

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                  |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 160th Street     | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | River Avenue     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Cherry Tree Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 224 PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 2892  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.149 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.660 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 284   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 147   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.20 | <b>Density</b>           | N/A | <b>PTSF</b>            | 41.6   | <b>ATS</b> | 40.2 | <b>% FFS</b> | 89.4 |
| <b>FFS Delay</b> | 4.8  | <b>LOS Thresh. Delay</b> | 8.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 230                                     | 460  | 740  | 1040  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 350                                     | 700  | 1130 | 1580  | 2160  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 2400                                    | 4700 | 7600 | 10700 | 14500 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 160th Street     | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | River Avenue     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cherry Tree Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 224 AM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 6403  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.080 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.843 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 432   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 80    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.31 | <b>Density</b>           | N/A | <b>PTSF</b>            | 46.5   | <b>ATS</b> | 40.1 | <b>% FFS</b> | 89.1 |
| <b>FFS Delay</b> | 4.9  | <b>LOS Thresh. Delay</b> | 8.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 320                                     | 630  | 930   | 1280  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 380                                     | 750  | 1110  | 1520  | 1690  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 4800                                    | 9400 | 13900 | 19000 | 21200 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 160th Street     | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | River Avenue     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cherry Tree Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 224 PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 6403  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.149 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.674 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 643   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 311   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.45 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 70.2   | <b>ATS</b> | 35.2 | <b>% FFS</b> | 78.2 |
| <b>FFS Delay</b> | 11.1 | <b>LOS Thresh. Delay</b> | 15.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 230                                     | 470  | 750  | 1060  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 350                                     | 700  | 1120 | 1580  | 2110  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 2400                                    | 4700 | 7600 | 10700 | 14200 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                  |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 161st Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 160th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 225 AM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 3459  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.049 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.750 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 127   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 42    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.09 | <b>Density</b>           | N/A | <b>PTSF</b>            | 53.4   | <b>ATS</b> | 41.0 | <b>% FFS</b> | 91.1 |
| <b>FFS Delay</b> | 1.6  | <b>LOS Thresh. Delay</b> | 3.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 350  | 600   | 990   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 140                                     | 470  | 800   | 1320  | 1900  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2900                                    | 9600 | 16400 | 27000 | 38800 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                  |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 161st Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 160th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 225 PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 3459  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.147 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.510 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 259   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 249   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.18 | <b>Density</b>           | N/A | <b>PTSF</b>            | 62.5   | <b>ATS</b> | 36.9 | <b>% FFS</b> | 82.0 |
| <b>FFS Delay</b> | 3.5  | <b>LOS Thresh. Delay</b> | 5.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 70                                      | 200  | 510  | 760   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 400  | 1000 | 1500  | 2790  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1000                                    | 2800 | 6900 | 10300 | 19000 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 161st Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 160th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 225 AM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 7034  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.072 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.831 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 421   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 86    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.30 | <b>Density</b>           | N/A | <b>PTSF</b>            | 75.5   | <b>ATS</b> | 37.8 | <b>% FFS</b> | 83.9 |
| <b>FFS Delay</b> | 3.1  | <b>LOS Thresh. Delay</b> | 4.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 110                                     | 440  | 680   | 1010  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 140                                     | 530  | 820   | 1220  | 1710  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2000                                    | 7400 | 11400 | 17000 | 23800 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 161st Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 160th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 225 PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 7034  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.147 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.591 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 611   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 423   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.43 | <b>Density</b>           | N/A | <b>PTSF</b>            | 82.3   | <b>ATS</b> | 33.2 | <b>% FFS</b> | 73.7 |
| <b>FFS Delay</b> | 5.7  | <b>LOS Thresh. Delay</b> | 7.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 220  | 560  | 860   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 380  | 950  | 1460  | 2410  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1000                                    | 2600 | 6500 | 10000 | 16400 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                 |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 156th Street    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Gray Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Hazel Dell Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 227 AM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1456  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.059 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.730 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 63    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 23    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.05 | <b>Density</b>           | N/A | <b>PTSF</b>            | 44.6   | <b>ATS</b> | 46.7 | <b>% FFS</b> | 93.4 |
| <b>FFS Delay</b> | 4.9  | <b>LOS Thresh. Delay</b> | 4.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 120                                     | 370  | 730   | 1130  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 510  | 1000  | 1550  | 1950  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2900                                    | 8700 | 17000 | 26300 | 33100 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                 |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 156th Street    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Gray Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Hazel Dell Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 227 PM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1456  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.113 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.650 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 107   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 58    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.08 | <b>Density</b>           | N/A | <b>PTSF</b>            | 47.8   | <b>ATS</b> | 45.9 | <b>% FFS</b> | 91.9 |
| <b>FFS Delay</b> | 6.1  | <b>LOS Thresh. Delay</b> | 6.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 110                                     | 300  | 690  | 1050  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 170                                     | 470  | 1070 | 1620  | 2190  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1600                                    | 4200 | 9500 | 14400 | 19400 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                 |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 156th Street    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Gray Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Hazel Dell Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 227 AM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 5770  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.083 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.630 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 302   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 177   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.21 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 68.7   | <b>ATS</b> | 41.6 | <b>% FFS</b> | 83.2 |
| <b>FFS Delay</b> | 13.8 | <b>LOS Thresh. Delay</b> | 13.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 110                                     | 290  | 680   | 1020  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 470  | 1080  | 1620  | 2260  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2200                                    | 5700 | 13100 | 19600 | 27300 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                 |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 156th Street    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Gray Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Hazel Dell Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 227 PM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 5770  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.113 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.525 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 342   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 310   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.24 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 67.2   | <b>ATS</b> | 41.0 | <b>% FFS</b> | 82.1 |
| <b>FFS Delay</b> | 15.0 | <b>LOS Thresh. Delay</b> | 15.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 280  | 600   | 870   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 540  | 1150  | 1660  | 2710  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1600                                    | 4800 | 10200 | 14700 | 24000 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 160th Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 228a AM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 1326  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.051 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.640 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 43    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 24    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.03 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 39.5   | <b>ATS</b> | 42.0 | <b>% FFS</b> | 93.2 |
| <b>FFS Delay</b> | 6.9  | <b>LOS Thresh. Delay</b> | 16.5 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 260  | 580   | 910   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 150                                     | 410  | 910   | 1430  | 2220  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3000                                    | 8100 | 17900 | 28100 | 43600 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 160th Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 228a PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 1326  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.105 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.620 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 86    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 53    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.06 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 44.5   | <b>ATS</b> | 41.3 | <b>% FFS</b> | 91.7 |
| <b>FFS Delay</b> | 8.7  | <b>LOS Thresh. Delay</b> | 18.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.**

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 240  | 570  | 890   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 130                                     | 390  | 920  | 1440  | 2300  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 3800 | 8800 | 13800 | 22000 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                  |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 160th Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | 146th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 228a AM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 1590  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.053 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.640 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 54    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 30    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.04 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 41.0   | <b>ATS</b> | 41.8 | <b>% FFS</b> | 92.9 |
| <b>FFS Delay</b> | 7.3  | <b>LOS Thresh. Delay</b> | 16.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 260  | 580   | 910   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 150                                     | 410  | 910   | 1430  | 2220  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2900                                    | 7800 | 17200 | 27000 | 41900 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                  |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 160th Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | 146th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 228a PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 1590  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.105 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.629 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 105   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 62    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.08 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 47.1   | <b>ATS</b> | 41.0 | <b>% FFS</b> | 91.1 |
| <b>FFS Delay</b> | 9.3  | <b>LOS Thresh. Delay</b> | 18.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 250  | 580  | 900   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 130                                     | 400  | 930  | 1440  | 2260  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 3900 | 8900 | 13800 | 21600 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 160th Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 228b AM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.700 | <b>Median</b>           | Yes | <b>AADT</b>                     | 1326  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.051 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.640 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 43    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 24    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.03 | <b>Density</b>           | N/A | <b>PTSF</b>            | 39.2   | <b>ATS</b> | 42.0 | <b>% FFS</b> | 93.3 |
| <b>FFS Delay</b> | 4.0  | <b>LOS Thresh. Delay</b> | 9.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 270  | 610   | 950   | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 150                                     | 430  | 960   | 1490  | 2330  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3000                                    | 8500 | 18900 | 29300 | 45700 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 160th Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 228b PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.700 | <b>Median</b>           | Yes | <b>AADT</b>                     | 1326  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.105 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.620 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 86    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 53    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.06 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 44.0   | <b>ATS</b> | 41.3 | <b>% FFS</b> | 91.9 |
| <b>FFS Delay</b> | 5.0  | <b>LOS Thresh. Delay</b> | 10.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 90                                      | 260  | 600  | 930   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 150                                     | 420  | 970  | 1500  | 2410  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1500                                    | 4000 | 9300 | 14300 | 23000 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                  |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 160th Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | 146th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 228b AM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.700 | <b>Median</b>           | Yes | <b>AADT</b>                     | 1590  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.053 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.553 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 47    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 38    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.03 | <b>Density</b>           | N/A | <b>PTSF</b>            | 35.9   | <b>ATS</b> | 41.8 | <b>% FFS</b> | 93.0 |
| <b>FFS Delay</b> | 4.2  | <b>LOS Thresh. Delay</b> | 9.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 80                                      | 210  | 560   | 860   | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 150                                     | 380  | 1020  | 1560  | 2700  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2900                                    | 7200 | 19300 | 29500 | 51000 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                  |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | Cherry Tree Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 160th Street     | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | 146th Street     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 228b PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.700 | <b>Median</b>           | Yes | <b>AADT</b>                     | 1590  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.105 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.629 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 105   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 62    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.07 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 46.5   | <b>ATS</b> | 41.1 | <b>% FFS</b> | 91.3 |
| <b>FFS Delay</b> | 5.3  | <b>LOS Thresh. Delay</b> | 10.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 90                                      | 260  | 610  | 940   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 150                                     | 420  | 970  | 1500  | 2370  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1500                                    | 4000 | 9300 | 14300 | 22600 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | River Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 160th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 146th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 229 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 7241  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.067 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.670 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 35  | <b>Peak Dir. Hrly. Vol.</b>     | 325   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 160   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.23 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 62.5   | <b>ATS</b> | 39.1 | <b>% FFS</b> | 86.9 |
| <b>FFS Delay</b> | 15.7 | <b>LOS Thresh. Delay</b> | 26.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 210                                     | 450   | 770   | 1050  | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 320                                     | 680   | 1150  | 1570  | 2120  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 4800                                    | 10200 | 17200 | 23500 | 31700 |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | River Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 160th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 146th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 229 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 7241  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.110 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.640 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 35  | <b>Peak Dir. Hrly. Vol.</b>     | 510   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 287   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.36 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 72.8   | <b>ATS</b> | 36.7 | <b>% FFS</b> | 81.7 |
| <b>FFS Delay</b> | 23.3 | <b>LOS Thresh. Delay</b> | 33.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 200                                     | 440  | 740   | 1010  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 320                                     | 690  | 1160  | 1580  | 2220  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3000                                    | 6300 | 10600 | 14400 | 20200 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | River Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 160th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 229 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 12200 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.068 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.752 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 35  | <b>Peak Dir. Hrly. Vol.</b>     | 624   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 206   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.44 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 76.1   | <b>ATS</b> | 36.0 | <b>% FFS</b> | 80.1 |
| <b>FFS Delay</b> | 25.8 | <b>LOS Thresh. Delay</b> | 36.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 260                                     | 490  | 830   | 1170  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 350                                     | 660  | 1110  | 1560  | 1890  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 5200                                    | 9800 | 16400 | 23000 | 27800 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | River Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 160th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 229 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 12200 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.110 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.665 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 35  | <b>Peak Dir. Hrly. Vol.</b>     | 892   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 450   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.63 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 87.7   | <b>ATS</b> | 32.1 | <b>% FFS</b> | 71.4 |
| <b>FFS Delay</b> | 41.6 | <b>LOS Thresh. Delay</b> | 52.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 210                                     | 450  | 760   | 1050  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 320                                     | 680  | 1150  | 1580  | 2140  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3000                                    | 6200 | 10500 | 14400 | 19500 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 230a AM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables                |       |                          |       |
|------------------------|-------|-------------------------|-----|----------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.400 | <b>Median</b>           | Yes | <b>AADT</b>                      | 10774 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                         | 0.078 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                         | 0.660 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrlly. Vol.</b>     | 555   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrlly. Vol.</b> | 286   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |         |            |      |              |       |
|------------------|------|--------------------------|-----|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.18 | <b>Density</b>           | 7.7 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 8.0 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710 |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060 |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1080                                    | 1850 | 2610 | 3370 | 4110 |
| 6            | 1630                                    | 2780 | 3910 | 5050 | 6160 |
| 8            | 2170                                    | 3700 | 5220 | 6750 | 8220 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |
|              |                                         |      |      |      |      |

|   |       |       |       |       |        |
|---|-------|-------|-------|-------|--------|
| 4 | 13900 | 23800 | 33500 | 43300 | 52700  |
| 6 | 20900 | 35700 | 50200 | 64800 | 79000  |
| 8 | 27900 | 47500 | 67000 | 86600 | 105400 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 230a PM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables                |       |                          |       |
|------------------------|-------|-------------------------|-----|----------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.400 | <b>Median</b>           | Yes | <b>AADT</b>                      | 10774 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                         | 0.111 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                         | 0.610 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrlly. Vol.</b>     | 730   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrlly. Vol.</b> | 466   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.24 | <b>Density</b>           | 10.2 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 8.0  | <b>Service Measure</b> | Density | <b>LOS</b> | B    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710 |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060 |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1170                                    | 2000 | 2820 | 3640 | 4450 |
| 6            | 1760                                    | 3000 | 4230 | 5460 | 6660 |
| 8            | 2350                                    | 4000 | 5640 | 7300 | 8890 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 4 | 10600 | 18100 | 25500 | 32800 | 40100 |
| 6 | 15900 | 27100 | 38200 | 49200 | 60000 |
| 8 | 21200 | 36100 | 50900 | 65800 | 80100 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                   |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 230a AM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables                |       |                          |       |
|------------------------|-------|-------------------------|-----|----------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.400 | <b>Median</b>           | Yes | <b>AADT</b>                      | 15757 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                         | 0.083 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                         | 0.516 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrlly. Vol.</b>     | 675   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrlly. Vol.</b> | 633   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |         |            |      |              |       |
|------------------|------|--------------------------|-----|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.22 | <b>Density</b>           | 9.4 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 8.0 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            |                                         |      |      |      |       |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710  |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060  |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            |                                         |      |      |      |       |
| 4            | 1380                                    | 2370 | 3340 | 4310 | 5260  |
| 6            | 2080                                    | 3550 | 5000 | 6460 | 7870  |
| 8            | 2780                                    | 4730 | 6670 | 8630 | 10510 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            |                                         |      |      |      |       |



|   |       |       |       |        |        |
|---|-------|-------|-------|--------|--------|
| 4 | 16700 | 28600 | 40300 | 52000  | 63400  |
| 6 | 25100 | 42800 | 60300 | 77900  | 94900  |
| 8 | 33500 | 57000 | 80400 | 104000 | 126700 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                   |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 230a PM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.400 | <b>Median</b>           | Yes | <b>AADT</b>                     | 15757 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.111 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.515 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 901   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 848   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.30 | <b>Density</b>           | 12.5 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 8.0  | <b>Service Measure</b> | Density | <b>LOS</b> | B    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            |                                         |      |      |      |       |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710  |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060  |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            |                                         |      |      |      |       |
| 4            | 1380                                    | 2370 | 3340 | 4320 | 5270  |
| 6            | 2080                                    | 3560 | 5010 | 6470 | 7890  |
| 8            | 2780                                    | 4740 | 6680 | 8650 | 10530 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            |                                         |      |      |      |       |
|              |                                         |      |      |      |       |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 4 | 12500 | 21400 | 30100 | 39000 | 47500 |
| 6 | 18800 | 32100 | 45200 | 58300 | 71100 |
| 8 | 25100 | 42800 | 60200 | 78000 | 94900 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 230b AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 10774 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.078 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.660 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 555   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 286   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.39 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 80.0   | <b>ATS</b> | 34.1 | <b>% FFS</b> | 75.8 |
| <b>FFS Delay</b> | 12.8 | <b>LOS Thresh. Delay</b> | 16.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 270  | 590   | 930   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 140                                     | 410  | 900   | 1410  | 2160  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1800                                    | 5300 | 11600 | 18100 | 27700 |

|   |
|---|
| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 230b PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 10774 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.111 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.610 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 730   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 466   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.51 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 85.9   | <b>ATS</b> | 31.9 | <b>% FFS</b> | 70.9 |
| <b>FFS Delay</b> | 16.4 | <b>LOS Thresh. Delay</b> | 20.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 240  | 570  | 880   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 400  | 940  | 1450  | 2330  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 3700 | 8500 | 13100 | 21000 |

|   |
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| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 230b AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 18775 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.089 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.632 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1056  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 615   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.74 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 92.4   | <b>ATS</b> | 28.1 | <b>% FFS</b> | 62.5 |
| <b>FFS Delay</b> | 24.0 | <b>LOS Thresh. Delay</b> | 28.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 80                                      | 250  | 580   | 900   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 130                                     | 400  | 920   | 1430  | 2250  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1500                                    | 4500 | 10400 | 16100 | 25300 |



|   |
|---|
| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 230b PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 18775 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.111 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.604 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1259  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 825   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.88 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 94.5   | <b>ATS</b> | 24.6 | <b>% FFS</b> | 54.6 |
| <b>FFS Delay</b> | 33.2 | <b>LOS Thresh. Delay</b> | 37.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 230  | 560  | 870   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 390  | 930  | 1450  | 2360  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 3600 | 8400 | 13100 | 21300 |

|   |
|---|
| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 230c AM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 10774 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.078 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.660 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 555   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 286   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.18 | <b>Density</b>           | 7.7  | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 10.0 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710 |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060 |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1080                                    | 1850 | 2610 | 3370 | 4110 |
| 6            | 1630                                    | 2780 | 3910 | 5050 | 6160 |
| 8            | 2170                                    | 3700 | 5220 | 6750 | 8220 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |
|              |                                         |      |      |      |      |

|   |       |       |       |       |        |
|---|-------|-------|-------|-------|--------|
| 4 | 13900 | 23800 | 33500 | 43300 | 52700  |
| 6 | 20900 | 35700 | 50200 | 64800 | 79000  |
| 8 | 27900 | 47500 | 67000 | 86600 | 105400 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 230c PM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 10774 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.078 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.660 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 555   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 286   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.18 | <b>Density</b>           | 7.7  | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 10.0 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710 |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060 |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1080                                    | 1850 | 2610 | 3370 | 4110 |
| 6            | 1630                                    | 2780 | 3910 | 5050 | 6160 |
| 8            | 2170                                    | 3700 | 5220 | 6750 | 8220 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |
|              |                                         |      |      |      |      |

|   |       |       |       |       |        |
|---|-------|-------|-------|-------|--------|
| 4 | 13900 | 23800 | 33500 | 43300 | 52700  |
| 6 | 20900 | 35700 | 50200 | 64800 | 79000  |
| 8 | 27900 | 47500 | 67000 | 86600 | 105400 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                   |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 230c AM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 27225 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.083 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.675 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1525  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 734   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.50 | <b>Density</b>           | 21.2 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 10.0 | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710 |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060 |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1060                                    | 1810 | 2550 | 3290 | 4020 |
| 6            | 1590                                    | 2720 | 3830 | 4940 | 6020 |
| 8            | 2120                                    | 3620 | 5100 | 6600 | 8030 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |
|              |                                         |      |      |      |      |



|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 4 | 12800 | 21900 | 30800 | 39700 | 48500 |
| 6 | 19200 | 32800 | 46200 | 59600 | 72600 |
| 8 | 25600 | 43700 | 61500 | 79600 | 96800 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                   |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 230c PM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables                |       |                          |       |
|------------------------|-------|-------------------------|-----|----------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                      | 27225 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                         | 0.111 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                         | 0.642 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrlly. Vol.</b>     | 1940  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrlly. Vol.</b> | 1082  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.64 | <b>Density</b>           | 27.0 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 10.0 | <b>Service Measure</b> | Density | <b>LOS</b> | D    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710 |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060 |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1110                                    | 1910 | 2680 | 3460 | 4230 |
| 6            | 1670                                    | 2860 | 4020 | 5190 | 6330 |
| 8            | 2230                                    | 3810 | 5360 | 6940 | 8450 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 4 | 10000 | 17300 | 24200 | 31200 | 38200 |
| 6 | 15100 | 25800 | 36300 | 46800 | 57100 |
| 8 | 20100 | 34400 | 48300 | 62600 | 76200 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Promise Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 231a AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | No  | <b>AADT</b>                     | 5891  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.106 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.660 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 412   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 212   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.29 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 73.3   | <b>ATS</b> | 35.5 | <b>% FFS</b> | 79.0 |
| <b>FFS Delay</b> | 12.8 | <b>LOS Thresh. Delay</b> | 17.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 90                                      | 270  | 590  | 930   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 410  | 900  | 1410  | 2160  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1400                                    | 3900 | 8500 | 13400 | 20400 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Promise Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 231a PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | No  | <b>AADT</b>                     | 5891  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.157 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.630 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 583   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 342   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.41 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 81.1   | <b>ATS</b> | 33.7 | <b>% FFS</b> | 75.0 |
| <b>FFS Delay</b> | 16.0 | <b>LOS Thresh. Delay</b> | 20.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            | 80                                      | 250  | 580  | 900  | 1420  |
| 2            |                                         |      |      |      |       |
| 3            |                                         |      |      |      |       |
| 4            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            | 130                                     | 400  | 930  | 1430 | 2260  |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            | 900                                     | 2600 | 6000 | 9200 | 14400 |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | Promise Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | 146th Street      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 231a AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | No  | <b>AADT</b>                     | 12159 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.106 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.738 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 951   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 338   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.67 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 93.7   | <b>ATS</b> | 30.4 | <b>% FFS</b> | 67.5 |
| <b>FFS Delay</b> | 23.2 | <b>LOS Thresh. Delay</b> | 28.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 100                                     | 340  | 600  | 980   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 470  | 820  | 1330  | 1930  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1400                                    | 4500 | 7800 | 12600 | 18300 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | Promise Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | 146th Street      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 231a PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | No  | <b>AADT</b>                     | 12159 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.157 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.631 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1205  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 704   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.85 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 93.3   | <b>ATS</b> | 26.1 | <b>% FFS</b> | 58.0 |
| <b>FFS Delay</b> | 34.7 | <b>LOS Thresh. Delay</b> | 39.5 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            | 80                                      | 250  | 580  | 900  | 1420  |
| 2            |                                         |      |      |      |       |
| 3            |                                         |      |      |      |       |
| 4            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            | 130                                     | 400  | 920  | 1430 | 2260  |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            | 900                                     | 2600 | 5900 | 9200 | 14400 |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Promise Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 231b AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 5891  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.106 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.660 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 412   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 212   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.28 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 72.8   | <b>ATS</b> | 35.7 | <b>% FFS</b> | 79.4 |
| <b>FFS Delay</b> | 10.4 | <b>LOS Thresh. Delay</b> | 14.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 90                                      | 290  | 610  | 970   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 440  | 930  | 1470  | 2260  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1400                                    | 4200 | 8800 | 13900 | 21400 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Promise Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 231b PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 5891  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.157 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.630 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 583   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 342   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.39 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 79.9   | <b>ATS</b> | 34.0 | <b>% FFS</b> | 75.7 |
| <b>FFS Delay</b> | 12.9 | <b>LOS Thresh. Delay</b> | 16.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            | 90                                      | 260  | 610  | 940  | 1490  |
| 2            |                                         |      |      |      |       |
| 3            |                                         |      |      |      |       |
| 4            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            | 150                                     | 420  | 970  | 1500 | 2370  |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            | 1000                                    | 2700 | 6200 | 9600 | 15100 |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | Promise Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | 146th Street      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 231b AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 12160 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.106 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.738 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 951   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 338   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.64 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 93.2   | <b>ATS</b> | 30.8 | <b>% FFS</b> | 68.5 |
| <b>FFS Delay</b> | 18.4 | <b>LOS Thresh. Delay</b> | 22.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 110                                     | 350  | 630  | 1030  | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 150                                     | 480  | 860  | 1400  | 2020  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1500                                    | 4600 | 8200 | 13300 | 19100 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | Promise Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | 146th Street      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 231b PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 12160 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.158 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.625 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1201  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 720   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.80 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 93.0   | <b>ATS</b> | 26.8 | <b>% FFS</b> | 59.6 |
| <b>FFS Delay</b> | 27.1 | <b>LOS Thresh. Delay</b> | 31.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            | 90                                      | 260  | 600  | 940  | 1490  |
| 2            |                                         |      |      |      |       |
| 3            |                                         |      |      |      |       |
| 4            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            | 150                                     | 420  | 960  | 1510 | 2390  |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            | 1000                                    | 2700 | 6100 | 9600 | 15200 |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Summer Road       | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 232 AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 12009 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.071 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.600 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 512   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 341   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.36 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 77.9   | <b>ATS</b> | 39.4 | <b>% FFS</b> | 78.8 |
| <b>FFS Delay</b> | 23.3 | <b>LOS Thresh. Delay</b> | 23.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 290  | 660   | 990   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 490  | 1100  | 1660  | 2370  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2400                                    | 7000 | 15500 | 23400 | 33400 |

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| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Summer Road       | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 232 PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 12009 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.120 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.500 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 721   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 721   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.51 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 83.8   | <b>ATS</b> | 35.4 | <b>% FFS</b> | 70.8 |
| <b>FFS Delay</b> | 35.7 | <b>LOS Thresh. Delay</b> | 35.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 270  | 580  | 830   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 160                                     | 540  | 1160 | 1660  | 2840  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1400                                    | 4600 | 9700 | 13900 | 23700 |

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| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Summer Road       | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 232 AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 33450 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.077 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.662 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1705  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 871   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.20     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 110                                     | 310  | 700   | 1060  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 470  | 1060  | 1610  | 2150  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2300                                    | 6200 | 13800 | 21000 | 28000 |



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|---|
| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Summer Road       | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 232 PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 33450 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.120 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.600 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 2408  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1606  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.69     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 100                                     | 290  | 660  | 990   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 170                                     | 490  | 1100 | 1660  | 2370  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1500                                    | 4100 | 9200 | 13900 | 19800 |

|   |
|---|
| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |                   |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Summer Road       | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Eastbound         | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 232 AM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 33450 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.077 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.662 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1705  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 871   | <b>Adjusted Capacity</b> | 1647  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.56 | <b>Density</b>           | 22.5 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 14.4 | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 750                                     | 1280 | 1810 | 2320 | 2690 |
| 3            | 1130                                    | 1930 | 2720 | 3480 | 4040 |
| 4            | 1510                                    | 2570 | 3630 | 4650 | 5390 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1140                                    | 1940 | 2740 | 3510 | 4070 |
| 6            | 1710                                    | 2920 | 4110 | 5260 | 6110 |
| 8            | 2290                                    | 3890 | 5490 | 7030 | 8150 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |

|   |       |       |       |       |        |
|---|-------|-------|-------|-------|--------|
| 4 | 14900 | 25200 | 35600 | 45600 | 52900  |
| 6 | 22300 | 38000 | 53400 | 68400 | 79400  |
| 8 | 29800 | 50600 | 71300 | 91300 | 105900 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |                   |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Summer Road       | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Westbound         | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 232 PM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 33450 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.120 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.600 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 2408  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1606  | <b>Adjusted Capacity</b> | 1647  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.79 | <b>Density</b>           | 32.3 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 49.2 | <b>% FFS</b> | 98.5 |
| <b>FFS Delay</b> | 1.4  | <b>LOS Thresh. Delay</b> | 15.8 | <b>Service Measure</b> | Density | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 750                                     | 1280 | 1810 | 2320 | 2690 |
| 3            | 1130                                    | 1930 | 2720 | 3480 | 4040 |
| 4            | 1510                                    | 2570 | 3630 | 4650 | 5390 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1260                                    | 2140 | 3020 | 3870 | 4490 |
| 6            | 1890                                    | 3220 | 4540 | 5800 | 6740 |
| 8            | 2520                                    | 4290 | 6060 | 7760 | 8990 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 4 | 10600 | 17900 | 25200 | 32300 | 37500 |
| 6 | 15800 | 26900 | 37900 | 48400 | 56200 |
| 8 | 21000 | 35800 | 50600 | 64700 | 75000 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Olio Road    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 156th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 233 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 4945  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.092 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.530 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 90  | <b>Peak Dir. Hrly. Vol.</b>     | 241   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 214   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.17 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 61.3   | <b>ATS</b> | 42.2 | <b>% FFS</b> | 84.3 |
| <b>FFS Delay</b> | 12.7 | <b>LOS Thresh. Delay</b> | 12.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 280  | 610   | 890   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 530  | 1160  | 1680  | 2680  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1900                                    | 5800 | 12700 | 18300 | 29200 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Olio Road    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 156th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 233 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 4945  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.120 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.570 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 90  | <b>Peak Dir. Hrly. Vol.</b>     | 338   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 255   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.24 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 68.6   | <b>ATS</b> | 41.2 | <b>% FFS</b> | 82.4 |
| <b>FFS Delay</b> | 14.6 | <b>LOS Thresh. Delay</b> | 14.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 100                                     | 290  | 650  | 950   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 180                                     | 510  | 1150 | 1670  | 2500  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1600                                    | 4300 | 9600 | 14000 | 20900 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Olio Road    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 156th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 233 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 22592 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.102 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.741 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 90  | <b>Peak Dir. Hrly. Vol.</b>     | 1708  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 597   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.20     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 130                                     | 380  | 730  | 1140  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 180                                     | 520  | 990  | 1540  | 1920  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1800                                    | 5100 | 9800 | 15100 | 18900 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Olio Road    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 156th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 233 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 22592 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.120 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.587 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 91  | <b>Peak Dir. Hrly. Vol.</b>     | 1591  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1120  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.12     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 0 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            |                                         | 460  | 790   | 1080  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            |                                         | 820  | 1400  | 1910  | 2510  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            |                                         | 7700 | 13100 | 17900 | 23500 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |              |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | Olio Road    | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | 156th Street | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 233 AM.xhp |                       |              |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |              |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.000 | <b>Median</b>           | No  | <b>AADT</b>                     | 22592 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.102 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.741 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1708  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 597   | <b>Adjusted Capacity</b> | 1647  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.56 | <b>Density</b>           | 22.5 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 12.0 | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 750                                     | 1280  | 1810  | 2320  | 2690  |
| 3            | 1130                                    | 1930  | 2720  | 3480  | 4040  |
| 4            | 1510                                    | 2570  | 3630  | 4650  | 5390  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1020                                    | 1730  | 2450  | 3140  | 3640  |
| 6            | 1530                                    | 2610  | 3680  | 4700  | 5460  |
| 8            | 2040                                    | 3470  | 4900  | 6280  | 7280  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 10000                                   | 17000 | 24100 | 30800 | 35700 |
| 6            | 15100                                   | 25600 | 36100 | 46100 | 53600 |
| 8            | 20000                                   | 34100 | 48100 | 61600 | 71400 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |              |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | Olio Road    | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | 156th Street | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 233 PM.xhp |                       |              |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |              |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.000 | <b>Median</b>           | No  | <b>AADT</b>                     | 22592 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.120 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.587 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1591  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1120  | <b>Adjusted Capacity</b> | 1647  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.53 | <b>Density</b>           | 21.0 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 12.0 | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 750                                     | 1280  | 1810  | 2320  | 2690  |
| 3            | 1130                                    | 1930  | 2720  | 3480  | 4040  |
| 4            | 1510                                    | 2570  | 3630  | 4650  | 5390  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1280                                    | 2190  | 3090  | 3960  | 4590  |
| 6            | 1930                                    | 3290  | 4640  | 5930  | 6890  |
| 8            | 2580                                    | 4380  | 6190  | 7930  | 9190  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 10700                                   | 18300 | 25800 | 33000 | 38300 |
| 6            | 16100                                   | 27500 | 38700 | 49500 | 57500 |
| 8            | 21600                                   | 36600 | 51600 | 66100 | 76600 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                 |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Cyntheanne Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 156th Street    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 146th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 234 AM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1821  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.088 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.610 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 72  | <b>Peak Dir. Hrly. Vol.</b>     | 98    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 62    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.07 | <b>Density</b>           | N/A | <b>PTSF</b>            | 45.0   | <b>ATS</b> | 51.0 | <b>% FFS</b> | 92.8 |
| <b>FFS Delay</b> | 4.8  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 130                                     | 390  | 790   | 1130  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 220                                     | 640  | 1300  | 1860  | 2330  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2500                                    | 7300 | 14800 | 21200 | 26500 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                 |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Cyntheanne Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 156th Street    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 146th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 234 PM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1821  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.110 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.570 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 72  | <b>Peak Dir. Hrly. Vol.</b>     | 114   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 86    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.08 | <b>Density</b>           | N/A | <b>PTSF</b>            | 45.3   | <b>ATS</b> | 50.6 | <b>% FFS</b> | 92.0 |
| <b>FFS Delay</b> | 5.4  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 120                                     | 380  | 750   | 1070  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 220                                     | 670  | 1320  | 1880  | 2500  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2000                                    | 6100 | 12000 | 17100 | 22800 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                 |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cyntheanne Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 156th Street    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 234 AM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 2391  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.102 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.570 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 72  | <b>Peak Dir. Hrly. Vol.</b>     | 139   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 105   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.10 | <b>Density</b>           | N/A | <b>PTSF</b>            | 49.1   | <b>ATS</b> | 49.9 | <b>% FFS</b> | 90.7 |
| <b>FFS Delay</b> | 6.4  | <b>LOS Thresh. Delay</b> | 0.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 120                                     | 380  | 750   | 1070  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 220                                     | 670  | 1320  | 1880  | 2500  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2200                                    | 6600 | 13000 | 18500 | 24600 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                 |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                   | <b>Highway Name</b>   | Cyntheanne Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                | <b>From</b>           | 156th Street    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 146th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu234 PM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 2391  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.110 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.510 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 72  | <b>Peak Dir. Hrly. Vol.</b>     | 134   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 129   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

### Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B | C | D | E |
|--------------|-----------------------------------------|---|---|---|---|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |   |   |   |   |
| 1            |                                         |   |   |   |   |
| 2            |                                         |   |   |   |   |
| 3            |                                         |   |   |   |   |
| 4            |                                         |   |   |   |   |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |   |   |   |   |
| 2            |                                         |   |   |   |   |
| 4            |                                         |   |   |   |   |
| 6            |                                         |   |   |   |   |
| 8            |                                         |   |   |   |   |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |   |   |   |   |
| 2            |                                         |   |   |   |   |
| 4            |                                         |   |   |   |   |
| 6            |                                         |   |   |   |   |
| 8            |                                         |   |   |   |   |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |               |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Atlantic Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 156th Street  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 146th Street  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 235 AM.xhp |                       |               |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |               |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.017 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.650 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 11    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 6     | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.01 | <b>Density</b>           | N/A | <b>PTSF</b>            | 8.5    | <b>ATS</b> | 49.6 | <b>% FFS</b> | 99.3 |
| <b>FFS Delay</b> | 0.5  | <b>LOS Thresh. Delay</b> | 0.5 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D      | E      |
|--------------|-----------------------------------------|-------|-------|--------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |        |        |
| 1            | 230                                     | 500   | 820   | 1130   | 1420   |
| 2            |                                         |       |       |        |        |
| 3            |                                         |       |       |        |        |
| 4            |                                         |       |       |        |        |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |        |        |
| 2            | 360                                     | 770   | 1270  | 1740   | 2190   |
| 4            |                                         |       |       |        |        |
| 6            |                                         |       |       |        |        |
| 8            |                                         |       |       |        |        |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |        |        |
| 2            | 21200                                   | 45300 | 74800 | 102400 | 128900 |
| 4            |                                         |       |       |        |        |
| 6            |                                         |       |       |        |        |
| 8            |                                         |       |       |        |        |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |               |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Atlantic Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 156th Street  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 146th Street  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 235 PM.xhp |                       |               |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |               |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.048 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.810 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 39    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 9     | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.03 | <b>Density</b>           | N/A | <b>PTSF</b>            | 12.6   | <b>ATS</b> | 49.3 | <b>% FFS</b> | 98.7 |
| <b>FFS Delay</b> | 0.9  | <b>LOS Thresh. Delay</b> | 0.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 340                                     | 630   | 980   | 1350  | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 420                                     | 780   | 1210  | 1670  | 1760  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 8800                                    | 16300 | 25300 | 34800 | 36700 |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |               |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Atlantic Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 156th Street  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 235 AM.xhp |                       |               |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |               |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.029 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.655 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 19    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 10    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.01 | <b>Density</b>           | N/A | <b>PTSF</b>            | 9.7    | <b>ATS</b> | 49.5 | <b>% FFS</b> | 99.0 |
| <b>FFS Delay</b> | 0.7  | <b>LOS Thresh. Delay</b> | 0.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 230                                     | 500   | 820   | 1140  | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 360                                     | 770   | 1260  | 1750  | 2170  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 12500                                   | 26600 | 43500 | 60400 | 74900 |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |               |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Atlantic Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 156th Street  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 235 PM.xhp |                       |               |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |               |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.073 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.753 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 55    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 18    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.04 | <b>Density</b>           | N/A | <b>PTSF</b>            | 15.0   | <b>ATS</b> | 49.1 | <b>% FFS</b> | 98.2 |
| <b>FFS Delay</b> | 1.2  | <b>LOS Thresh. Delay</b> | 1.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 300                                     | 570   | 920   | 1280  | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 400                                     | 760   | 1230  | 1700  | 1890  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 5500                                    | 10500 | 16900 | 23300 | 25900 |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Howe Road         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 236a AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 5995  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.080 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.730 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 350   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 129   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.25 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 72.3   | <b>ATS</b> | 32.2 | <b>% FFS</b> | 80.5 |
| <b>FFS Delay</b> | 10.9 | <b>LOS Thresh. Delay</b> | 19.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 70                                      | 290  | 470  | 810   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 400  | 650  | 1110  | 1950  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 5000 | 8200 | 13900 | 24400 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Howe Road         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 236a PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 5995  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.120 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.560 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 403   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 317   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.29 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 71.4   | <b>ATS</b> | 30.5 | <b>% FFS</b> | 76.1 |
| <b>FFS Delay</b> | 14.1 | <b>LOS Thresh. Delay</b> | 23.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.**

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 180  | 440  | 700   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 330  | 790  | 1250  | 2540  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 800                                     | 2800 | 6600 | 10500 | 21200 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | Howe Road         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 236a AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 8550  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.080 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.725 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 496   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 188   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.35 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 75.8   | <b>ATS</b> | 29.8 | <b>% FFS</b> | 74.5 |
| <b>FFS Delay</b> | 15.4 | <b>LOS Thresh. Delay</b> | 24.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 70                                      | 280  | 470  | 810   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 390  | 650  | 1120  | 1960  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 4900 | 8200 | 14000 | 24600 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | Howe Road         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 236a PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 8550  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.122 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.520 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 542   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 501   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.38 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 77.2   | <b>ATS</b> | 28.5 | <b>% FFS</b> | 71.3 |
| <b>FFS Delay</b> | 18.1 | <b>LOS Thresh. Delay</b> | 27.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.**

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 160  | 420  | 660   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 310  | 810  | 1270  | 2740  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 900                                     | 2600 | 6700 | 10500 | 22500 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Howe Road         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 236b AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | Yes | <b>AADT</b>                     | 5995  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.080 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.730 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 350   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 129   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.24 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 71.1   | <b>ATS</b> | 32.5 | <b>% FFS</b> | 81.3 |
| <b>FFS Delay</b> | 12.4 | <b>LOS Thresh. Delay</b> | 23.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 70                                      | 300  | 500  | 850   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 420  | 690  | 1170  | 2050  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 5300 | 8700 | 14700 | 25700 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Howe Road         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 236b PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | Yes | <b>AADT</b>                     | 5995  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.120 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.560 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 403   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 317   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.27 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 70.3   | <b>ATS</b> | 30.7 | <b>% FFS</b> | 76.6 |
| <b>FFS Delay</b> | 16.5 | <b>LOS Thresh. Delay</b> | 27.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 190  | 460  | 740   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 340  | 830  | 1330  | 2670  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 800                                     | 2900 | 7000 | 11100 | 22300 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | Howe Road         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 236b AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | Yes | <b>AADT</b>                     | 8550  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.080 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.725 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 496   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 188   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.33 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 74.8   | <b>ATS</b> | 30.0 | <b>% FFS</b> | 75.1 |
| <b>FFS Delay</b> | 17.9 | <b>LOS Thresh. Delay</b> | 28.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 70                                      | 300  | 490  | 850   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 420  | 680  | 1180  | 2060  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 5300 | 8600 | 14800 | 25800 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | Howe Road         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 236b PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | Yes | <b>AADT</b>                     | 8550  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.122 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.520 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 542   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 501   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.36 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 76.5   | <b>ATS</b> | 28.8 | <b>% FFS</b> | 72.1 |
| <b>FFS Delay</b> | 20.9 | <b>LOS Thresh. Delay</b> | 31.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 170  | 440  | 700   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 330  | 850  | 1350  | 2870  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 900                                     | 2800 | 7000 | 11100 | 23600 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | North Pointe Blvd | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Cumberland Road   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 237 AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 2385  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.082 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.710 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 139   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 57    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.09 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 52.2   | <b>ATS</b> | 35.8 | <b>% FFS</b> | 89.6 |
| <b>FFS Delay</b> | 5.2  | <b>LOS Thresh. Delay</b> | 14.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 70                                      | 290  | 490  | 850   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 410  | 700  | 1200  | 2100  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 5100 | 8600 | 14700 | 25700 |

|   |
|---|
| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | North Pointe Blvd | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Cumberland Road   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 237 PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 2385  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.110 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.640 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 168   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 94    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.11 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 54.4   | <b>ATS</b> | 35.1 | <b>% FFS</b> | 87.7 |
| <b>FFS Delay</b> | 6.3  | <b>LOS Thresh. Delay</b> | 15.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 60                                      | 240  | 480  | 800   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 380  | 760  | 1260  | 2330  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1000                                    | 3500 | 7000 | 11500 | 21200 |
|              |                                         |      |      |       |       |



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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | North Pointe Blvd | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cumberland Road   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 237 AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 12273 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.091 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.513 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 573   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 544   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.38 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 77.3   | <b>ATS</b> | 28.4 | <b>% FFS</b> | 70.9 |
| <b>FFS Delay</b> | 18.4 | <b>LOS Thresh. Delay</b> | 27.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 160  | 440  | 690   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 320  | 860  | 1350  | 2910  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1100                                    | 3600 | 9500 | 14900 | 32000 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | North Pointe Blvd | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cumberland Road   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 237 PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 12273 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.110 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.571 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 771   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 579   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.52 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 85.4   | <b>ATS</b> | 26.4 | <b>% FFS</b> | 66.1 |
| <b>FFS Delay</b> | 23.1 | <b>LOS Thresh. Delay</b> | 32.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 190  | 470  | 750   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 340  | 830  | 1320  | 2610  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 900                                     | 3100 | 7600 | 12000 | 23800 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                    |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Herriman Boulevard | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Stony Crreek Way   | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 146th Street       | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 238 AM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 5625  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.098 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.670 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 369   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 182   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.26 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 72.1   | <b>ATS</b> | 36.0 | <b>% FFS</b> | 79.9 |
| <b>FFS Delay</b> | 19.1 | <b>LOS Thresh. Delay</b> | 26.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 90                                      | 280  | 590  | 930   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 420  | 890  | 1390  | 2120  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1500                                    | 4300 | 9100 | 14200 | 21700 |
|              |                                         |      |      |       |       |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                    |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Herriman Boulevard | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Stony Crreek Way   | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 146th Street       | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 238 PM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 5625  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.145 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.620 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 506   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 310   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.36 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 77.7   | <b>ATS</b> | 34.5 | <b>% FFS</b> | 76.7 |
| <b>FFS Delay</b> | 23.1 | <b>LOS Thresh. Delay</b> | 30.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 240  | 570  | 890   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 130                                     | 390  | 920  | 1440  | 2300  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 900                                     | 2700 | 6400 | 10000 | 15900 |



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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                    |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Herriman Boulevard | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Stony Creek Way    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street       | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 238 AM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 5625  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.098 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.674 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 372   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 180   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.26 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 72.2   | <b>ATS</b> | 36.0 | <b>% FFS</b> | 79.9 |
| <b>FFS Delay</b> | 19.1 | <b>LOS Thresh. Delay</b> | 26.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 90                                      | 280  | 590  | 940   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 420  | 880  | 1400  | 2110  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1500                                    | 4300 | 9000 | 14300 | 21600 |
|              |                                         |      |      |       |       |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                    |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Herriman Boulevard | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Stony Crreek Way   | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street       | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 238 PM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 5625  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.145 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.619 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 505   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 311   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.36 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 77.6   | <b>ATS</b> | 34.5 | <b>% FFS</b> | 76.7 |
| <b>FFS Delay</b> | 23.0 | <b>LOS Thresh. Delay</b> | 30.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 240  | 570  | 890   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 130                                     | 390  | 930  | 1440  | 2300  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 900                                     | 2700 | 6500 | 10000 | 15900 |

|   |
|---|
| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Marilyn Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 249 AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 3477  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.051 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.770 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 137   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 41    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.10 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 55.1   | <b>ATS</b> | 35.9 | <b>% FFS</b> | 89.8 |
| <b>FFS Delay</b> | 5.1  | <b>LOS Thresh. Delay</b> | 14.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 70                                      | 320  | 510   | 820   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 100                                     | 420  | 670   | 1070  | 1850  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2000                                    | 8300 | 13200 | 21000 | 36300 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Marilyn Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 249 PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 3477  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.102 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.560 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 199   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 156   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.14 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 58.4   | <b>ATS</b> | 32.8 | <b>% FFS</b> | 82.1 |
| <b>FFS Delay</b> | 9.8  | <b>LOS Thresh. Delay</b> | 18.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 180  | 440  | 700   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 330  | 790  | 1250  | 2540  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 900                                     | 3300 | 7800 | 12300 | 25000 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Marilyn Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 249 AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 7598  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.082 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.886 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 552   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 71    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.39 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 76.0   | <b>ATS</b> | 31.8 | <b>% FFS</b> | 79.5 |
| <b>FFS Delay</b> | 11.6 | <b>LOS Thresh. Delay</b> | 20.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.**

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 400  | 700  | 960   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 460  | 800  | 1090  | 1610  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 5700 | 9800 | 13300 | 19700 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Marilyn Road      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Greenfield Avenue | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 249 PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 7598  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.102 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.519 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 402   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 373   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.28 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 71.1   | <b>ATS</b> | 30.3 | <b>% FFS</b> | 75.7 |
| <b>FFS Delay</b> | 14.4 | <b>LOS Thresh. Delay</b> | 23.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 160  | 420  | 660   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 310  | 810  | 1280  | 2740  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1000                                    | 3100 | 8000 | 12600 | 26900 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Boden Road        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 251 AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 14089 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.064 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.640 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 577   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 325   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.41 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 80.8   | <b>ATS</b> | 38.8 | <b>% FFS</b> | 77.7 |
| <b>FFS Delay</b> | 10.3 | <b>LOS Thresh. Delay</b> | 10.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 110                                     | 290  | 690   | 1030  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 460  | 1080  | 1610  | 2220  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2900                                    | 7200 | 16900 | 25200 | 34700 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Boden Road        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 251 PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 14089 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.106 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.530 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 792   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 702   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.56 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 86.2   | <b>ATS</b> | 34.9 | <b>% FFS</b> | 69.8 |
| <b>FFS Delay</b> | 15.6 | <b>LOS Thresh. Delay</b> | 15.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 280  | 610   | 880   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 530  | 1160  | 1670  | 2680  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1700                                    | 5000 | 11000 | 15800 | 25300 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Boden Road        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 251 AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 35491 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.069 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.621 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1521  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 928   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.07     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 290  | 680   | 1010  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 470  | 1100  | 1630  | 2290  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2500                                    | 6900 | 16000 | 23700 | 33200 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Boden Road        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 251 PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 35491 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.106 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.621 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 2336  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1426  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.64     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 290  | 680   | 1010  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 470  | 1100  | 1630  | 2290  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1700                                    | 4500 | 10400 | 15400 | 21700 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |                   |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Boden Road        | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Eastbound         | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 251 AM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 35491 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.069 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.621 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1521  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 928   | <b>Adjusted Capacity</b> | 1647  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.50 | <b>Density</b>           | 20.1 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0  | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D      | E      |
|--------------|-----------------------------------------|-------|-------|--------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |        |        |
| 1            |                                         |       |       |        |        |
| 2            | 750                                     | 1280  | 1810  | 2320   | 2690   |
| 3            | 1130                                    | 1930  | 2720  | 3480   | 4040   |
| 4            | 1510                                    | 2570  | 3630  | 4650   | 5390   |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |        |        |
| 2            |                                         |       |       |        |        |
| 4            | 1210                                    | 2070  | 2920  | 3740   | 4340   |
| 6            | 1820                                    | 3110  | 4390  | 5610   | 6510   |
| 8            | 2440                                    | 4140  | 5850  | 7490   | 8680   |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |        |        |
| 2            |                                         |       |       |        |        |
| 4            | 17600                                   | 30000 | 42400 | 54300  | 62900  |
| 6            | 26400                                   | 45100 | 63700 | 81400  | 94400  |
| 8            | 35400                                   | 60000 | 84800 | 108600 | 125800 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                |                       |                   |                      |                   |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                             | <b>Highway Name</b>   | Greenfield Avenue | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                          | <b>From</b>           | Marilyn Road      | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                          | <b>To</b>             | Boden Road        | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                            | <b>Peak Direction</b> | Westbound         | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu251 PM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                                |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 35491 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.106 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.621 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 2336  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1426  | <b>Adjusted Capacity</b> | 1647  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.77 | <b>Density</b>           | 31.2 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 49.5 | <b>% FFS</b> | 98.9 |
| <b>FFS Delay</b> | 0.4  | <b>LOS Thresh. Delay</b> | 6.4  | <b>Service Measure</b> | Density | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 750                                     | 1280  | 1810  | 2320  | 2690  |
| 3            | 1130                                    | 1930  | 2720  | 3480  | 4040  |
| 4            | 1510                                    | 2570  | 3630  | 4650  | 5390  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1210                                    | 2070  | 2920  | 3740  | 4340  |
| 6            | 1820                                    | 3110  | 4390  | 5610  | 6510  |
| 8            | 2440                                    | 4140  | 5850  | 7490  | 8680  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 11500                                   | 19600 | 27600 | 35300 | 41000 |
| 6            | 17200                                   | 29400 | 41500 | 53000 | 61500 |
| 8            | 23100                                   | 39100 | 55200 | 70700 | 81900 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                   |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Boden Road        | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Campus Parkway    | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 252 AM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables                |       |                          |       |
|------------------------|-------|-------------------------|-----|----------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.400 | <b>Median</b>           | Yes | <b>AADT</b>                      | 17892 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                         | 0.064 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                         | 0.750 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrlly. Vol.</b>     | 859   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrlly. Vol.</b> | 286   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.27 | <b>Density</b>           | 10.8 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 4.8  | <b>Service Measure</b> | Density | <b>LOS</b> | B    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 790                                     | 1350 | 1910 | 2440 | 2830 |
| 3            | 1190                                    | 2030 | 2870 | 3670 | 4250 |
| 4            | 1590                                    | 2710 | 3820 | 4890 | 5670 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1060                                    | 1800 | 2550 | 3260 | 3780 |
| 6            | 1590                                    | 2710 | 3830 | 4900 | 5670 |
| 8            | 2120                                    | 3620 | 5100 | 6520 | 7560 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |



|   |       |       |       |        |        |
|---|-------|-------|-------|--------|--------|
| 4 | 16600 | 28200 | 39900 | 51000  | 59100  |
| 6 | 24900 | 42400 | 59900 | 76600  | 88600  |
| 8 | 33200 | 56600 | 79700 | 101900 | 118200 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                   |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Boden Road        | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Campus Parkway    | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 252 PM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.400 | <b>Median</b>           | Yes | <b>AADT</b>                     | 17892 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.108 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.570 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1101  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 831   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.35 | <b>Density</b>           | 13.8 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 4.8  | <b>Service Measure</b> | Density | <b>LOS</b> | B    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 790                                     | 1350 | 1910 | 2440 | 2830 |
| 3            | 1190                                    | 2030 | 2870 | 3670 | 4250 |
| 4            | 1590                                    | 2710 | 3820 | 4890 | 5670 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1390                                    | 2370 | 3360 | 4290 | 4970 |
| 6            | 2090                                    | 3570 | 5040 | 6440 | 7460 |
| 8            | 2790                                    | 4760 | 6710 | 8580 | 9950 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 4 | 12900 | 22000 | 31200 | 39800 | 46100 |
| 6 | 19400 | 33100 | 46700 | 59700 | 69100 |
| 8 | 25900 | 44100 | 62200 | 79500 | 92200 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Boden Road        | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Campus Parkway    | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 252 AM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.400 | <b>Median</b>           | Yes | <b>AADT</b>                     | 54676 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.069 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.633 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 2388  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1385  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.75 | <b>Density</b>           | 30.1 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 49.7 | <b>% FFS</b> | 99.4 |
| <b>FFS Delay</b> | 0.2  | <b>LOS Thresh. Delay</b> | 5.0  | <b>Service Measure</b> | Density | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 790                                     | 1350 | 1910 | 2440 | 2830 |
| 3            | 1190                                    | 2030 | 2870 | 3670 | 4250 |
| 4            | 1590                                    | 2710 | 3820 | 4890 | 5670 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1250                                    | 2140 | 3020 | 3860 | 4480 |
| 6            | 1880                                    | 3210 | 4540 | 5800 | 6720 |
| 8            | 2520                                    | 4290 | 6040 | 7730 | 8960 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |

|   |       |       |       |        |        |
|---|-------|-------|-------|--------|--------|
| 4 | 18200 | 31100 | 43800 | 56000  | 65000  |
| 6 | 27300 | 46600 | 65800 | 84100  | 97400  |
| 8 | 36600 | 62200 | 87600 | 112100 | 129900 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Boden Road        | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Campus Parkway    | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 252 PM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.400 | <b>Median</b>           | Yes | <b>AADT</b>                     | 54676 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.108 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.546 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 3224  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 2681  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 1.01 | <b>Density</b>           | 43.6 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 46.3 | <b>% FFS</b> | 92.7 |
| <b>FFS Delay</b> | 2.3  | <b>LOS Thresh. Delay</b> | 7.1  | <b>Service Measure</b> | Density | <b>LOS</b> | F    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            |                                         |      |      |      |       |
| 2            | 790                                     | 1350 | 1910 | 2440 | 2830  |
| 3            | 1190                                    | 2030 | 2870 | 3670 | 4250  |
| 4            | 1590                                    | 2710 | 3820 | 4890 | 5670  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            |                                         |      |      |      |       |
| 4            | 1450                                    | 2480 | 3500 | 4470 | 5190  |
| 6            | 2180                                    | 3720 | 5260 | 6730 | 7790  |
| 8            | 2920                                    | 4970 | 7000 | 8960 | 10390 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            |                                         |      |      |      |       |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 4 | 13500 | 23000 | 32500 | 41400 | 48100 |
| 6 | 20200 | 34500 | 48800 | 62400 | 72200 |
| 8 | 27100 | 46100 | 64900 | 83000 | 96300 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |                   |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | Boden Road        | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Campus Parkway    | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 252 AM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.400 | <b>Median</b>           | Yes | <b>AADT</b>                     | 54676 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 6     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.069 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.633 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 2388  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1385  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.50 | <b>Density</b>           | 20.0 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 4.8  | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 790                                     | 1350 | 1910 | 2440 | 2830 |
| 3            | 1190                                    | 2030 | 2870 | 3670 | 4250 |
| 4            | 1590                                    | 2710 | 3820 | 4890 | 5670 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1250                                    | 2140 | 3020 | 3860 | 4480 |
| 6            | 1880                                    | 3210 | 4540 | 5800 | 6720 |
| 8            | 2520                                    | 4290 | 6040 | 7730 | 8960 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |



|   |       |       |       |        |        |
|---|-------|-------|-------|--------|--------|
| 4 | 18200 | 31100 | 43800 | 56000  | 65000  |
| 6 | 27300 | 46600 | 65800 | 84100  | 97400  |
| 8 | 36600 | 62200 | 87600 | 112100 | 129900 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |                   |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | Boden Road        | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Greenfield Avenue | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Campus Parkway    | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 252 PM.xhp |                       |                   |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |                   |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.400 | <b>Median</b>           | Yes | <b>AADT</b>                     | 54676 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 6     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.108 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.546 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 3224  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 2681  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.67 | <b>Density</b>           | 26.9 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 4.8  | <b>Service Measure</b> | Density | <b>LOS</b> | D    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            |                                         |      |      |      |       |
| 2            | 790                                     | 1350 | 1910 | 2440 | 2830  |
| 3            | 1190                                    | 2030 | 2870 | 3670 | 4250  |
| 4            | 1590                                    | 2710 | 3820 | 4890 | 5670  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            |                                         |      |      |      |       |
| 4            | 1450                                    | 2480 | 3500 | 4470 | 5190  |
| 6            | 2180                                    | 3720 | 5260 | 6730 | 7790  |
| 8            | 2920                                    | 4970 | 7000 | 8960 | 10390 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            |                                         |      |      |      |       |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 4 | 13500 | 23000 | 32500 | 41400 | 48100 |
| 6 | 20200 | 34500 | 48800 | 62400 | 72200 |
| 8 | 27100 | 46100 | 64900 | 83000 | 96300 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                  |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Boden Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Bergen Boulevard | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 253 AM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | Yes | <b>AADT</b>                     | 9982  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.065 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.670 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 435   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 214   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.29 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 73.4   | <b>ATS</b> | 40.5 | <b>% FFS</b> | 81.1 |
| <b>FFS Delay</b> | 10.1 | <b>LOS Thresh. Delay</b> | 10.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 120                                     | 330  | 740   | 1120  | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 500  | 1110  | 1680  | 2230  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2800                                    | 7700 | 17100 | 25900 | 34400 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                  |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Boden Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Bergen Boulevard | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 253 PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | Yes | <b>AADT</b>                     | 9982  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.110 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.510 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 560   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 538   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.38 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 76.7   | <b>ATS</b> | 38.4 | <b>% FFS</b> | 76.8 |
| <b>FFS Delay</b> | 13.0 | <b>LOS Thresh. Delay</b> | 13.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 290  | 620   | 890   | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 570  | 1220  | 1750  | 2930  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1700                                    | 5200 | 11100 | 16000 | 26700 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Boden Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Bergen Boulevard | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 253 AM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | Yes | <b>AADT</b>                     | 28500 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.087 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.620 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1537  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 942   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.03     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 110                                     | 300  | 710   | 1060  | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 490  | 1150  | 1710  | 2410  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2100                                    | 5700 | 13300 | 19700 | 27800 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Boden Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Bergen Boulevard | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 253 PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | Yes | <b>AADT</b>                     | 28500 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.110 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.644 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 2019  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1116  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.35     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 110                                     | 310  | 730   | 1090  | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 490  | 1140  | 1700  | 2320  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1700                                    | 4500 | 10400 | 15500 | 21100 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |                  |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Boden Road       | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Bergen Boulevard | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 253 AM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | No  | <b>AADT</b>                     | 28500 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.087 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.620 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1537  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 942   | <b>Adjusted Capacity</b> | 1647  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.51 | <b>Density</b>           | 20.3 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 7.2  | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.**

|              | A                                       | B     | C     | D     | E      |
|--------------|-----------------------------------------|-------|-------|-------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |        |
| 1            |                                         |       |       |       |        |
| 2            | 750                                     | 1280  | 1810  | 2320  | 2690   |
| 3            | 1130                                    | 1930  | 2720  | 3480  | 4040   |
| 4            | 1510                                    | 2570  | 3630  | 4650  | 5390   |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |        |
| 2            |                                         |       |       |       |        |
| 4            | 1210                                    | 2070  | 2920  | 3750  | 4340   |
| 6            | 1830                                    | 3120  | 4390  | 5620  | 6520   |
| 8            | 2440                                    | 4150  | 5860  | 7500  | 8700   |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |        |
| 2            |                                         |       |       |       |        |
| 4            | 14000                                   | 23800 | 33600 | 43200 | 49900  |
| 6            | 21100                                   | 35900 | 50500 | 64600 | 75000  |
| 8            | 28100                                   | 47800 | 67400 | 86300 | 100000 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                |                       |                  |                      |                   |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                             | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                          | <b>From</b>           | Boden Road       | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                          | <b>To</b>             | Bergen Boulevard | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                            | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu253 PM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                                |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.600 | <b>Median</b>           | No  | <b>AADT</b>                     | 28500 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.110 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.644 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 2019  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1116  | <b>Adjusted Capacity</b> | 1647  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.67 | <b>Density</b>           | 26.6 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 7.2  | <b>Service Measure</b> | Density | <b>LOS</b> | D    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 750                                     | 1280  | 1810  | 2320  | 2690  |
| 3            | 1130                                    | 1930  | 2720  | 3480  | 4040  |
| 4            | 1510                                    | 2570  | 3630  | 4650  | 5390  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1170                                    | 1990  | 2820  | 3610  | 4180  |
| 6            | 1760                                    | 3000  | 4230  | 5410  | 6280  |
| 8            | 2350                                    | 4000  | 5640  | 7230  | 8370  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 10700                                   | 18100 | 25700 | 32900 | 38000 |
| 6            | 16000                                   | 27300 | 38500 | 49200 | 57100 |
| 8            | 21400                                   | 36400 | 51300 | 65800 | 76100 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                  |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Bergen Boulevard | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Olio Road        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 254 AM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 6272  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.057 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.590 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 211   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 147   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.14 | <b>Density</b>           | N/A | <b>PTSF</b>            | 58.9   | <b>ATS</b> | 43.2 | <b>% FFS</b> | 86.5 |
| <b>FFS Delay</b> | 5.6  | <b>LOS Thresh. Delay</b> | 5.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 300  | 690   | 1020  | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 510  | 1170  | 1730  | 2530  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3000                                    | 9000 | 20600 | 30400 | 44400 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                  |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Bergen Boulevard | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Olio Road        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 254 PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 6272  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.115 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.650 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 469   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 252   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.32 | <b>Density</b>           | N/A | <b>PTSF</b>            | 74.3   | <b>ATS</b> | 40.2 | <b>% FFS</b> | 80.3 |
| <b>FFS Delay</b> | 8.8  | <b>LOS Thresh. Delay</b> | 8.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 120                                     | 310  | 730  | 1100  | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 190                                     | 480  | 1130 | 1700  | 2300  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1700                                    | 4200 | 9900 | 14800 | 20000 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Bergen Boulevard | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Olio Road        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 254 AM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 29226 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.102 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.592 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1765  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1216  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.18     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 300  | 690   | 1030  | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 510  | 1170  | 1740  | 2520  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1700                                    | 5000 | 11500 | 17100 | 24800 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Bergen Boulevard | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Olio Road        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 254 PM.xhp |                       |                  |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 29226 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.115 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.623 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 2094  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1267  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.40     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 110                                     | 300  | 710   | 1070  | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 490  | 1140  | 1720  | 2400  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1600                                    | 4300 | 10000 | 15000 | 20900 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |                  |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Bergen Boulevard | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Olio Road        | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 254 AM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 29226 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.102 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.592 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1765  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1216  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.55 | <b>Density</b>           | 22.1 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0  | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 790                                     | 1350  | 1910  | 2440  | 2830  |
| 3            | 1190                                    | 2030  | 2870  | 3670  | 4250  |
| 4            | 1590                                    | 2710  | 3820  | 4890  | 5670  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1340                                    | 2290  | 3230  | 4130  | 4790  |
| 6            | 2020                                    | 3430  | 4850  | 6200  | 7180  |
| 8            | 2690                                    | 4580  | 6460  | 8270  | 9580  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 13200                                   | 22500 | 31700 | 40500 | 47000 |
| 6            | 19900                                   | 33700 | 47600 | 60800 | 70400 |
| 8            | 26400                                   | 45000 | 63400 | 81100 | 94000 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                |                       |                  |                      |                   |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                             | <b>Highway Name</b>   | 146th Street     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                          | <b>From</b>           | Bergen Boulevard | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                          | <b>To</b>             | Olio Road        | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                            | <b>Peak Direction</b> | Westbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu254 PM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                                |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 29226 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.115 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.623 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 2094  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1267  | <b>Adjusted Capacity</b> | 1734  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.66 | <b>Density</b>           | 26.3 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0  | <b>Service Measure</b> | Density | <b>LOS</b> | D    |              |       |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 790                                     | 1350  | 1910  | 2440  | 2830  |
| 3            | 1190                                    | 2030  | 2870  | 3670  | 4250  |
| 4            | 1590                                    | 2710  | 3820  | 4890  | 5670  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1270                                    | 2170  | 3070  | 3920  | 4550  |
| 6            | 1920                                    | 3260  | 4610  | 5900  | 6830  |
| 8            | 2560                                    | 4350  | 6140  | 7850  | 9110  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 11100                                   | 18900 | 26700 | 34100 | 39600 |
| 6            | 16700                                   | 28400 | 40100 | 51400 | 59400 |
| 8            | 22300                                   | 37900 | 53400 | 68300 | 79300 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                      |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 146th Street         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Olio Road            | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Prairie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound            | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 255 AM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1552  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.053 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.650 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 53    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 29    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.04 | <b>Density</b>           | N/A | <b>PTSF</b>            | 40.8   | <b>ATS</b> | 46.7 | <b>% FFS</b> | 93.4 |
| <b>FFS Delay</b> | 4.8  | <b>LOS Thresh. Delay</b> | 4.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 110                                     | 300  | 690   | 1050  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 470  | 1070  | 1620  | 2190  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3300                                    | 8900 | 20200 | 30600 | 41400 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                      |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 146th Street         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Olio Road            | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Prairie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound            | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 255 PM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1552  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.125 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.760 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 147   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 47    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.11 | <b>Density</b>           | N/A | <b>PTSF</b>            | 55.6   | <b>ATS</b> | 45.7 | <b>% FFS</b> | 91.3 |
| <b>FFS Delay</b> | 6.5  | <b>LOS Thresh. Delay</b> | 6.5 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 130                                     | 400  | 730  | 1150  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 180                                     | 530  | 970  | 1520  | 1870  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1500                                    | 4300 | 7800 | 12200 | 15000 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                      |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 146th Street         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Olio Road            | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Prairie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound            | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 255 AM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 24320 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.108 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.755 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1983  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 644   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.39     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.**

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 130                                     | 400  | 730  | 1150  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 180                                     | 530  | 970  | 1530  | 1890  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1700                                    | 5000 | 9000 | 14200 | 17500 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                      |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 146th Street         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Olio Road            | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Prairie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound            | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 255 PM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 24320 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.125 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.732 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 2225  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 815   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.56     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 120                                     | 370  | 730  | 1130  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 170                                     | 510  | 1000 | 1550  | 1940  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1400                                    | 4100 | 8000 | 12400 | 15600 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |                      |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | 146th Street         | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Olio Road            | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Prairie Baptist Road | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Eastbound            | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 255 AM.xhp |                       |                      |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |                      |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.000 | <b>Median</b>           | No  | <b>AADT</b>                     | 24320 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.108 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.755 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1983  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 644   | <b>Adjusted Capacity</b> | 1647  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.65 | <b>Density</b>           | 26.2 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 12.0 | <b>Service Measure</b> | Density | <b>LOS</b> | D    |              |       |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 750                                     | 1280  | 1810  | 2320  | 2690  |
| 3            | 1130                                    | 1930  | 2720  | 3480  | 4040  |
| 4            | 1510                                    | 2570  | 3630  | 4650  | 5390  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1000                                    | 1700  | 2400  | 3080  | 3570  |
| 6            | 1500                                    | 2560  | 3610  | 4610  | 5360  |
| 8            | 2000                                    | 3410  | 4810  | 6160  | 7140  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 9300                                    | 15800 | 22300 | 28600 | 33100 |
| 6            | 13900                                   | 23800 | 33500 | 42700 | 49700 |
| 8            | 18600                                   | 31600 | 44600 | 57100 | 66200 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                |                       |                      |                      |                   |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                             | <b>Highway Name</b>   | 146th Street         | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                          | <b>From</b>           | Olio Road            | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                          | <b>To</b>             | Prairie Baptist Road | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                            | <b>Peak Direction</b> | Westbound            | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu255 PM.xhp |                       |                      |                      |                   |
| <b>User Notes</b>    |                                                                                                                                |                       |                      |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.000 | <b>Median</b>           | No  | <b>AADT</b>                     | 24320 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.125 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.732 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 2225  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 815   | <b>Adjusted Capacity</b> | 1647  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.73 | <b>Density</b>           | 29.5 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 49.8 | <b>% FFS</b> | 99.6 |
| <b>FFS Delay</b> | 0.3  | <b>LOS Thresh. Delay</b> | 12.3 | <b>Service Measure</b> | Density | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 750                                     | 1280  | 1810  | 2320  | 2690  |
| 3            | 1130                                    | 1930  | 2720  | 3480  | 4040  |
| 4            | 1510                                    | 2570  | 3630  | 4650  | 5390  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1030                                    | 1750  | 2480  | 3170  | 3680  |
| 6            | 1550                                    | 2640  | 3720  | 4760  | 5520  |
| 8            | 2070                                    | 3520  | 4960  | 6360  | 7370  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 8300                                    | 14000 | 19900 | 25400 | 29500 |
| 6            | 12400                                   | 21200 | 29800 | 38100 | 44200 |
| 8            | 16600                                   | 28200 | 39700 | 50900 | 59000 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                      |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 146th Street         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Prairie Baptist Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Cyntheanne Road      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound            | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 256 AM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.029 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.930 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 27    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 2     | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.02 | <b>Density</b>           | N/A | <b>PTSF</b>            | 44.6   | <b>ATS</b> | 47.2 | <b>% FFS</b> | 94.4 |
| <b>FFS Delay</b> | 4.0  | <b>LOS Thresh. Delay</b> | 4.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 160                                     | 580   | 1000  | 1380  | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 180                                     | 630   | 1080  | 1490  | 1530  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 6300                                    | 21800 | 37300 | 51400 | 52800 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                      |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 146th Street         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Prairie Baptist Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Cyntheanne Road      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound            | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 256 PM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.084 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.700 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 59    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 25    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.04 | <b>Density</b>           | N/A | <b>PTSF</b>            | 42.9   | <b>ATS</b> | 46.7 | <b>% FFS</b> | 93.4 |
| <b>FFS Delay</b> | 4.8  | <b>LOS Thresh. Delay</b> | 4.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 120                                     | 340  | 720   | 1100  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 490  | 1030  | 1580  | 2030  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2200                                    | 5900 | 12300 | 18900 | 24200 |



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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                      |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 146th Street         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Prairie Baptist Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cyntheanne Road      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound            | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 256 AM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1486  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.067 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.980 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 98    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 2     | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.07 | <b>Density</b>           | N/A | <b>PTSF</b>            | 56.2   | <b>ATS</b> | 46.5 | <b>% FFS</b> | 93.1 |
| <b>FFS Delay</b> | 5.1  | <b>LOS Thresh. Delay</b> | 5.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 170                                     | 610  | 1050  | 1420  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 630  | 1080  | 1450  | 1450  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2700                                    | 9500 | 16200 | 21700 | 21700 |

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| 6 |
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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                      |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 146th Street         | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Prairie Baptist Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cyntheanne Road      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound            | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 256 PM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1486  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.105 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.622 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 97    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 59    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.07 | <b>Density</b>           | N/A | <b>PTSF</b>            | 46.0   | <b>ATS</b> | 46.0 | <b>% FFS</b> | 92.0 |
| <b>FFS Delay</b> | 5.9  | <b>LOS Thresh. Delay</b> | 5.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 290  | 680   | 1010  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 470  | 1100  | 1630  | 2290  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1700                                    | 4500 | 10500 | 15600 | 21900 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                 |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 146th Street    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Cyntheanne Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Atlantic Road   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 257 AM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.020 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.850 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 17    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 3     | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.01 | <b>Density</b>           | N/A | <b>PTSF</b>            | 41.5   | <b>ATS</b> | 47.3 | <b>% FFS</b> | 94.6 |
| <b>FFS Delay</b> | 3.9  | <b>LOS Thresh. Delay</b> | 3.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 150                                     | 510   | 810   | 1190  | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 180                                     | 600   | 960   | 1400  | 1680  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 9000                                    | 30000 | 48000 | 70000 | 84000 |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                 |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 146th Street    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Cyntheanne Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Atlantic Road   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 257 PM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.046 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.570 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 26    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 20    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.02 | <b>Density</b>           | N/A | <b>PTSF</b>            | 34.0   | <b>ATS</b> | 47.1 | <b>% FFS</b> | 94.1 |
| <b>FFS Delay</b> | 4.3  | <b>LOS Thresh. Delay</b> | 4.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 100                                     | 280   | 640   | 940   | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 180                                     | 500   | 1130  | 1650  | 2500  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 4000                                    | 10900 | 24600 | 35900 | 54400 |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                 |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 146th Street    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Cyntheanne Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Atlantic Road   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 257 AM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.021 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.857 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 18    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 3     | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.01 | <b>Density</b>           | N/A | <b>PTSF</b>            | 41.7   | <b>ATS</b> | 47.3 | <b>% FFS</b> | 94.6 |
| <b>FFS Delay</b> | 3.9  | <b>LOS Thresh. Delay</b> | 3.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 150                                     | 520   | 820   | 1190  | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 180                                     | 610   | 960   | 1390  | 1660  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 8600                                    | 29100 | 45800 | 66200 | 79100 |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                 |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 146th Street    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Cyntheanne Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Atlantic Road   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 257 PM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.047 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.574 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 27    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 20    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.02 | <b>Density</b>           | N/A | <b>PTSF</b>            | 34.6   | <b>ATS</b> | 47.1 | <b>% FFS</b> | 94.1 |
| <b>FFS Delay</b> | 4.3  | <b>LOS Thresh. Delay</b> | 4.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 100                                     | 280   | 640   | 950   | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 180                                     | 490   | 1120  | 1660  | 2480  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 3900                                    | 10500 | 23900 | 35400 | 52800 |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                 |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Cyntheanne Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 136th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 258 AM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 2278  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.082 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.620 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 31  | <b>Peak Dir. Hrly. Vol.</b>     | 116   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 71    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.08 | <b>Density</b>           | N/A | <b>PTSF</b>            | 38.2   | <b>ATS</b> | 52.3 | <b>% FFS</b> | 95.2 |
| <b>FFS Delay</b> | 3.2  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 200                                     | 490  | 850   | 1180  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 330                                     | 800  | 1380  | 1910  | 2300  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 4100                                    | 9800 | 16900 | 23300 | 28100 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                 |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Cyntheanne Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 136th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 258 PM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 2278  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.100 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.610 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 31  | <b>Peak Dir. Hrly. Vol.</b>     | 139   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 89    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.10 | <b>Density</b>           | N/A | <b>PTSF</b>            | 41.3   | <b>ATS</b> | 51.9 | <b>% FFS</b> | 94.3 |
| <b>FFS Delay</b> | 3.8  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 200                                     | 490  | 840   | 1160  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 330                                     | 810  | 1380  | 1910  | 2330  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3400                                    | 8200 | 13800 | 19200 | 23400 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                 |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cyntheanne Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 136th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 258 AM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 2841  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.082 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.639 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 31  | <b>Peak Dir. Hrly. Vol.</b>     | 149   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 84    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.11 | <b>Density</b>           | N/A | <b>PTSF</b>            | 42.9   | <b>ATS</b> | 51.9 | <b>% FFS</b> | 94.3 |
| <b>FFS Delay</b> | 3.7  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 210                                     | 510  | 870   | 1220  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 330                                     | 800  | 1370  | 1910  | 2230  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 4100                                    | 9800 | 16800 | 23300 | 27200 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                 |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Cyntheanne Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 136th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 258 PM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 2841  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.107 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.566 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 31  | <b>Peak Dir. Hrly. Vol.</b>     | 172   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 132   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.12 | <b>Density</b>           | N/A | <b>PTSF</b>            | 46.5   | <b>ATS</b> | 50.6 | <b>% FFS</b> | 92.0 |
| <b>FFS Delay</b> | 5.4  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 170                                     | 460  | 790   | 1080  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 310                                     | 820  | 1400  | 1910  | 2510  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2900                                    | 7700 | 13100 | 17900 | 23500 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                     |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 259a AM.xhp |                       |                     |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                     |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 1465  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.106 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.510 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 79    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 76    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.06 | <b>Density</b>           | N/A | <b>PTSF</b>            | 15.7   | <b>ATS</b> | 53.0 | <b>% FFS</b> | 96.4 |
| <b>FFS Delay</b> | 2.0  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 160                                     | 440  | 720   | 980   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 320                                     | 870  | 1420  | 1930  | 2790  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3100                                    | 8300 | 13400 | 18300 | 26400 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                     |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 259a PM.xhp |                       |                     |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                     |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 1465  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.156 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.510 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 117   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 112   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.08 | <b>Density</b>           | N/A | <b>PTSF</b>            | 21.8   | <b>ATS</b> | 52.0 | <b>% FFS</b> | 94.5 |
| <b>FFS Delay</b> | 3.1  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.**

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 160                                     | 440  | 720  | 980   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 320                                     | 870  | 1420 | 1930  | 2790  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 2100                                    | 5600 | 9200 | 12400 | 17900 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                     |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Westbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 259a AM.xhp |                       |                     |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                     |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 23000 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.131 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.539 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 1624  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1389  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.14     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 180                                     | 460  | 760   | 1030  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 340                                     | 860  | 1420  | 1920  | 2640  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2600                                    | 6600 | 10900 | 14700 | 20200 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                     |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Eastbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 259a PM.xhp |                       |                     |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                     |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 23000 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.156 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.573 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 2056  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1532  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.44     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 190                                     | 480  | 800  | 1100  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 340                                     | 840  | 1400 | 1920  | 2480  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 2200                                    | 5400 | 9000 | 12400 | 15900 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                  |                       |                     |                      |                   |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                               | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                            | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                            | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                              | <b>Peak Direction</b> | Westbound           | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 259a AM.xhp |                       |                     |                      |                   |
| <b>User Notes</b>    |                                                                                                                                  |                       |                     |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 23000 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.131 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.539 | <b>Base Capacity</b>     | 2100  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1624  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1389  | <b>Adjusted Capacity</b> | 1730  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.51 | <b>Density</b>           | 19.5 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 55.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 4.4  | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 830                                     | 1410  | 2000  | 2530  | 2800  |
| 3            | 1250                                    | 2120  | 3000  | 3790  | 4200  |
| 4            | 1660                                    | 2830  | 4000  | 5060  | 5600  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1540                                    | 2620  | 3720  | 4700  | 5200  |
| 6            | 2320                                    | 3940  | 5570  | 7040  | 7800  |
| 8            | 3080                                    | 5260  | 7430  | 9390  | 10390 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 11800                                   | 20000 | 28400 | 35900 | 39700 |
| 6            | 17800                                   | 30100 | 42600 | 53800 | 59600 |
| 8            | 23600                                   | 40200 | 56800 | 71700 | 79400 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |                     |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Eastbound           | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu259a PM.xhp |                       |                     |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |                     |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 23000 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.156 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.573 | <b>Base Capacity</b>     | 2100  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 2056  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1532  | <b>Adjusted Capacity</b> | 1730  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.65 | <b>Density</b>           | 24.7 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 55.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 4.4  | <b>Service Measure</b> | Density | <b>LOS</b> | D    |              |       |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.**

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 830                                     | 1410  | 2000  | 2530  | 2800  |
| 3            | 1250                                    | 2120  | 3000  | 3790  | 4200  |
| 4            | 1660                                    | 2830  | 4000  | 5060  | 5600  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1450                                    | 2470  | 3500  | 4420  | 4890  |
| 6            | 2190                                    | 3700  | 5240  | 6620  | 7330  |
| 8            | 2900                                    | 4940  | 6990  | 8840  | 9780  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 9300                                    | 15900 | 22500 | 28400 | 31400 |
| 6            | 14100                                   | 23800 | 33600 | 42500 | 47000 |
| 8            | 18600                                   | 31700 | 44900 | 56700 | 62700 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                     |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 259b AM.xhp |                       |                     |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                     |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | Yes | <b>AADT</b>                     | 1465  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.106 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.510 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 79    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 76    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.05 | <b>Density</b>           | N/A | <b>PTSF</b>            | 37.4   | <b>ATS</b> | 50.9 | <b>% FFS</b> | 92.5 |
| <b>FFS Delay</b> | 1.1  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 360  | 700   | 990   | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 710  | 1380  | 1950  | 2930  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1700                                    | 6700 | 13100 | 18400 | 27700 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                     |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 259b PM.xhp |                       |                     |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                     |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | Yes | <b>AADT</b>                     | 1465  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.156 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.510 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 117   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 112   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.08 | <b>Density</b>           | N/A | <b>PTSF</b>            | 43.9   | <b>ATS</b> | 49.8 | <b>% FFS</b> | 90.6 |
| <b>FFS Delay</b> | 1.4  | <b>LOS Thresh. Delay</b> | 0.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 90                                      | 360  | 700  | 990   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 180                                     | 710  | 1380 | 1950  | 2930  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1200                                    | 4600 | 8900 | 12600 | 18800 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                     |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Westbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 259b AM.xhp |                       |                     |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                     |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | Yes | <b>AADT</b>                     | 22981 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.131 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.539 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1623  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1388  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.09     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 370  | 740   | 1050  | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 190                                     | 690  | 1380  | 1950  | 2770  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1500                                    | 5300 | 10600 | 14900 | 21200 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                     |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Eastbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 259b PM.xhp |                       |                     |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                     |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | Yes | <b>AADT</b>                     | 22981 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.156 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.574 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 2058  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1527  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.38     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.**

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 110                                     | 370  | 770  | 1110  | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 200                                     | 650  | 1350 | 1940  | 2600  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 4200 | 8700 | 12500 | 16700 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                  |                       |                     |                      |                   |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                               | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                            | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                            | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                              | <b>Peak Direction</b> | Westbound           | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 259b AM.xhp |                       |                     |                      |                   |
| <b>User Notes</b>    |                                                                                                                                  |                       |                     |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | Yes | <b>AADT</b>                     | 22981 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.131 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.539 | <b>Base Capacity</b>     | 2100  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1623  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1388  | <b>Adjusted Capacity</b> | 1821  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.48 | <b>Density</b>           | 18.5 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 55.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 1.1  | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 870                                     | 1490  | 2100  | 2660  | 2950  |
| 3            | 1310                                    | 2230  | 3150  | 3990  | 4420  |
| 4            | 1750                                    | 2980  | 4210  | 5330  | 5900  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1620                                    | 2770  | 3900  | 4940  | 5480  |
| 6            | 2440                                    | 4140  | 5850  | 7410  | 8210  |
| 8            | 3250                                    | 5530  | 7820  | 9890  | 10950 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 12400                                   | 21200 | 29800 | 37800 | 41900 |
| 6            | 18700                                   | 31700 | 44700 | 56600 | 62700 |
| 8            | 24900                                   | 42300 | 59700 | 75500 | 83600 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |                     |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | 141st Street        | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Olio Road           | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Prarie Baptist Road | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Eastbound           | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu259b PM.xhp |                       |                     |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |                     |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | Yes | <b>AADT</b>                     | 22981 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.156 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.574 | <b>Base Capacity</b>     | 2100  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 2058  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1527  | <b>Adjusted Capacity</b> | 1821  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.61 | <b>Density</b>           | 23.5 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 55.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 1.1  | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 870                                     | 1490  | 2100  | 2660  | 2950  |
| 3            | 1310                                    | 2230  | 3150  | 3990  | 4420  |
| 4            | 1750                                    | 2980  | 4210  | 5330  | 5900  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1520                                    | 2600  | 3660  | 4640  | 5140  |
| 6            | 2290                                    | 3890  | 5490  | 6960  | 7710  |
| 8            | 3050                                    | 5200  | 7340  | 9290  | 10280 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 9800                                    | 16700 | 23500 | 29800 | 33000 |
| 6            | 14700                                   | 25000 | 35200 | 44700 | 49500 |
| 8            | 19600                                   | 33400 | 47100 | 59600 | 65900 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                   |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Olio Road    | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 260 AM.xhp |                       |              |                      |                   |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 10173 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.073 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.540 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 401   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 342   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |         |            |      |              |       |
|------------------|------|--------------------------|-----|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.13 | <b>Density</b>           | 5.3 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D      | E      |
|--------------|-----------------------------------------|-------|-------|--------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |        |        |
| 1            |                                         |       |       |        |        |
| 2            | 750                                     | 1280  | 1810  | 2320   | 2690   |
| 3            | 1130                                    | 1930  | 2720  | 3480   | 4040   |
| 4            | 1510                                    | 2570  | 3630  | 4650   | 5390   |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |        |        |
| 2            |                                         |       |       |        |        |
| 4            | 1390                                    | 2380  | 3360  | 4300   | 4990   |
| 6            | 2100                                    | 3580  | 5040  | 6450   | 7490   |
| 8            | 2800                                    | 4760  | 6730  | 8620   | 9990   |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |        |        |
| 2            |                                         |       |       |        |        |
| 4            | 19100                                   | 32700 | 46100 | 59000  | 68400  |
| 6            | 28800                                   | 49100 | 69100 | 88400  | 102700 |
| 8            | 38400                                   | 65300 | 92200 | 118100 | 136900 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                   |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Olio Road    | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 260 PM.xhp |                       |              |                      |                   |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 10173 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.103 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.510 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 534   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 513   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |         |            |      |              |       |
|------------------|------|--------------------------|-----|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.18 | <b>Density</b>           | 7.1 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E      |
|--------------|-----------------------------------------|-------|-------|-------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |        |
| 1            |                                         |       |       |       |        |
| 2            | 750                                     | 1280  | 1810  | 2320  | 2690   |
| 3            | 1130                                    | 1930  | 2720  | 3480  | 4040   |
| 4            | 1510                                    | 2570  | 3630  | 4650  | 5390   |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |        |
| 2            |                                         |       |       |       |        |
| 4            | 1480                                    | 2510  | 3550  | 4550  | 5280   |
| 6            | 2220                                    | 3790  | 5340  | 6830  | 7930   |
| 8            | 2970                                    | 5040  | 7120  | 9120  | 10570  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |        |
| 2            |                                         |       |       |       |        |
| 4            | 14400                                   | 24400 | 34500 | 44200 | 51300  |
| 6            | 21600                                   | 36800 | 51900 | 66400 | 77000  |
| 8            | 28900                                   | 49000 | 69200 | 88600 | 102700 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Olio Road    | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 260 AM.xhp |                       |              |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 15650 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.082 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.652 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 837   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 447   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.28 | <b>Density</b>           | 11.0 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0  | <b>Service Measure</b> | Density | <b>LOS</b> | B    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E      |
|--------------|-----------------------------------------|-------|-------|-------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |        |
| 1            |                                         |       |       |       |        |
| 2            | 750                                     | 1280  | 1810  | 2320  | 2690   |
| 3            | 1130                                    | 1930  | 2720  | 3480  | 4040   |
| 4            | 1510                                    | 2570  | 3630  | 4650  | 5390   |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |        |
| 2            |                                         |       |       |       |        |
| 4            | 1160                                    | 1970  | 2780  | 3560  | 4130   |
| 6            | 1740                                    | 2970  | 4180  | 5340  | 6200   |
| 8            | 2320                                    | 3950  | 5570  | 7140  | 8270   |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |        |
| 2            |                                         |       |       |       |        |
| 4            | 14200                                   | 24100 | 34000 | 43500 | 50400  |
| 6            | 21300                                   | 36300 | 51000 | 65200 | 75700  |
| 8            | 28300                                   | 48200 | 68000 | 87100 | 100900 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Olio Road    | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 260 PM.xhp |                       |              |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 15650 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.103 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.591 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 953   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 659   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.31 | <b>Density</b>           | 12.6 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0  | <b>Service Measure</b> | Density | <b>LOS</b> | B    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 750                                     | 1280  | 1810  | 2320  | 2690  |
| 3            | 1130                                    | 1930  | 2720  | 3480  | 4040  |
| 4            | 1510                                    | 2570  | 3630  | 4650  | 5390  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1270                                    | 2170  | 3070  | 3930  | 4560  |
| 6            | 1920                                    | 3270  | 4610  | 5890  | 6840  |
| 8            | 2560                                    | 4350  | 6150  | 7870  | 9130  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 12400                                   | 21100 | 29900 | 38200 | 44300 |
| 6            | 18700                                   | 31800 | 44800 | 57200 | 66500 |
| 8            | 24900                                   | 42300 | 59800 | 76500 | 88700 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                  |                      |                   |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 141st Street     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Bergen Boulevard | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Olio Road        | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 261 AM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                      |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 7544  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.064 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.650 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 314   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 169   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |         |            |      |              |       |
|------------------|------|--------------------------|-----|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.10 | <b>Density</b>           | 3.9 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D      | E      |
|--------------|-----------------------------------------|-------|-------|--------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |        |        |
| 1            |                                         |       |       |        |        |
| 2            | 790                                     | 1350  | 1910  | 2440   | 2830   |
| 3            | 1190                                    | 2030  | 2870  | 3670   | 4250   |
| 4            | 1590                                    | 2710  | 3820  | 4890   | 5670   |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |        |        |
| 2            |                                         |       |       |        |        |
| 4            | 1220                                    | 2080  | 2940  | 3760   | 4360   |
| 6            | 1840                                    | 3130  | 4420  | 5650   | 6540   |
| 8            | 2450                                    | 4170  | 5880  | 7530   | 8730   |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |        |        |
| 2            |                                         |       |       |        |        |
| 4            | 19100                                   | 32600 | 46000 | 58800  | 68200  |
| 6            | 28800                                   | 49000 | 69100 | 88300  | 102200 |
| 8            | 38300                                   | 65200 | 91900 | 117700 | 136500 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                  |                      |                   |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 141st Street     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Bergen Boulevard | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Olio Road        | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 261 PM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                      |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 7544  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.103 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.510 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 396   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 381   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |         |            |      |              |       |
|------------------|------|--------------------------|-----|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.12 | <b>Density</b>           | 5.0 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E      |
|--------------|-----------------------------------------|-------|-------|-------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |        |
| 1            |                                         |       |       |       |        |
| 2            | 790                                     | 1350  | 1910  | 2440  | 2830   |
| 3            | 1190                                    | 2030  | 2870  | 3670  | 4250   |
| 4            | 1590                                    | 2710  | 3820  | 4890  | 5670   |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |        |
| 2            |                                         |       |       |       |        |
| 4            | 1550                                    | 2650  | 3750  | 4790  | 5550   |
| 6            | 2340                                    | 3990  | 5630  | 7200  | 8340   |
| 8            | 3120                                    | 5320  | 7500  | 9590  | 11120  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |        |
| 2            |                                         |       |       |       |        |
| 4            | 15100                                   | 25800 | 36500 | 46600 | 53900  |
| 6            | 22800                                   | 38800 | 54700 | 70000 | 81000  |
| 8            | 30300                                   | 51700 | 72900 | 93200 | 108000 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 141st Street     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Bergen Boulevard | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Olio Road        | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 261 AM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 32223 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.068 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.655 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1435  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 756   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.45 | <b>Density</b>           | 18.0 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0  | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D      | E      |
|--------------|-----------------------------------------|-------|-------|--------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |        |        |
| 1            |                                         |       |       |        |        |
| 2            | 790                                     | 1350  | 1910  | 2440   | 2830   |
| 3            | 1190                                    | 2030  | 2870  | 3670   | 4250   |
| 4            | 1590                                    | 2710  | 3820  | 4890   | 5670   |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |        |        |
| 2            |                                         |       |       |        |        |
| 4            | 1210                                    | 2070  | 2920  | 3730   | 4330   |
| 6            | 1820                                    | 3100  | 4390  | 5610   | 6490   |
| 8            | 2430                                    | 4140  | 5840  | 7470   | 8660   |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |        |        |
| 2            |                                         |       |       |        |        |
| 4            | 17800                                   | 30500 | 43000 | 54900  | 63700  |
| 6            | 26800                                   | 45600 | 64600 | 82600  | 95500  |
| 8            | 35800                                   | 60900 | 85900 | 109900 | 127400 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 141st Street     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Bergen Boulevard | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Olio Road        | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 261 PM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 32223 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.103 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.547 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1815  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1503  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.57 | <b>Density</b>           | 22.8 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0  | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E      |
|--------------|-----------------------------------------|-------|-------|-------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |        |
| 1            |                                         |       |       |       |        |
| 2            | 790                                     | 1350  | 1910  | 2440  | 2830   |
| 3            | 1190                                    | 2030  | 2870  | 3670  | 4250   |
| 4            | 1590                                    | 2710  | 3820  | 4890  | 5670   |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |        |
| 2            |                                         |       |       |       |        |
| 4            | 1450                                    | 2470  | 3500  | 4470  | 5180   |
| 6            | 2180                                    | 3720  | 5250  | 6710  | 7770   |
| 8            | 2910                                    | 4960  | 6990  | 8940  | 10370  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |        |
| 2            |                                         |       |       |       |        |
| 4            | 14100                                   | 24000 | 34000 | 43400 | 50300  |
| 6            | 21200                                   | 36200 | 51000 | 65200 | 75500  |
| 8            | 28300                                   | 48200 | 67900 | 86800 | 100700 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Tegler Drive      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Corporate Parkway | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Bergen Boulevard  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 263a AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 4084  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.067 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.620 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 170   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 104   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.12 | <b>Density</b>           | N/A | <b>PTSF</b>            | 54.4   | <b>ATS</b> | 44.7 | <b>% FFS</b> | 89.4 |
| <b>FFS Delay</b> | 2.6  | <b>LOS Thresh. Delay</b> | 2.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 110                                     | 300  | 710   | 1060  | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 490  | 1150  | 1710  | 2410  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2700                                    | 7400 | 17200 | 25600 | 36000 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Tegler Drive      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Corporate Parkway | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Bergen Boulevard  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 263a PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 4084  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.128 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.530 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 277   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 246   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.19 | <b>Density</b>           | N/A | <b>PTSF</b>            | 63.8   | <b>ATS</b> | 41.9 | <b>% FFS</b> | 83.7 |
| <b>FFS Delay</b> | 4.2  | <b>LOS Thresh. Delay</b> | 4.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 90                                      | 290  | 640  | 930   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 170                                     | 550  | 1210 | 1760  | 2820  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1400                                    | 4300 | 9500 | 13800 | 22100 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | Tegler Drive      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Corporate Parkway | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Bergen Boulevard  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Eastbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 263a AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 11773 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.082 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.736 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 711   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 255   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.48 | <b>Density</b>           | N/A | <b>PTSF</b>            | 85.8   | <b>ATS</b> | 38.0 | <b>% FFS</b> | 76.1 |
| <b>FFS Delay</b> | 6.8  | <b>LOS Thresh. Delay</b> | 6.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 130                                     | 400  | 760   | 1190  | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 550  | 1040  | 1620  | 2030  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2200                                    | 6800 | 12700 | 19800 | 24800 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                   |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | Tegler Drive      | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Corporate Parkway | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Bergen Boulevard  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Westbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 263a PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 11773 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.128 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.666 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1004  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 503   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.67 | <b>Density</b>           | N/A | <b>PTSF</b>            | 91.0   | <b>ATS</b> | 34.7 | <b>% FFS</b> | 69.4 |
| <b>FFS Delay</b> | 9.5  | <b>LOS Thresh. Delay</b> | 9.5 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 120                                     | 330  | 740  | 1120  | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 190                                     | 500  | 1120 | 1690  | 2240  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1500                                    | 4000 | 8800 | 13300 | 17600 |



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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Tegler Drive     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Corporate Pkwy   | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Bergen Boulevard | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 263b AM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.100 | <b>Median</b>           | Yes | <b>AADT</b>                     | 4084  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.067 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.620 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 170   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 104   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |         |            |      |              |       |
|------------------|------|--------------------------|-----|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.05 | <b>Density</b>           | 2.1 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 1.2 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 790                                     | 1350 | 1910 | 2440 | 2830 |
| 3            | 1190                                    | 2030 | 2870 | 3670 | 4250 |
| 4            | 1590                                    | 2710 | 3820 | 4890 | 5670 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1280                                    | 2180 | 3090 | 3940 | 4570 |
| 6            | 1920                                    | 3280 | 4630 | 5920 | 6860 |
| 8            | 2570                                    | 4380 | 6170 | 7890 | 9150 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |

|   |       |       |       |        |        |
|---|-------|-------|-------|--------|--------|
| 4 | 19200 | 32600 | 46200 | 58900  | 68300  |
| 6 | 28700 | 49000 | 69200 | 88400  | 102400 |
| 8 | 38400 | 65400 | 92100 | 117800 | 136600 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                  |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Tegler Drive     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Corporate Pkwy   | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Bergen Boulevard | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 263b PM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 4084  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.128 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.530 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 277   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 246   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |         |            |      |              |       |
|------------------|------|--------------------------|-----|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.09 | <b>Density</b>           | 3.5 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 3.6 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            |                                         |      |      |      |       |
| 2            | 790                                     | 1350 | 1910 | 2440 | 2830  |
| 3            | 1190                                    | 2030 | 2870 | 3670 | 4250  |
| 4            | 1590                                    | 2710 | 3820 | 4890 | 5670  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            |                                         |      |      |      |       |
| 4            | 1500                                    | 2550 | 3610 | 4610 | 5340  |
| 6            | 2250                                    | 3840 | 5420 | 6930 | 8020  |
| 8            | 3000                                    | 5120 | 7210 | 9230 | 10700 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            |                                         |      |      |      |       |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 4 | 11800 | 20000 | 28300 | 36100 | 41800 |
| 6 | 17600 | 30000 | 42400 | 54200 | 62700 |
| 8 | 23500 | 40000 | 56400 | 72200 | 83600 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                  |                      |                   |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | Tegler Drive     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Corporate Pkwy   | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Bergen Boulevard | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Eastbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 263b AM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                        |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.100 | <b>Median</b>           | Yes | <b>AADT</b>                     | 11773 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.082 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.736 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 711   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 255   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |         |            |      |              |       |
|------------------|------|--------------------------|-----|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.22 | <b>Density</b>           | 8.9 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 1.2 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 790                                     | 1350 | 1910 | 2440 | 2830 |
| 3            | 1190                                    | 2030 | 2870 | 3670 | 4250 |
| 4            | 1590                                    | 2710 | 3820 | 4890 | 5670 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1080                                    | 1840 | 2600 | 3320 | 3850 |
| 6            | 1620                                    | 2760 | 3900 | 4990 | 5780 |
| 8            | 2170                                    | 3690 | 5200 | 6650 | 7710 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 4 | 13200 | 22500 | 31800 | 40500 | 47000 |
| 6 | 19800 | 33700 | 47600 | 60900 | 70500 |
| 8 | 26500 | 45100 | 63500 | 81100 | 94100 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |                  |                      |                   |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | Tegler Drive     | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Corporate Pkwy   | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Bergen Boulevard | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Westbound        | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 263b PM.xhp |                       |                  |                      |                   |
| <b>User Notes</b>    |                                                                                                                        |                       |                  |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.100 | <b>Median</b>           | Yes | <b>AADT</b>                     | 11773 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.128 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.666 | <b>Base Capacity</b>     | 2000  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1004  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 503   | <b>Adjusted Capacity</b> | 1734  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.31 | <b>Density</b>           | 12.6 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 50.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 1.2  | <b>Service Measure</b> | Density | <b>LOS</b> | B    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 790                                     | 1350 | 1910 | 2440 | 2830 |
| 3            | 1190                                    | 2030 | 2870 | 3670 | 4250 |
| 4            | 1590                                    | 2710 | 3820 | 4890 | 5670 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1190                                    | 2030 | 2870 | 3670 | 4250 |
| 6            | 1790                                    | 3050 | 4310 | 5520 | 6390 |
| 8            | 2390                                    | 4070 | 5740 | 7350 | 8520 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |
| 2            |                                         |      |      |      |      |



|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 4 | 9300  | 15900 | 22500 | 28700 | 33300 |
| 6 | 14000 | 23900 | 33700 | 43200 | 50000 |
| 8 | 18700 | 31800 | 44900 | 57500 | 66600 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Marilyn Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/20/2023 10:58:32 AM                                                                                                | <b>From</b>           | Campus Parkway | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 141st Street   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound     | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 266 AM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 3775  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.067 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.570 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 144   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 109   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.10 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 51.0   | <b>ATS</b> | 34.7 | <b>% FFS</b> | 86.7 |
| <b>FFS Delay</b> | 6.9  | <b>LOS Thresh. Delay</b> | 15.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 50                                      | 180  | 440   | 710   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 90                                      | 320  | 780   | 1250  | 2500  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1400                                    | 4800 | 11700 | 18700 | 37400 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Marilyn Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Campus Parkway | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 141st Street   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound     | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 266 PM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 3775  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.136 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.540 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 277   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 236   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.20 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 65.1   | <b>ATS</b> | 31.7 | <b>% FFS</b> | 79.4 |
| <b>FFS Delay</b> | 11.7 | <b>LOS Thresh. Delay</b> | 20.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            | 50                                      | 170  | 430  | 680  | 1420  |
| 2            |                                         |      |      |      |       |
| 3            |                                         |      |      |      |       |
| 4            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            | 100                                     | 320  | 800  | 1260 | 2630  |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            | 800                                     | 2400 | 5900 | 9300 | 19400 |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Marilyn Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/20/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Campus Parkway | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 141st Street   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound     | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 266 AM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 7412  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.091 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.588 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 397   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 278   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.28 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 71.4   | <b>ATS</b> | 30.6 | <b>% FFS</b> | 76.4 |
| <b>FFS Delay</b> | 13.9 | <b>LOS Thresh. Delay</b> | 22.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 190  | 450  | 730   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 330  | 770  | 1250  | 2420  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1000                                    | 3700 | 8500 | 13800 | 26600 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Marilyn Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Campus Parkway | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 141st Street   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound     | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 266 PM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 7412  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.136 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.579 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 584   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 424   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.41 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 81.1   | <b>ATS</b> | 28.4 | <b>% FFS</b> | 71.0 |
| <b>FFS Delay</b> | 18.4 | <b>LOS Thresh. Delay</b> | 27.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            | 50                                      | 190  | 450  | 720  | 1420  |
| 2            |                                         |      |      |      |       |
| 3            |                                         |      |      |      |       |
| 4            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            | 90                                      | 330  | 780  | 1250 | 2460  |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            | 700                                     | 2500 | 5800 | 9200 | 18100 |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Promise Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 141st Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 146th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 268 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 5724  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.076 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.570 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 248   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 187   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.18 | <b>Density</b>           | N/A | <b>PTSF</b>            | 63.2   | <b>ATS</b> | 42.1 | <b>% FFS</b> | 84.2 |
| <b>FFS Delay</b> | 6.8  | <b>LOS Thresh. Delay</b> | 6.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 280  | 640   | 940   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 500  | 1130  | 1650  | 2500  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2400                                    | 6600 | 14900 | 21800 | 32900 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Promise Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 141st Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 146th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 268 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 5724  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.121 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.500 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 346   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 346   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.25 | <b>Density</b>           | N/A | <b>PTSF</b>            | 66.9   | <b>ATS</b> | 40.9 | <b>% FFS</b> | 81.8 |
| <b>FFS Delay</b> | 8.0  | <b>LOS Thresh. Delay</b> | 8.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 270  | 580  | 830   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 160                                     | 540  | 1160 | 1660  | 2840  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1400                                    | 4500 | 9600 | 13800 | 23500 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Promise Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 141st Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 268 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 12198 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.085 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.576 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 597   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 440   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.42 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 81.4   | <b>ATS</b> | 38.2 | <b>% FFS</b> | 76.3 |
| <b>FFS Delay</b> | 11.2 | <b>LOS Thresh. Delay</b> | 11.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 280  | 650   | 950   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 180                                     | 490  | 1130  | 1650  | 2470  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2200                                    | 5800 | 13300 | 19500 | 29100 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Promise Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 141st Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 146th Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 268 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 12198 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.121 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.541 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 798   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 677   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.56 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 86.5   | <b>ATS</b> | 35.0 | <b>% FFS</b> | 70.0 |
| <b>FFS Delay</b> | 15.4 | <b>LOS Thresh. Delay</b> | 15.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 90                                      | 280  | 620  | 900   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 170                                     | 520  | 1150 | 1670  | 2630  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1500                                    | 4300 | 9600 | 13900 | 21800 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Howe Road    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 269 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 4627  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.087 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.550 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 221   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 181   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.16 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 60.2   | <b>ATS</b> | 32.3 | <b>% FFS</b> | 80.9 |
| <b>FFS Delay</b> | 10.6 | <b>LOS Thresh. Delay</b> | 19.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 170  | 430  | 690   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 310  | 790  | 1260  | 2590  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1200                                    | 3600 | 9100 | 14500 | 29800 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Howe Road    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 269 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 4627  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.119 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.520 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 286   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 264   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.20 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 64.6   | <b>ATS</b> | 31.6 | <b>% FFS</b> | 79.0 |
| <b>FFS Delay</b> | 11.9 | <b>LOS Thresh. Delay</b> | 20.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 160  | 420  | 660   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 310  | 810  | 1270  | 2740  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 900                                     | 2700 | 6900 | 10700 | 23100 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Howe Road    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 269 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 5414  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.087 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.520 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 245   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 226   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.17 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 61.9   | <b>ATS</b> | 32.1 | <b>% FFS</b> | 80.1 |
| <b>FFS Delay</b> | 11.2 | <b>LOS Thresh. Delay</b> | 20.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 160  | 420  | 660   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 310  | 810  | 1270  | 2740  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1200                                    | 3600 | 9400 | 14600 | 31500 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Howe Road    | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 269 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 5414  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.120 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.534 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 347   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 303   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.25 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 67.8   | <b>ATS</b> | 31.0 | <b>% FFS</b> | 77.5 |
| <b>FFS Delay</b> | 13.1 | <b>LOS Thresh. Delay</b> | 22.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 160  | 430  | 680   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 300  | 810  | 1280  | 2660  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 900                                     | 2600 | 6800 | 10700 | 22200 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 141st Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Howe Road    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Promise Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 270 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 6561  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.072 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.720 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 340   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 132   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.24 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 71.5   | <b>ATS</b> | 37.2 | <b>% FFS</b> | 82.7 |
| <b>FFS Delay</b> | 8.4  | <b>LOS Thresh. Delay</b> | 12.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 320  | 600   | 970   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 140                                     | 450  | 840   | 1350  | 1980  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2000                                    | 6300 | 11700 | 18800 | 27500 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 141st Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Howe Road    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Promise Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 270 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 6561  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.119 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.610 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 476   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 304   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.34 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 76.2   | <b>ATS</b> | 34.8 | <b>% FFS</b> | 77.4 |
| <b>FFS Delay</b> | 11.7 | <b>LOS Thresh. Delay</b> | 15.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 240  | 570  | 880   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 400  | 940  | 1450  | 2330  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1200                                    | 3400 | 7900 | 12200 | 19600 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 141st Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Howe Road    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Promise Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 270 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 7908  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.075 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.616 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 365   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 228   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.26 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 71.4   | <b>ATS</b> | 35.9 | <b>% FFS</b> | 79.9 |
| <b>FFS Delay</b> | 10.1 | <b>LOS Thresh. Delay</b> | 14.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 80                                      | 240  | 570   | 880   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 130                                     | 390  | 930   | 1430  | 2310  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1800                                    | 5200 | 12400 | 19100 | 30800 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 141st Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Howe Road    | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Promise Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 270 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 7908  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.119 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.570 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 536   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 405   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.38 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 79.0   | <b>ATS</b> | 33.9 | <b>% FFS</b> | 75.4 |
| <b>FFS Delay</b> | 13.1 | <b>LOS Thresh. Delay</b> | 17.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 210  | 550  | 840   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 150                                     | 370  | 970  | 1480  | 2500  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1300                                    | 3200 | 8200 | 12500 | 21100 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 141st Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Marilyn Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Promise Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Westbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 271 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 4119  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.081 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.700 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 234   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 100   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.17 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 62.8   | <b>ATS</b> | 39.1 | <b>% FFS</b> | 86.9 |
| <b>FFS Delay</b> | 18.1 | <b>LOS Thresh. Delay</b> | 30.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 300  | 590   | 950   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 130                                     | 430  | 850   | 1360  | 2030  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1700                                    | 5400 | 10500 | 16800 | 25100 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 141st Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Marilyn Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Promise Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 271 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 4119  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.127 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.650 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 340   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 183   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.24 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 71.1   | <b>ATS</b> | 36.2 | <b>% FFS</b> | 80.5 |
| <b>FFS Delay</b> | 29.0 | <b>LOS Thresh. Delay</b> | 41.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 90                                      | 260  | 580  | 920   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 400  | 900  | 1420  | 2190  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1200                                    | 3200 | 7100 | 11200 | 17300 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 141st Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Marilyn Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Promise Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 271 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 11593 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.081 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.738 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 693   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 246   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.49 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 86.6   | <b>ATS</b> | 32.9 | <b>% FFS</b> | 73.1 |
| <b>FFS Delay</b> | 44.2 | <b>LOS Thresh. Delay</b> | 56.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 100                                     | 340  | 600   | 980   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 140                                     | 470  | 820   | 1330  | 1930  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1800                                    | 5900 | 10200 | 16500 | 23900 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 141st Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Marilyn Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Promise Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 271 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 11593 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.130 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.587 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 885   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 622   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.62 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 89.4   | <b>ATS</b> | 29.6 | <b>% FFS</b> | 65.9 |
| <b>FFS Delay</b> | 62.1 | <b>LOS Thresh. Delay</b> | 74.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 220  | 550  | 850   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 140                                     | 380  | 940  | 1450  | 2420  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1100                                    | 3000 | 7300 | 11200 | 18700 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Marilyn Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 136th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 272 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 4976  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.065 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.650 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 210   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 113   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.15 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 60.3   | <b>ATS</b> | 33.9 | <b>% FFS</b> | 84.9 |
| <b>FFS Delay</b> | 8.0  | <b>LOS Thresh. Delay</b> | 17.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 60                                      | 230  | 460   | 770   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 100                                     | 360  | 710   | 1190  | 2190  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1600                                    | 5600 | 11000 | 18400 | 33700 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Marilyn Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 136th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 272 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 4976  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.103 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.530 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 272   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 241   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.19 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 64.3   | <b>ATS</b> | 31.8 | <b>% FFS</b> | 79.5 |
| <b>FFS Delay</b> | 11.6 | <b>LOS Thresh. Delay</b> | 20.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 160  | 420  | 670   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 310  | 800  | 1270  | 2680  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1000                                    | 3100 | 7800 | 12400 | 26100 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Marilyn Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 136th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 272 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 10466 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.066 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.545 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 376   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 314   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.27 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 69.5   | <b>ATS</b> | 30.7 | <b>% FFS</b> | 76.8 |
| <b>FFS Delay</b> | 13.6 | <b>LOS Thresh. Delay</b> | 22.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 50                                      | 170  | 430   | 690   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 100                                     | 320  | 790   | 1270  | 2610  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1600                                    | 4900 | 12000 | 19300 | 39600 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Marilyn Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 136th Street | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 141st Street | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 272 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 10466 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.103 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.590 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 636   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 442   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.45 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 83.0   | <b>ATS</b> | 27.9 | <b>% FFS</b> | 69.6 |
| <b>FFS Delay</b> | 19.6 | <b>LOS Thresh. Delay</b> | 28.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 190  | 450  | 730   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 330  | 770  | 1240  | 2410  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 900                                     | 3300 | 7500 | 12100 | 23400 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                    |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Brooks School Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 136th Street       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Harrel Pkwy        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 273 AM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 10594 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.059 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.520 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 325   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 300   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.22 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 65.7   | <b>ATS</b> | 36.4 | <b>% FFS</b> | 80.8 |
| <b>FFS Delay</b> | 9.5  | <b>LOS Thresh. Delay</b> | 13.5 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 70                                      | 210  | 540   | 810   | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 140                                     | 410  | 1040  | 1560  | 2870  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2400                                    | 7000 | 17700 | 26500 | 48700 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                    |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Brooks School Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 136th Street       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Harrel Pkwy        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 273 PM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 10594 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.105 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.520 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 578   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 534   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.39 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 77.6   | <b>ATS</b> | 33.4 | <b>% FFS</b> | 74.2 |
| <b>FFS Delay</b> | 13.9 | <b>LOS Thresh. Delay</b> | 17.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 70                                      | 210  | 540   | 810   | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 140                                     | 410  | 1040  | 1560  | 2870  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1400                                    | 4000 | 10000 | 14900 | 27400 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                    |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Brooks School Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 136th Street       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Harrel Pkwy        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 273 AM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 18457 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.067 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.595 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 736   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 501   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.49 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 84.7   | <b>ATS</b> | 32.1 | <b>% FFS</b> | 71.4 |
| <b>FFS Delay</b> | 16.0 | <b>LOS Thresh. Delay</b> | 20.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 80                                      | 240  | 590   | 910   | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 140                                     | 410  | 1000  | 1530  | 2510  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2100                                    | 6200 | 15000 | 22900 | 37500 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                    |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Brooks School Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 136th Street       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Harrel Pkwy        | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound         | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 273 PM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 18457 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.105 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.562 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1089  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 849   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.73 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 91.7   | <b>ATS</b> | 26.8 | <b>% FFS</b> | 59.5 |
| <b>FFS Delay</b> | 27.2 | <b>LOS Thresh. Delay</b> | 31.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 80                                      | 220  | 570  | 870   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 150                                     | 400  | 1020 | 1550  | 2660  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1500                                    | 3900 | 9800 | 14800 | 25400 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Corporate Pkwy | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 136th Street   | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Harrell Pkwy   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound     | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 274 AM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 2512  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.020 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.660 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 33    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 17    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.02 | <b>Density</b>           | N/A | <b>PTSF</b>            | 38.2   | <b>ATS</b> | 37.1 | <b>% FFS</b> | 92.9 |
| <b>FFS Delay</b> | 2.1  | <b>LOS Thresh. Delay</b> | 7.5 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E      |
|--------------|-----------------------------------------|-------|-------|-------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |        |
| 1            | 60                                      | 250   | 480   | 820   | 1490   |
| 2            |                                         |       |       |       |        |
| 3            |                                         |       |       |       |        |
| 4            |                                         |       |       |       |        |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |        |
| 2            | 100                                     | 380   | 730   | 1250  | 2260   |
| 4            |                                         |       |       |       |        |
| 6            |                                         |       |       |       |        |
| 8            |                                         |       |       |       |        |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |        |
| 2            | 5000                                    | 19000 | 36600 | 62600 | 113000 |
| 4            |                                         |       |       |       |        |
| 6            |                                         |       |       |       |        |
| 8            |                                         |       |       |       |        |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Corporate Pkwy | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 136th Street   | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Harrell Pkwy   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound     | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 274 PM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 2512  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.100 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.520 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 131   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 121   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.09 | <b>Density</b>           | N/A | <b>PTSF</b>            | 46.7   | <b>ATS</b> | 34.7 | <b>% FFS</b> | 86.7 |
| <b>FFS Delay</b> | 4.1  | <b>LOS Thresh. Delay</b> | 9.5 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 170  | 440  | 700   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 330  | 850  | 1350  | 2870  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1000                                    | 3400 | 8600 | 13600 | 28800 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Corporate Pkwy | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 136th Street   | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Harrell Pkwy   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound     | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 274 AM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 2512  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.020 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.660 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 33    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 17    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.02 | <b>Density</b>           | N/A | <b>PTSF</b>            | 38.2   | <b>ATS</b> | 37.1 | <b>% FFS</b> | 92.9 |
| <b>FFS Delay</b> | 2.1  | <b>LOS Thresh. Delay</b> | 7.5 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E      |
|--------------|-----------------------------------------|-------|-------|-------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |        |
| 1            | 60                                      | 250   | 480   | 820   | 1490   |
| 2            |                                         |       |       |       |        |
| 3            |                                         |       |       |       |        |
| 4            |                                         |       |       |       |        |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |        |
| 2            | 100                                     | 380   | 730   | 1250  | 2260   |
| 4            |                                         |       |       |       |        |
| 6            |                                         |       |       |       |        |
| 8            |                                         |       |       |       |        |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |        |
| 2            | 5000                                    | 19000 | 36600 | 62600 | 113000 |
| 4            |                                         |       |       |       |        |
| 6            |                                         |       |       |       |        |
| 8            |                                         |       |       |       |        |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Corporate Pkwy | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 136th Street   | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Harrell Pkwy   | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound     | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 274 PM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 2512  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.100 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.522 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 131   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 120   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.09 | <b>Density</b>           | N/A | <b>PTSF</b>            | 46.7   | <b>ATS</b> | 34.7 | <b>% FFS</b> | 86.8 |
| <b>FFS Delay</b> | 4.1  | <b>LOS Thresh. Delay</b> | 9.5 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 170  | 440  | 700   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 330  | 850  | 1350  | 2860  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1000                                    | 3400 | 8600 | 13600 | 28600 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                    |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 136th Street       | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Marilyn Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Brooks School Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound          | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 275 AM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 8609  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.011 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 1.000 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 95    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 0     | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.07 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 56.7   | <b>ATS</b> | 36.7 | <b>% FFS</b> | 91.7 |
| <b>FFS Delay</b> | 4.1  | <b>LOS Thresh. Delay</b> | 13.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D      | E      |
|--------------|-----------------------------------------|-------|-------|--------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |        |        |
| 1            | 90                                      | 450   | 810   | 1170   | 1420   |
| 2            |                                         |       |       |        |        |
| 3            |                                         |       |       |        |        |
| 4            |                                         |       |       |        |        |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |        |        |
| 2            | 100                                     | 460   | 820   | 1180   | 1420   |
| 4            |                                         |       |       |        |        |
| 6            |                                         |       |       |        |        |
| 8            |                                         |       |       |        |        |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |        |        |
| 2            | 9100                                    | 41900 | 74600 | 107300 | 129100 |
| 4            |                                         |       |       |        |        |
| 6            |                                         |       |       |        |        |
| 8            |                                         |       |       |        |        |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                    |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 136th Street       | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Marilyn Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Brooks School Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound          | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 275 PM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 8609  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.022 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 1.000 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 189   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 0     | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.13 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 66.7   | <b>ATS</b> | 35.8 | <b>% FFS</b> | 89.6 |
| <b>FFS Delay</b> | 5.2  | <b>LOS Thresh. Delay</b> | 14.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 90                                      | 450   | 810   | 1170  | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 100                                     | 460   | 820   | 1180  | 1420  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 4600                                    | 21000 | 37300 | 53700 | 64600 |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                    |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 136th Street       | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Marilyn Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Brooks School Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound          | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 275 AM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 14818 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.013 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.667 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 128   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 64    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.09 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 50.8   | <b>ATS</b> | 35.8 | <b>% FFS</b> | 89.4 |
| <b>FFS Delay</b> | 5.3  | <b>LOS Thresh. Delay</b> | 14.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E      |
|--------------|-----------------------------------------|-------|-------|-------|--------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |        |
| 1            | 60                                      | 240   | 460   | 780   | 1420   |
| 2            |                                         |       |       |       |        |
| 3            |                                         |       |       |       |        |
| 4            |                                         |       |       |       |        |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |        |
| 2            | 90                                      | 360   | 690   | 1170  | 2130   |
| 4            |                                         |       |       |       |        |
| 6            |                                         |       |       |       |        |
| 8            |                                         |       |       |       |        |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |        |
| 2            | 7000                                    | 27700 | 53100 | 90000 | 163900 |
| 4            |                                         |       |       |       |        |
| 6            |                                         |       |       |       |        |
| 8            |                                         |       |       |       |        |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                    |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 136th Street       | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Marilyn Road       | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Brooks School Road | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound          | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 275 PM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 14818 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.022 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.788 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 257   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 69    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.18 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 66.2   | <b>ATS</b> | 34.5 | <b>% FFS</b> | 86.3 |
| <b>FFS Delay</b> | 7.1  | <b>LOS Thresh. Delay</b> | 16.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 70                                      | 340   | 530   | 820   | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 90                                      | 440   | 680   | 1050  | 1810  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 4100                                    | 20000 | 31000 | 47800 | 82300 |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                    |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 136th Street       | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Brooks School Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Corporate Pkwy     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound          | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 276 AM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 5679  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.035 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.740 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 147   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 52    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.10 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 54.2   | <b>ATS</b> | 35.8 | <b>% FFS</b> | 89.5 |
| <b>FFS Delay</b> | 5.3  | <b>LOS Thresh. Delay</b> | 14.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 70                                      | 310   | 500   | 860   | 1490  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 100                                     | 420   | 680   | 1170  | 2020  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 2900                                    | 12000 | 19500 | 33500 | 57800 |

|   |
|---|
| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                    |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 136th Street       | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Brooks School Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Corporate Pkwy     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound          | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 276 PM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 5679  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.116 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.560 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 369   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 290   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.25 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 69.1   | <b>ATS</b> | 31.0 | <b>% FFS</b> | 77.5 |
| <b>FFS Delay</b> | 13.1 | <b>LOS Thresh. Delay</b> | 22.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 190  | 460  | 740   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 340  | 830  | 1330  | 2670  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 800                                     | 3000 | 7200 | 11500 | 23100 |



|   |
|---|
| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                    |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 136th Street       | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Brooks School Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Corporate Pkwy     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound          | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 276 AM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 6431  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.045 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.763 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 221   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 69    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.15 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 61.8   | <b>ATS</b> | 35.0 | <b>% FFS</b> | 87.5 |
| <b>FFS Delay</b> | 6.4  | <b>LOS Thresh. Delay</b> | 15.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 70                                      | 330  | 530   | 860   | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 100                                     | 440  | 700   | 1130  | 1960  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2300                                    | 9800 | 15600 | 25200 | 43600 |

|   |
|---|
| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                    |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 136th Street       | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Brooks School Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Corporate Pkwy     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound          | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 276 PM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 6431  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.116 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.560 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 418   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 328   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.28 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 71.2   | <b>ATS</b> | 30.5 | <b>% FFS</b> | 76.3 |
| <b>FFS Delay</b> | 14.0 | <b>LOS Thresh. Delay</b> | 23.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 190  | 460  | 740   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 340  | 830  | 1330  | 2670  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 800                                     | 3000 | 7200 | 11500 | 23100 |

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| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 136th Street   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Corporate Pkwy | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Hoard Drive    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 277 AM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 3930  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.040 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.790 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 124   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 33    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.08 | <b>Density</b>           | N/A | <b>PTSF</b>            | 53.8   | <b>ATS</b> | 36.2 | <b>% FFS</b> | 90.5 |
| <b>FFS Delay</b> | 2.8  | <b>LOS Thresh. Delay</b> | 8.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 80                                      | 360   | 560   | 870   | 1490  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 110                                     | 460   | 710   | 1110  | 1890  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 2800                                    | 11600 | 17800 | 27800 | 47300 |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 136th Street   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Corporate Pkwy | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Hoard Drive    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Eastbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 277 PM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 3930  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.142 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.560 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 313   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 246   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.21 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 67.1   | <b>ATS</b> | 31.6 | <b>% FFS</b> | 78.9 |
| <b>FFS Delay</b> | 7.2  | <b>LOS Thresh. Delay</b> | 12.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            | 50                                      | 190  | 460  | 740  | 1490  |
| 2            |                                         |      |      |      |       |
| 3            |                                         |      |      |      |       |
| 4            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            | 90                                      | 340  | 830  | 1330 | 2670  |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            | 700                                     | 2400 | 5900 | 9400 | 18900 |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 136th Street   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Corporate Pkwy | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Hoard Drive    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 277 AM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 4549  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.054 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.799 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 196   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 49    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.13 | <b>Density</b>           | N/A | <b>PTSF</b>            | 60.8   | <b>ATS</b> | 35.4 | <b>% FFS</b> | 88.5 |
| <b>FFS Delay</b> | 3.5  | <b>LOS Thresh. Delay</b> | 8.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 80                                      | 360  | 580   | 870   | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 110                                     | 460  | 730   | 1090  | 1870  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2100                                    | 8600 | 13600 | 20200 | 34700 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 136th Street   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Corporate Pkwy | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Hoard Drive    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 277 PM.xhp |                       |                |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | Yes | <b>AADT</b>                     | 4549  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.148 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.567 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 382   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 292   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.26 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 69.7   | <b>ATS</b> | 30.9 | <b>% FFS</b> | 77.2 |
| <b>FFS Delay</b> | 8.0  | <b>LOS Thresh. Delay</b> | 13.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            | 50                                      | 190  | 460  | 740  | 1490  |
| 2            |                                         |      |      |      |       |
| 3            |                                         |      |      |      |       |
| 4            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            | 90                                      | 340  | 820  | 1310 | 2630  |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            | 700                                     | 2300 | 5600 | 8900 | 17800 |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |               |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Seminole Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 161st Street  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 169th Street  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 279 AM.xhp |                       |               |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |               |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.067 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.550 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 37    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 30    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.03 | <b>Density</b>           | N/A | <b>PTSF</b>            | 34.7   | <b>ATS</b> | 46.9 | <b>% FFS</b> | 93.7 |
| <b>FFS Delay</b> | 3.9  | <b>LOS Thresh. Delay</b> | 3.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.**

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 280  | 630   | 910   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 510  | 1150  | 1660  | 2590  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2600                                    | 7700 | 17200 | 24800 | 38700 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |               |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Seminole Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 161st Street  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 169th Street  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 279 PM.xhp |                       |               |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |               |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.072 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.530 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 38    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 34    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.03 | <b>Density</b>           | N/A | <b>PTSF</b>            | 33.5   | <b>ATS</b> | 46.8 | <b>% FFS</b> | 93.6 |
| <b>FFS Delay</b> | 3.9  | <b>LOS Thresh. Delay</b> | 3.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.**

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 90                                      | 280  | 610   | 880   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 530  | 1160  | 1670  | 2680  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2400                                    | 7400 | 16200 | 23200 | 37300 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |               |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Seminole Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 161st Street  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 169th Street  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 279 AM.xhp |                       |               |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |               |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 2152  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.079 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.718 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 122   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 48    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.09 | <b>Density</b>           | N/A | <b>PTSF</b>            | 51.4   | <b>ATS</b> | 45.9 | <b>% FFS</b> | 91.8 |
| <b>FFS Delay</b> | 5.2  | <b>LOS Thresh. Delay</b> | 5.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.**

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 120                                     | 360  | 720   | 1120  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 170                                     | 510  | 1010  | 1560  | 1980  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2200                                    | 6500 | 12800 | 19800 | 25100 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |               |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Seminole Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 161st Street  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 169th Street  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound    | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 279 PM.xhp |                       |               |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |               |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 2152  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.118 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.617 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 157   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 97    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.11 | <b>Density</b>           | N/A | <b>PTSF</b>            | 53.8   | <b>ATS</b> | 44.8 | <b>% FFS</b> | 89.6 |
| <b>FFS Delay</b> | 6.7  | <b>LOS Thresh. Delay</b> | 6.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 100                                     | 290  | 670  | 1010  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 170                                     | 480  | 1090 | 1640  | 2310  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1500                                    | 4100 | 9300 | 13900 | 19600 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                      |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Prairie Baptist Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street         | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 156th Street         | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 280 AM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1735  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.092 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.690 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 110   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 49    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.08 | <b>Density</b>           | N/A | <b>PTSF</b>            | 21.9   | <b>ATS</b> | 53.0 | <b>% FFS</b> | 96.3 |
| <b>FFS Delay</b> | 2.4  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 260                                     | 570  | 940   | 1310  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 380                                     | 830  | 1370  | 1900  | 2060  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 4200                                    | 9100 | 14900 | 20700 | 22400 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                      |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Prairie Baptist Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | 146th Street         | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 156th Street         | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 280 PM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 1735  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.148 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.740 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 190   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 67    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.14 | <b>Density</b>           | N/A | <b>PTSF</b>            | 30.9   | <b>ATS</b> | 52.1 | <b>% FFS</b> | 94.7 |
| <b>FFS Delay</b> | 3.5  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 290                                     | 610  | 990  | 1380  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 400                                     | 830  | 1340 | 1870  | 1920  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 2800                                    | 5700 | 9100 | 12700 | 13000 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                      |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Prairie Baptist Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street         | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 156th Street         | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 280 AM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 16378 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.117 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.847 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 1623  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 293   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.14     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 360                                     | 730  | 1120  | 1420  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 430                                     | 870  | 1330  | 1680  | 1680  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3700                                    | 7500 | 11400 | 14400 | 14400 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                      |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Prairie Baptist Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | 146th Street         | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 156th Street         | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound           | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 280 PM.xhp |                       |                      |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                      |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.950 | <b>Median</b>           | No  | <b>AADT</b>                     | 16378 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.148 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.666 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 1614  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 810   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.13     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 250                                     | 550  | 910  | 1270  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 380                                     | 830  | 1370 | 1910  | 2140  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 2600                                    | 5700 | 9300 | 13000 | 14500 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |                      |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | Prairie Baptist Road | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | 146th Street         | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | 156th Street         | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Southbound           | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 280 AM.xhp |                       |                      |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |                      |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.000 | <b>Median</b>           | No  | <b>AADT</b>                     | 16378 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.117 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.847 | <b>Base Capacity</b>     | 2100  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1623  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 293   | <b>Adjusted Capacity</b> | 1730  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.51 | <b>Density</b>           | 19.5 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 55.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 5.5  | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 830                                     | 1410  | 2000  | 2530  | 2800  |
| 3            | 1250                                    | 2120  | 3000  | 3790  | 4200  |
| 4            | 1660                                    | 2830  | 4000  | 5060  | 5600  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 980                                     | 1670  | 2370  | 2990  | 3310  |
| 6            | 1480                                    | 2510  | 3550  | 4480  | 4960  |
| 8            | 1960                                    | 3350  | 4730  | 5980  | 6620  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 8400                                    | 14300 | 20300 | 25600 | 28300 |
| 6            | 12700                                   | 21500 | 30400 | 38300 | 42400 |
| 8            | 16800                                   | 28700 | 40500 | 51200 | 56600 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                |                       |                      |                      |                   |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                             | <b>Highway Name</b>   | Prairie Baptist Road | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                          | <b>From</b>           | 146th Street         | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                          | <b>To</b>             | 156th Street         | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                            | <b>Peak Direction</b> | Northbound           | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu280 PM.xhp |                       |                      |                      |                   |
| <b>User Notes</b>    |                                                                                                                                |                       |                      |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.000 | <b>Median</b>           | No  | <b>AADT</b>                     | 16378 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.148 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.666 | <b>Base Capacity</b>     | 2100  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1614  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 810   | <b>Adjusted Capacity</b> | 1730  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.51 | <b>Density</b>           | 19.4 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 55.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 5.5  | <b>Service Measure</b> | Density | <b>LOS</b> | C    |              |       |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 830                                     | 1410  | 2000  | 2530  | 2800  |
| 3            | 1250                                    | 2120  | 3000  | 3790  | 4200  |
| 4            | 1660                                    | 2830  | 4000  | 5060  | 5600  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1250                                    | 2120  | 3010  | 3800  | 4210  |
| 6            | 1880                                    | 3190  | 4510  | 5700  | 6310  |
| 8            | 2500                                    | 4250  | 6010  | 7600  | 8410  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 8500                                    | 14400 | 20400 | 25700 | 28500 |
| 6            | 12800                                   | 21600 | 30500 | 38600 | 42700 |
| 8            | 16900                                   | 28800 | 40700 | 51400 | 56900 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                            |                      |                   |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Union Chapel Road          | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Town and Country Boulevard | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Pleasant Street            | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound                 | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 281 AM.xhp |                       |                            |                      |                   |
| <b>User Notes</b>    |                                                                                                                      |                       |                            |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables                |       |                          |       |
|------------------------|-------|-------------------------|-----|----------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                      | 8403  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                         | 0.078 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                         | 0.640 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrlly. Vol.</b>     | 419   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrlly. Vol.</b> | 236   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.14 | <b>Density</b>           | 5.8  | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 10.0 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710 |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060 |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1110                                    | 1910 | 2690 | 3470 | 4240 |
| 6            | 1680                                    | 2860 | 4040 | 5210 | 6350 |
| 8            | 2240                                    | 3820 | 5380 | 6960 | 8470 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |

|   |       |       |       |       |        |
|---|-------|-------|-------|-------|--------|
| 2 |       |       |       |       |        |
| 4 | 14300 | 24500 | 34500 | 44500 | 54400  |
| 6 | 21600 | 36700 | 51800 | 66800 | 81500  |
| 8 | 28800 | 49000 | 69000 | 89300 | 108600 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                            |                      |                   |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Union Chapel Road          | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Town and Country Boulevard | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Pleasant Street            | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound                 | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 281 PM.xhp |                       |                            |                      |                   |
| <b>User Notes</b>    |                                                                                                                      |                       |                            |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 8403  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.116 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.560 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 546   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 429   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.18 | <b>Density</b>           | 7.6  | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 10.0 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710 |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060 |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1270                                    | 2180 | 3080 | 3970 | 4840 |
| 6            | 1920                                    | 3270 | 4610 | 5950 | 7250 |
| 8            | 2560                                    | 4360 | 6150 | 7950 | 9680 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 2 |       |       |       |       |       |
| 4 | 11000 | 18800 | 26600 | 34300 | 41800 |
| 6 | 16600 | 28200 | 39800 | 51300 | 62600 |
| 8 | 22100 | 37600 | 53100 | 68600 | 83500 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                            |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|----------------------|-------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Union Chapel Road          | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Town and Country Boulevard | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Pleasant Street            | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound                 | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 281 AM.xhp |                       |                            |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                            |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 14362 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.079 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.523 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 593   | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 541   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.20 | <b>Density</b>           | 8.3  | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 10.0 | <b>Service Measure</b> | Density | <b>LOS</b> | A    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            |                                         |      |      |      |       |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710  |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060  |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            |                                         |      |      |      |       |
| 4            | 1360                                    | 2340 | 3290 | 4250 | 5190  |
| 6            | 2050                                    | 3500 | 4940 | 6370 | 7770  |
| 8            | 2740                                    | 4670 | 6580 | 8510 | 10370 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |



|   |       |       |       |        |        |
|---|-------|-------|-------|--------|--------|
| 2 |       |       |       |        |        |
| 4 | 17300 | 29700 | 41700 | 53800  | 65700  |
| 6 | 26000 | 44400 | 62600 | 80700  | 98400  |
| 8 | 34700 | 59200 | 83300 | 107800 | 131300 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                            |                      |                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Union Chapel Road          | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Town and Country Boulevard | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Pleasant Street            | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound                 | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 281 PM.xhp |                       |                            |                      |                   |
| <b>User Notes</b>    |                                                                                                                       |                       |                            |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | Yes | <b>AADT</b>                     | 14362 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.116 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.612 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1020  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 646   | <b>Adjusted Capacity</b> | 1647  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.34 | <b>Density</b>           | 14.2 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 10.0 | <b>Service Measure</b> | Density | <b>LOS</b> | B    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B    | C    | D    | E    |
|--------------|-----------------------------------------|------|------|------|------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |      |
| 1            |                                         |      |      |      |      |
| 2            | 710                                     | 1220 | 1720 | 2220 | 2710 |
| 3            | 1070                                    | 1830 | 2580 | 3330 | 4060 |
| 4            | 1430                                    | 2440 | 3440 | 4450 | 5420 |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |      |
| 2            |                                         |      |      |      |      |
| 4            | 1170                                    | 2000 | 2820 | 3630 | 4430 |
| 6            | 1750                                    | 3000 | 4220 | 5450 | 6640 |
| 8            | 2340                                    | 3990 | 5630 | 7280 | 8860 |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |      |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| 2 |       |       |       |       |       |
| 4 | 10100 | 17300 | 24400 | 31300 | 38200 |
| 6 | 15100 | 25900 | 36400 | 47000 | 57300 |
| 8 | 20200 | 34400 | 48600 | 62800 | 76400 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |            |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 8th Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Walnut St  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cherry St  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 282a AM.xhp |                       |            |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |            |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 16797 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.066 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.650 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 721   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 388   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.51 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 86.0   | <b>ATS</b> | 27.3 | <b>% FFS</b> | 68.2 |
| <b>FFS Delay</b> | 8.4  | <b>LOS Thresh. Delay</b> | 12.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 60                                      | 230  | 460   | 770   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 100                                     | 360  | 710   | 1190  | 2190  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1600                                    | 5500 | 10800 | 18100 | 33200 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |            |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 8th Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Walnut St  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cherry St  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 282a PM.xhp |                       |            |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |            |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 16797 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.088 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.610 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 902   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 576   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.63 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 90.1   | <b>ATS</b> | 24.8 | <b>% FFS</b> | 61.9 |
| <b>FFS Delay</b> | 11.1 | <b>LOS Thresh. Delay</b> | 14.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 210  | 450  | 750   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 350  | 740  | 1230  | 2330  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1100                                    | 4000 | 8500 | 14000 | 26500 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |            |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | 8th Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Walnut St  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Cherry St  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Southbound | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 282a AM.xhp |                       |            |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |            |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 18591 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.066 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.683 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 838   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 389   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.59 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 88.9   | <b>ATS</b> | 26.2 | <b>% FFS</b> | 65.5 |
| <b>FFS Delay</b> | 9.5  | <b>LOS Thresh. Delay</b> | 13.1 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 60                                      | 250  | 460   | 790   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 90                                      | 370  | 680   | 1160  | 2080  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1400                                    | 5700 | 10400 | 17600 | 31600 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |            |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | 8th Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Walnut St  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Cherry St  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 282a PM.xhp |                       |            |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |            |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.200 | <b>Median</b>           | No  | <b>AADT</b>                     | 18591 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.107 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.545 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1084  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 905   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.76 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 92.5   | <b>ATS</b> | 20.5 | <b>% FFS</b> | 51.3 |
| <b>FFS Delay</b> | 17.1 | <b>LOS Thresh. Delay</b> | 20.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 170  | 430  | 690   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 320  | 790  | 1270  | 2610  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1000                                    | 3000 | 7400 | 11900 | 24400 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |            |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 8th Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Walnut St  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cherry St  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 282b AM.xhp |                       |            |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |            |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.100 | <b>Median</b>           | Yes | <b>AADT</b>                     | 16797 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.066 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.650 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 721   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 388   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.48 | <b>Density</b>           | N/A | <b>PTSF</b>            | 85.0   | <b>ATS</b> | 27.7 | <b>% FFS</b> | 69.2 |
| <b>FFS Delay</b> | 4.0  | <b>LOS Thresh. Delay</b> | 5.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 60                                      | 240  | 480   | 810   | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 100                                     | 370  | 740   | 1250  | 2300  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1600                                    | 5700 | 11300 | 19000 | 34900 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |            |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 8th Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Walnut St  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cherry St  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 282b PM.xhp |                       |            |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |            |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.100 | <b>Median</b>           | Yes | <b>AADT</b>                     | 16797 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.088 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.610 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 902   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 576   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.60 | <b>Density</b>           | N/A | <b>PTSF</b>            | 89.1   | <b>ATS</b> | 25.3 | <b>% FFS</b> | 63.3 |
| <b>FFS Delay</b> | 5.2  | <b>LOS Thresh. Delay</b> | 7.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 60                                      | 220  | 470  | 780   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 370  | 780  | 1280  | 2450  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1200                                    | 4300 | 8900 | 14600 | 27900 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |            |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                     | <b>Highway Name</b>   | 8th Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Walnut St  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Cherry St  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Southbound | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 282b AM.xhp |                       |            |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |            |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.100 | <b>Median</b>           | Yes | <b>AADT</b>                     | 18591 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.066 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.683 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 838   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 389   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.56 | <b>Density</b>           | N/A | <b>PTSF</b>            | 87.7   | <b>ATS</b> | 26.6 | <b>% FFS</b> | 66.6 |
| <b>FFS Delay</b> | 4.5  | <b>LOS Thresh. Delay</b> | 6.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 70                                      | 270  | 490   | 830   | 1490  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 110                                     | 400  | 720   | 1220  | 2190  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 1700                                    | 6100 | 11000 | 18500 | 33200 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                        |                       |            |                      |                  |
|----------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                     | <b>Highway Name</b>   | 8th Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                  | <b>From</b>           | Walnut St  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                  | <b>To</b>             | Cherry St  | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                    | <b>Peak Direction</b> | Northbound | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 282b PM.xhp |                       |            |                      |                  |
| <b>User Notes</b>    |                                                                                                                        |                       |            |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.100 | <b>Median</b>           | Yes | <b>AADT</b>                     | 18591 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.107 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.545 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1084  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 905   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.73 | <b>Density</b>           | N/A | <b>PTSF</b>            | 91.6   | <b>ATS</b> | 21.4 | <b>% FFS</b> | 53.4 |
| <b>FFS Delay</b> | 7.9  | <b>LOS Thresh. Delay</b> | 9.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 180  | 450  | 720   | 1490  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 340  | 830  | 1330  | 2740  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1000                                    | 3200 | 7800 | 12500 | 25700 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 8th Street   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Christian St | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Walnut St    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 283 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 10493 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.077 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.610 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 493   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 315   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.35 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 77.0   | <b>ATS</b> | 29.6 | <b>% FFS</b> | 74.1 |
| <b>FFS Delay</b> | 9.4  | <b>LOS Thresh. Delay</b> | 14.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 210  | 450  | 750   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 350  | 740  | 1230  | 2330  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1200                                    | 4600 | 9700 | 16000 | 30300 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |              |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | 8th Street   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Christian St | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Walnut St    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 283 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 10493 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.089 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.610 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 570   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 364   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.40 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 80.8   | <b>ATS</b> | 28.8 | <b>% FFS</b> | 71.9 |
| <b>FFS Delay</b> | 10.5 | <b>LOS Thresh. Delay</b> | 15.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 210  | 450  | 750   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 350  | 740  | 1230  | 2330  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1100                                    | 4000 | 8400 | 13900 | 26200 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 8th Street   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Christian St | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Walnut St    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 283 AM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 32909 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.077 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.704 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1784  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 750   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.25     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 60                                      | 270  | 470  | 800   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 90                                      | 390  | 670  | 1140  | 2020  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1200                                    | 5100 | 8800 | 14900 | 26300 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |              |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | 8th Street   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Christian St | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Walnut St    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 283 PM.xhp |                       |              |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |              |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 32909 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.098 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.530 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 100 | <b>Peak Dir. Hrly. Vol.</b>     | 1709  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1516  | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |          |                          |          |                        |         |            |     |              |     |
|------------------|----------|--------------------------|----------|------------------------|---------|------------|-----|--------------|-----|
| <b>v/c Ratio</b> | 1.20     | <b>Density</b>           | N/A      | <b>PTSF</b>            | 100.0   | <b>ATS</b> | 0.0 | <b>% FFS</b> | 0.0 |
| <b>FFS Delay</b> | Infinity | <b>LOS Thresh. Delay</b> | Infinity | <b>Service Measure</b> | vcRatio | <b>LOS</b> | F   |              |     |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 50                                      | 160  | 420  | 670   | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 100                                     | 310  | 800  | 1270  | 2680  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1100                                    | 3200 | 8200 | 13000 | 27400 |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |              |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | 8th Street   | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Christian St | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Walnut St    | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Southbound   | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 283 AM.xhp |                       |              |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |              |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 32909 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.077 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.704 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1784  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 750   | <b>Adjusted Capacity</b> | 1565  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.62 | <b>Density</b>           | 26.2 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0  | <b>Service Measure</b> | Density | <b>LOS</b> | D    |              |       |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 680                                     | 1150  | 1630  | 2110  | 2570  |
| 3            | 1020                                    | 1730  | 2450  | 3170  | 3860  |
| 4            | 1360                                    | 2310  | 3270  | 4220  | 5150  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 970                                     | 1640  | 2320  | 3000  | 3660  |
| 6            | 1450                                    | 2460  | 3490  | 4510  | 5490  |
| 8            | 1940                                    | 3290  | 4650  | 6000  | 7320  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 12600                                   | 21300 | 30200 | 39000 | 47600 |
| 6            | 18900                                   | 32000 | 45400 | 58600 | 71300 |
| 8            | 25200                                   | 42800 | 60400 | 78000 | 95100 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.



# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                                 |                       |              |                      |                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|----------------------|-------------------|
| <b>Analyst</b>       | SK                                                                                                                              | <b>Highway Name</b>   | 8th Street   | <b>Study Period</b>  | Kother            |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                           | <b>From</b>           | Christian St | <b>Analysis Type</b> | Multilane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                           | <b>To</b>             | Walnut St    | <b>Program</b>       | HIGHPLAN 2012     |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                             | <b>Peak Direction</b> | Northbound   | <b>Version Date</b>  | 12/12/2012        |
| <b>File Name</b>     | Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 283 PM.xhp |                       |              |                      |                   |
| <b>User Notes</b>    |                                                                                                                                 |                       |              |                      |                   |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 32909 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 4     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.098 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.530 | <b>Base Capacity</b>     | 1900  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | N/A | <b>Peak Dir. Hrly. Vol.</b>     | 1709  | <b>Local Adj. Factor</b> | 0.88  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 1516  | <b>Adjusted Capacity</b> | 1565  |

## LOS Results

|                  |      |                          |      |                        |         |            |      |              |       |
|------------------|------|--------------------------|------|------------------------|---------|------------|------|--------------|-------|
| <b>v/c Ratio</b> | 0.59 | <b>Density</b>           | 25.1 | <b>PTSF</b>            | N/A     | <b>ATS</b> | 45.0 | <b>% FFS</b> | 100.0 |
| <b>FFS Delay</b> | 0.0  | <b>LOS Thresh. Delay</b> | 6.0  | <b>Service Measure</b> | Density | <b>LOS</b> | D    |              |       |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            |                                         |       |       |       |       |
| 2            | 680                                     | 1150  | 1630  | 2110  | 2570  |
| 3            | 1020                                    | 1730  | 2450  | 3170  | 3860  |
| 4            | 1360                                    | 2310  | 3270  | 4220  | 5150  |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 1290                                    | 2170  | 3080  | 3990  | 4850  |
| 6            | 1930                                    | 3270  | 4630  | 5990  | 7290  |
| 8            | 2570                                    | 4360  | 6170  | 7970  | 9720  |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            |                                         |       |       |       |       |
| 4            | 13200                                   | 22200 | 31500 | 40800 | 49500 |
| 6            | 19700                                   | 33400 | 47300 | 61200 | 74400 |
| 8            | 26300                                   | 44500 | 63000 | 81400 | 99200 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Allisonville Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Riverwood Ave     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 284 AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 7794  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.064 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.750 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 72  | <b>Peak Dir. Hrly. Vol.</b>     | 374   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 125   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.26 | <b>Density</b>           | N/A | <b>PTSF</b>            | 72.5   | <b>ATS</b> | 42.4 | <b>% FFS</b> | 84.7 |
| <b>FFS Delay</b> | 3.9  | <b>LOS Thresh. Delay</b> | 3.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 150                                     | 410  | 760   | 1170  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 200                                     | 550  | 1020  | 1560  | 1900  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3200                                    | 8600 | 16000 | 24400 | 29700 |

|   |
|---|
| 4 |
| 6 |
| 8 |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                   |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Allisonville Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | Riverwood Ave     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 284 PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 7794  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.100 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.680 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 72  | <b>Peak Dir. Hrly. Vol.</b>     | 530   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 249   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.37 | <b>Density</b>           | N/A | <b>PTSF</b>            | 77.7   | <b>ATS</b> | 39.7 | <b>% FFS</b> | 79.4 |
| <b>FFS Delay</b> | 5.6  | <b>LOS Thresh. Delay</b> | 5.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 140                                     | 340  | 740   | 1110  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 210                                     | 500  | 1090  | 1640  | 2090  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2200                                    | 5000 | 11000 | 16400 | 21000 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Allisonville Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Riverwood Ave     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 284 AM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 14844 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.064 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.703 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 72  | <b>Peak Dir. Hrly. Vol.</b>     | 668   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 282   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.47 | <b>Density</b>           | N/A | <b>PTSF</b>            | 83.2   | <b>ATS</b> | 38.3 | <b>% FFS</b> | 76.7 |
| <b>FFS Delay</b> | 6.6  | <b>LOS Thresh. Delay</b> | 6.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 140                                     | 360  | 750   | 1130  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 200                                     | 520  | 1070  | 1610  | 2020  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3200                                    | 8200 | 16800 | 25200 | 31600 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                   |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Cumberland Road   | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Allisonville Road | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Riverwood Ave     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound        | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 284 PM.xhp |                       |                   |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                   |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.300 | <b>Median</b>           | No  | <b>AADT</b>                     | 14844 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.122 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.612 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 72  | <b>Peak Dir. Hrly. Vol.</b>     | 1108  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 703   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.78 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 92.4   | <b>ATS</b> | 32.2 | <b>% FFS</b> | 64.4 |
| <b>FFS Delay</b> | 12.0 | <b>LOS Thresh. Delay</b> | 12.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 120                                     | 320  | 690  | 1020  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 200                                     | 530  | 1130 | 1670  | 2330  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1700                                    | 4400 | 9300 | 13700 | 19100 |



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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                 |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Cumberland Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Riverwood Ave   | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 206th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Southbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 285 AM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.640 | <b>Median</b>           | No  | <b>AADT</b>                     | 7059  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.066 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.740 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 71  | <b>Peak Dir. Hrly. Vol.</b>     | 345   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 121   | <b>Adjusted Capacity</b> | 1547  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.24 | <b>Density</b>           | N/A | <b>PTSF</b>            | 70.7   | <b>ATS</b> | 42.8 | <b>% FFS</b> | 85.5 |
| <b>FFS Delay</b> | 7.8  | <b>LOS Thresh. Delay</b> | 7.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 150                                     | 400  | 760   | 1160  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 210                                     | 550  | 1030  | 1570  | 1920  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3200                                    | 8400 | 15700 | 23800 | 29100 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                      |                       |                 |                      |                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                   | <b>Highway Name</b>   | Cumberland Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                | <b>From</b>           | Riverwood Ave   | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                | <b>To</b>             | 206th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                  | <b>Peak Direction</b> | Northbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 285 PM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                      |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.640 | <b>Median</b>           | No  | <b>AADT</b>                     | 7059  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.101 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.680 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 71  | <b>Peak Dir. Hrly. Vol.</b>     | 485   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 228   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.34 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 75.1   | <b>ATS</b> | 40.2 | <b>% FFS</b> | 80.4 |
| <b>FFS Delay</b> | 11.3 | <b>LOS Thresh. Delay</b> | 11.3 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 140                                     | 340  | 740   | 1110  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 210                                     | 500  | 1090  | 1640  | 2090  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2100                                    | 5000 | 10800 | 16300 | 20700 |
|              |                                         |      |       |       |       |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                 |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Cumberland Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Riverwood Ave   | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 206th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 285 AM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.640 | <b>Median</b>           | No  | <b>AADT</b>                     | 12803 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.066 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.692 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 71  | <b>Peak Dir. Hrly. Vol.</b>     | 585   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 260   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.41 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 80.1   | <b>ATS</b> | 39.2 | <b>% FFS</b> | 78.4 |
| <b>FFS Delay</b> | 12.7 | <b>LOS Thresh. Delay</b> | 12.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 140                                     | 350  | 750   | 1120  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 210                                     | 510  | 1090  | 1620  | 2060  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3200                                    | 7800 | 16600 | 24600 | 31300 |
|              |                                         |      |       |       |       |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                 |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | SK                                                                                                                    | <b>Highway Name</b>   | Cumberland Road | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 12/4/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Riverwood Ave   | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 206th Street    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound      | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 285 PM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.640 | <b>Median</b>           | No  | <b>AADT</b>                     | 7059  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.128 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.610 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 71  | <b>Peak Dir. Hrly. Vol.</b>     | 551   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 352   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.39 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 78.9   | <b>ATS</b> | 39.3 | <b>% FFS</b> | 78.5 |
| <b>FFS Delay</b> | 12.6 | <b>LOS Thresh. Delay</b> | 12.6 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | C    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D     | E     |
|--------------|-----------------------------------------|------|------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |       |       |
| 1            | 120                                     | 320  | 690  | 1020  | 1420  |
| 2            |                                         |      |      |       |       |
| 3            |                                         |      |      |       |       |
| 4            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |       |       |
| 2            | 200                                     | 530  | 1140 | 1680  | 2330  |
| 4            |                                         |      |      |       |       |
| 6            |                                         |      |      |       |       |
| 8            |                                         |      |      |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |       |       |
| 2            | 1600                                    | 4200 | 9000 | 13200 | 18300 |



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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                    |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 141st St Extension | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Prairie Baptist Rd | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cyntheanne Rd      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Westbound          | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 286 AM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.000 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.071 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.676 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 48    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 23    | <b>Adjusted Capacity</b> | 0     |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.03 | <b>Density</b>           | N/A | <b>PTSF</b>            | 13.8   | <b>ATS</b> | 53.8 | <b>% FFS</b> | 97.9 |
| <b>FFS Delay</b> | 1.4  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B     | C     | D     | E     |
|--------------|-----------------------------------------|-------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |       |       |       |       |
| 1            | 250                                     | 560   | 920   | 1290  | 1420  |
| 2            |                                         |       |       |       |       |
| 3            |                                         |       |       |       |       |
| 4            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |       |       |       |       |
| 2            | 370                                     | 830   | 1370  | 1910  | 2110  |
| 4            |                                         |       |       |       |       |
| 6            |                                         |       |       |       |       |
| 8            |                                         |       |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |       |       |       |       |
| 2            | 5300                                    | 11700 | 19300 | 27000 | 29800 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                    |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | 141st St Extension | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Prairie Baptist Rd | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | Cyntheanne Rd      | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound          | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 286 PM.xhp |                       |                    |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                    |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 1.000 | <b>Median</b>           | No  | <b>AADT</b>                     | 1000  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.102 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.637 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 50    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 65    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 55    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 37    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.05 | <b>Density</b>           | N/A | <b>PTSF</b>            | 16.0   | <b>ATS</b> | 53.5 | <b>% FFS</b> | 97.3 |
| <b>FFS Delay</b> | 1.8  | <b>LOS Thresh. Delay</b> | 0.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 230                                     | 530  | 880   | 1220  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 370                                     | 840  | 1390  | 1920  | 2230  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3700                                    | 8300 | 13700 | 18900 | 21900 |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                         |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Presley Drive Extension | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Phillip Dr              | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 186th St                | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Northbound              | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 287 AM.xhp |                       |                         |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                         |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 1200  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.100 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.542 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 65    | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 55    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.05 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 14.6   | <b>ATS</b> | 38.8 | <b>% FFS</b> | 96.9 |
| <b>FFS Delay</b> | 1.4  | <b>LOS Thresh. Delay</b> | 10.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 150                                     | 330  | 550   | 760   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 280                                     | 610  | 1020  | 1410  | 2620  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 2800                                    | 6200 | 10200 | 14200 | 26200 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                         |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Presley Drive Extension | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Phillip Dr              | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 186th St                | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound              | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 287 PM.xhp |                       |                         |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                         |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 1200  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.200 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.627 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 35    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 150   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 40    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 90    | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.11 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 27.1   | <b>ATS</b> | 37.5 | <b>% FFS</b> | 93.9 |
| <b>FFS Delay</b> | 2.9  | <b>LOS Thresh. Delay</b> | 11.9 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            | 190                                     | 380  | 620  | 870  | 1420  |
| 2            |                                         |      |      |      |       |
| 3            |                                         |      |      |      |       |
| 4            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            | 310                                     | 610  | 990  | 1390 | 2270  |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            | 1600                                    | 3100 | 5000 | 7000 | 11400 |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                          |                       |                         |                      |                  |
|----------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                       | <b>Highway Name</b>   | 141st St<br>(Extension) | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                    | <b>From</b>           | Marilyn Rd              | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                    | <b>To</b>             | Brooks<br>School Rd     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                      | <b>Peak Direction</b> | Westbound               | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity<br>Analysis\HCS\Future\AM\Fu 288 AM.xhp |                       |                         |                      |                  |
| <b>User Notes</b>    |                                                                                                                          |                       |                         |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 3190  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.100 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.815 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 260   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 59    | <b>Adjusted Capacity</b> | 1547  |

## LOS Results

|                  |      |                          |     |                        |        |            |      |              |      |
|------------------|------|--------------------------|-----|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.18 | <b>Density</b>           | N/A | <b>PTSF</b>            | 35.9   | <b>ATS</b> | 41.9 | <b>% FFS</b> | 93.1 |
| <b>FFS Delay</b> | 3.0  | <b>LOS Thresh. Delay</b> | 7.0 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | A    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 310                                     | 600  | 900   | 1230  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 390                                     | 740  | 1110  | 1510  | 1750  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 4000                                    | 7400 | 11200 | 15200 | 17600 |
|              |                                         |      |       |       |       |



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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                          |                       |                         |                      |                  |
|----------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                       | <b>Highway Name</b>   | 141st St<br>(Extension) | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                    | <b>From</b>           | Marilyn Rd              | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                    | <b>To</b>             | Brooks<br>School Rd     | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                      | <b>Peak Direction</b> | Westbound               | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity<br>Analysis\HCS\Future\PM\Fu 288 PM.xhp |                       |                         |                      |                  |
| <b>User Notes</b>    |                                                                                                                          |                       |                         |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 3190  | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.188 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.520 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 40    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 312   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 45    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 288   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.22 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 47.9   | <b>ATS</b> | 38.5 | <b>% FFS</b> | 85.5 |
| <b>FFS Delay</b> | 6.8  | <b>LOS Thresh. Delay</b> | 10.8 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | B    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C    | D    | E     |
|--------------|-----------------------------------------|------|------|------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |      |      |       |
| 1            | 160                                     | 360  | 600  | 820  | 1420  |
| 2            |                                         |      |      |      |       |
| 3            |                                         |      |      |      |       |
| 4            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |      |      |       |
| 2            | 310                                     | 700  | 1160 | 1580 | 2740  |
| 4            |                                         |      |      |      |       |
| 6            |                                         |      |      |      |       |
| 8            |                                         |      |      |      |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |      |      |       |
| 2            | 1700                                    | 3800 | 6200 | 8500 | 14600 |
|              |                                         |      |      |      |       |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                 |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Pleasant Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Cherry Tree Ln  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | River Ave       | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 289 AM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 16200 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.100 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.729 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 1181  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 439   | <b>Adjusted Capacity</b> | 1547  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.83 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 88.6   | <b>ATS</b> | 34.2 | <b>% FFS</b> | 68.4 |
| <b>FFS Delay</b> | 16.7 | <b>LOS Thresh. Delay</b> | 16.7 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 280                                     | 560  | 890   | 1250  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 390                                     | 770  | 1230  | 1720  | 1950  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 4000                                    | 7800 | 12400 | 17200 | 19600 |
|              |                                         |      |       |       |       |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                 |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Pleasant Street | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Cherry Tree Ln  | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | River Ave       | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound       | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 289 PM.xhp |                       |                 |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                 |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.500 | <b>Median</b>           | No  | <b>AADT</b>                     | 16200 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.110 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.528 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 941   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 841   | <b>Adjusted Capacity</b> | 1428  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.66 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 85.7   | <b>ATS</b> | 33.1 | <b>% FFS</b> | 66.2 |
| <b>FFS Delay</b> | 18.4 | <b>LOS Thresh. Delay</b> | 18.4 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 170                                     | 410  | 680   | 920   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 330                                     | 780  | 1290  | 1750  | 2690  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3000                                    | 7100 | 11800 | 16000 | 24500 |
|              |                                         |      |       |       |       |

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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                           |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Pleasant Street Extension | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | River Ave                 | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 8th St                    | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Eastbound                 | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 290 AM.xhp |                       |                           |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                           |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 16120 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.100 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.728 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 1174  | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 438   | <b>Adjusted Capacity</b> | 1547  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.82 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 88.4   | <b>ATS</b> | 34.3 | <b>% FFS</b> | 68.5 |
| <b>FFS Delay</b> | 26.5 | <b>LOS Thresh. Delay</b> | 26.5 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | D    |              |      |

## Service Volumes

**Note:** The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 280                                     | 550  | 890   | 1250  | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 390                                     | 760  | 1230  | 1720  | 1960  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 4000                                    | 7600 | 12400 | 17200 | 19600 |
|              |                                         |      |       |       |       |



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\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

|                      |                                                                                                                       |                       |                         |                      |                  |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------|----------------------|------------------|
| <b>Analyst</b>       | TR                                                                                                                    | <b>Highway Name</b>   | Presley Drive Extension | <b>Study Period</b>  | Kother           |
| <b>Date Prepared</b> | 9/13/2023 10:58:32 AM                                                                                                 | <b>From</b>           | Phillip Dr              | <b>Analysis Type</b> | Two-Lane Segment |
| <b>Agency</b>        | A & F Engineering LLC                                                                                                 | <b>To</b>             | 186th St                | <b>Program</b>       | HIGHPLAN 2012    |
| <b>Area Type</b>     | Transitioning/Urban                                                                                                   | <b>Peak Direction</b> | Southbound              | <b>Version Date</b>  | 12/12/2012       |
| <b>File Name</b>     | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 290 PM.xhp |                       |                         |                      |                  |
| <b>User Notes</b>    |                                                                                                                       |                       |                         |                      |                  |

## Highway Data

| Roadway Variables      |       |                         |     | Traffic Variables               |       |                          |       |
|------------------------|-------|-------------------------|-----|---------------------------------|-------|--------------------------|-------|
| <b>Segment Length</b>  | 0.800 | <b>Median</b>           | No  | <b>AADT</b>                     | 16120 | <b>PHF</b>               | 0.920 |
| <b># Thru Lanes</b>    | 2     | <b>Left Turn Impact</b> | No  | <b>K</b>                        | 0.110 | <b>% Heavy Vehicles</b>  | 3.0   |
| <b>Terrain</b>         | Level | <b>Pass Lane Length</b> | N/A | <b>D</b>                        | 0.528 | <b>Base Capacity</b>     | 1700  |
| <b>Posted Speed</b>    | 45    | <b>% NPZ</b>            | 0   | <b>Peak Dir. Hrly. Vol.</b>     | 936   | <b>Local Adj. Factor</b> | 0.91  |
| <b>Free Flow Speed</b> | 50    | <b>Class</b>            | 3   | <b>Off Peak Dir. Hrly. Vol.</b> | 837   | <b>Adjusted Capacity</b> | 1547  |

## LOS Results

|                  |      |                          |      |                        |        |            |      |              |      |
|------------------|------|--------------------------|------|------------------------|--------|------------|------|--------------|------|
| <b>v/c Ratio</b> | 0.66 | <b>Density</b>           | N/A  | <b>PTSF</b>            | 85.5   | <b>ATS</b> | 33.2 | <b>% FFS</b> | 66.3 |
| <b>FFS Delay</b> | 29.2 | <b>LOS Thresh. Delay</b> | 29.2 | <b>Service Measure</b> | PctFFS | <b>LOS</b> | E    |              |      |

## Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

|              | A                                       | B    | C     | D     | E     |
|--------------|-----------------------------------------|------|-------|-------|-------|
| <b>Lanes</b> | <b>Hourly Volume In Peak Direction</b>  |      |       |       |       |
| 1            | 170                                     | 410  | 680   | 920   | 1420  |
| 2            |                                         |      |       |       |       |
| 3            |                                         |      |       |       |       |
| 4            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Hourly Volume In Both Directions</b> |      |       |       |       |
| 2            | 330                                     | 780  | 1290  | 1750  | 2690  |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |
| <b>Lanes</b> | <b>Annual Average Daily Traffic</b>     |      |       |       |       |
| 2            | 3000                                    | 7100 | 11800 | 16000 | 24500 |
| 4            |                                         |      |       |       |       |
| 6            |                                         |      |       |       |       |
| 8            |                                         |      |       |       |       |

\* Cannot be achieved based on input data provided.

# Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.