| |
|---|
| 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**# Performance measure results are no longer applicable with the presence of passing lanes.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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cicero Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Field Drive | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 147 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 15676 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.083 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.760 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 989 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 312 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.69 | **Density** | N/A | **PTSF** | 96.1 | **ATS** | 35.1 | **% FFS** | 70.1 |
| **FFS Delay** | 24.5 | **LOS Thresh. Delay** | 24.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 130 | 400 | 730 | 1150 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 530 | 970 | 1520 | 1870 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2200 | 6400 | 11700 | 18400 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cicero Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Field Drive | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 147 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 15676 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.100 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.680 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1066 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 502 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.75 | **Density** | N/A | **PTSF** | 92.4 | **ATS** | 33.6 | **% FFS** | 67.1 |
| **FFS Delay** | 28.2 | **LOS Thresh. Delay** | 28.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 110 | 320 | 710 | 1080 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 480 | 1050 | 1590 | 2090 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1800 | 4800 | 10600 | 16000 | 21000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cicero Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Field Drive | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 147 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 16480 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.088 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.775 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1124 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 326 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.79 | **Density** | N/A | **PTSF** | 96.9 | **ATS** | 33.8 | **% FFS** | 67.6 |
| **FFS Delay** | 27.6 | **LOS Thresh. Delay** | 27.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 130 | 420 | 740 | 1160 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 550 | 960 | 1500 | 1840 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2000 | 6300 | 11000 | 17100 | 21000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Cicero Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/1/2023 10:58:32 AM | **From** | Field Drive | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 147 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 16480 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.100 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.686 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1131 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 517 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.79 | **Density** | N/A | **PTSF** | 93.3 | **ATS** | 32.9 | **% FFS** | 65.7 |
| **FFS Delay** | 30.0 | **LOS Thresh. Delay** | 30.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 120 | 330 | 720 | 1090 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 490 | 1050 | 1590 | 2070 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1800 | 5000 | 10600 | 16000 | 20800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 10th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 148 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 7222 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.064 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.580 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 268 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 194 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.19 | **Density** | N/A | **PTSF** | 65.4 | **ATS** | 31.9 | **% FFS** | 79.7 |
| **FFS Delay** | 6.9 | **LOS Thresh. Delay** | 12.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 190 | 450 | 720 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 780 | 1250 | 2450 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1500 | 5200 | 12200 | 19600 | 38300 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 10th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 148 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 7222 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.117 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.610 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 515 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 330 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.36 | **Density** | N/A | **PTSF** | 78.0 | **ATS** | 29.4 | **% FFS** | 73.5 |
| **FFS Delay** | 9.7 | **LOS Thresh. Delay** | 15.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 210 | 450 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 350 | 740 | 1230 | 2330 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 800 | 3000 | 6400 | 10600 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 10th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 148 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 7222 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.064 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.576 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 266 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 196 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.19 | **Density** | N/A | **PTSF** | 65.1 | **ATS** | 31.9 | **% FFS** | 79.8 |
| **FFS Delay** | 6.8 | **LOS Thresh. Delay** | 12.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 190 | 450 | 720 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 790 | 1250 | 2470 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1500 | 5200 | 12400 | 19600 | 38600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 10th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/1/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 148 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 7222 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.117 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.607 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 513 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 332 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.36 | **Density** | N/A | **PTSF** | 77.9 | **ATS** | 29.4 | **% FFS** | 73.6 |
| **FFS Delay** | 9.7 | **LOS Thresh. Delay** | 15.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 200 | 450 | 740 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 750 | 1220 | 2340 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 800 | 2900 | 6500 | 10500 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 16th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 149 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 2465 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.063 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.650 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 101 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 54 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.07 | **Density** | N/A | **PTSF** | 47.2 | **ATS** | 36.1 | **% FFS** | 90.3 |
| **FFS Delay** | 2.9 | **LOS Thresh. Delay** | 8.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 230 | 460 | 770 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 360 | 710 | 1190 | 2190 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 5800 | 11300 | 18900 | 34800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 16th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 149 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 2465 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.140 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.610 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 211 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 135 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.15 | **Density** | N/A | **PTSF** | 60.1 | **ATS** | 33.3 | **% FFS** | 83.3 |
| **FFS Delay** | 5.4 | **LOS Thresh. Delay** | 10.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 210 | 450 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 350 | 740 | 1230 | 2330 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 700 | 2500 | 5300 | 8800 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 16th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 149 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 2465 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.063 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.654 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 102 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 54 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.07 | **Density** | N/A | **PTSF** | 47.3 | **ATS** | 36.1 | **% FFS** | 90.3 |
| **FFS Delay** | 2.9 | **LOS Thresh. Delay** | 8.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 230 | 460 | 770 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 360 | 710 | 1180 | 2180 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 5800 | 11300 | 18800 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 16th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/1/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Logan Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 149 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 2465 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.140 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.610 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 211 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 135 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.15 | **Density** | N/A | **PTSF** | 60.1 | **ATS** | 33.3 | **% FFS** | 83.3 |
| **FFS Delay** | 5.4 | **LOS Thresh. Delay** | 10.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 210 | 450 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 350 | 740 | 1230 | 2330 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 700 | 2500 | 5300 | 8800 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cumberland Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Conner Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 150 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | Yes | **AADT** | 10814 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.064 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.550 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 381 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 311 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.26 | **Density** | N/A | **PTSF** | 69.0 | **ATS** | 30.9 | **% FFS** | 77.1 |
| **FFS Delay** | 10.7 | **LOS Thresh. Delay** | 17.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 460 | 730 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 330 | 840 | 1330 | 2710 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 5200 | 13200 | 20800 | 42400 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cumberland Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Conner Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 150 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | Yes | **AADT** | 10814 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.089 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.620 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 597 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 366 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.40 | **Density** | N/A | **PTSF** | 80.6 | **ATS** | 28.8 | **% FFS** | 72.1 |
| **FFS Delay** | 13.9 | **LOS Thresh. Delay** | 21.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 220 | 480 | 790 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 360 | 780 | 1280 | 2410 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 4100 | 8800 | 14400 | 27100 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cumberland Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Conner Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 150 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | Yes | **AADT** | 10814 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.064 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.555 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 384 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 308 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.26 | **Density** | N/A | **PTSF** | 69.3 | **ATS** | 30.8 | **% FFS** | 77.1 |
| **FFS Delay** | 10.7 | **LOS Thresh. Delay** | 17.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 460 | 730 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 330 | 830 | 1320 | 2690 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 5200 | 13000 | 20700 | 42100 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Cumberland Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/1/2023 10:58:32 AM | **From** | Monument Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Conner Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 150 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | Yes | **AADT** | 10814 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.089 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.619 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 596 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 367 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.40 | **Density** | N/A | **PTSF** | 80.6 | **ATS** | 28.9 | **% FFS** | 72.1 |
| **FFS Delay** | 13.9 | **LOS Thresh. Delay** | 21.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 220 | 480 | 790 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 360 | 780 | 1280 | 2410 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 4100 | 8800 | 14400 | 27100 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Promise Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 181st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 151 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 6480 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.078 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.650 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 329 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 177 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.23 | **Density** | N/A | **PTSF** | 70.7 | **ATS** | 41.4 | **% FFS** | 82.7 |
| **FFS Delay** | 7.5 | **LOS Thresh. Delay** | 7.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 110 | 300 | 690 | 1050 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 470 | 1070 | 1620 | 2190 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2200 | 6100 | 13800 | 20800 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Promise Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 181st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 151 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 6480 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.114 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.540 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 399 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 340 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.28 | **Density** | N/A | **PTSF** | 70.9 | **ATS** | 40.4 | **% FFS** | 80.9 |
| **FFS Delay** | 8.5 | **LOS Thresh. Delay** | 8.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 280 | 620 | 900 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 520 | 1150 | 1670 | 2630 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1500 | 4600 | 10100 | 14700 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Promise Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 181st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 151 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 18965 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.081 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.731 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1123 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 413 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.79 | **Density** | N/A | **PTSF** | 94.8 | **ATS** | 33.4 | **% FFS** | 66.8 |
| **FFS Delay** | 17.9 | **LOS Thresh. Delay** | 17.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 120 | 370 | 730 | 1130 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 510 | 1000 | 1550 | 1950 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2100 | 6300 | 12400 | 19200 | 24100 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Promise Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 181st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 151 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 18965 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.114 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.588 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1271 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 891 | **Adjusted Capacity** | 0 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.89 | **Density** | N/A | **PTSF** | 94.8 | **ATS** | 28.9 | **% FFS** | 57.8 |
| **FFS Delay** | 26.3 | **LOS Thresh. Delay** | 26.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 650 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 500 | 1110 | 1650 | 2420 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 4400 | 9800 | 14500 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Presley Drive | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Union Chapel Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 162 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | Yes | **AADT** | 6625 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.061 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.570 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 230 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 174 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.08 | **Density** | 3.2 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 22.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 710 | 1220 | 1720 | 2220 | 2710 |
| 3 | 1070 | 1830 | 2580 | 3330 | 4060 |
| 4 | 1430 | 2440 | 3440 | 4450 | 5420 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1250 | 2150 | 3020 | 3900 | 4760 |
| 6 | 1880 | 3220 | 4530 | 5850 | 7130 |
| 8 | 2510 | 4290 | 6040 | 7810 | 9510 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 20500 | 35300 | 49600 | 64000 | 78100 |
| 6 | 30900 | 52800 | 74300 | 96000 | 116900 |
| 8 | 41200 | 70400 | 99100 | 128100 | 156000 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Presley Drive | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Union Chapel Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 162 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | Yes | **AADT** | 6625 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.130 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.620 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 534 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 327 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.18 | **Density** | 7.4 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 22.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 710 | 1220 | 1720 | 2220 | 2710 |
| 3 | 1070 | 1830 | 2580 | 3330 | 4060 |
| 4 | 1430 | 2440 | 3440 | 4450 | 5420 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1150 | 1970 | 2780 | 3590 | 4380 |
| 6 | 1730 | 2960 | 4170 | 5380 | 6550 |
| 8 | 2310 | 3940 | 5550 | 7180 | 8750 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 8900 | 15200 | 21400 | 27700 | 33700 |
| 6 | 13400 | 22800 | 32100 | 41400 | 50400 |
| 8 | 17800 | 30400 | 42700 | 55300 | 67400 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Presley Drive | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Union Chapel Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 162 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | Yes | **AADT** | 7361 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.061 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.588 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 264 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 185 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.09 | **Density** | 3.7 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 22.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 710 | 1220 | 1720 | 2220 | 2710 |
| 3 | 1070 | 1830 | 2580 | 3330 | 4060 |
| 4 | 1430 | 2440 | 3440 | 4450 | 5420 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1210 | 2080 | 2930 | 3780 | 4610 |
| 6 | 1820 | 3120 | 4390 | 5670 | 6910 |
| 8 | 2440 | 4150 | 5860 | 7570 | 9220 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 19900 | 34100 | 48100 | 62000 | 75600 |
| 6 | 29900 | 51200 | 72000 | 93000 | 113300 |
| 8 | 40000 | 68100 | 96100 | 124100 | 151200 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Presley Drive | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Union Chapel Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 162 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | Yes | **AADT** | 7361 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.133 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.636 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 623 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 356 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.21 | **Density** | 8.7 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 22.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 710 | 1220 | 1720 | 2220 | 2710 |
| 3 | 1070 | 1830 | 2580 | 3330 | 4060 |
| 4 | 1430 | 2440 | 3440 | 4450 | 5420 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1120 | 1920 | 2710 | 3500 | 4270 |
| 6 | 1690 | 2880 | 4060 | 5240 | 6390 |
| 8 | 2250 | 3840 | 5410 | 7000 | 8530 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 8500 | 14500 | 20400 | 26400 | 32200 |
| 6 | 12800 | 21700 | 30600 | 39400 | 48100 |
| 8 | 17000 | 28900 | 40700 | 52700 | 64200 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Presley Drive | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 163 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | Yes | **AADT** | 1560 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.200 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.540 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 168 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 144 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.11 | **Density** | N/A | **PTSF** | 53.1 | **ATS** | 33.7 | **% FFS** | 84.3 |
| **FFS Delay** | 10.0 | **LOS Thresh. Delay** | 20.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 450 | 720 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 340 | 840 | 1340 | 2760 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 600 | 1800 | 4200 | 6800 | 13800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Presley Drive | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 163 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | Yes | **AADT** | 1560 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.200 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.910 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 284 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 28 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.19 | **Density** | N/A | **PTSF** | 67.2 | **ATS** | 34.8 | **% FFS** | 87.0 |
| **FFS Delay** | 8.0 | **LOS Thresh. Delay** | 18.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 430 | 780 | 1080 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 480 | 860 | 1190 | 1640 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 600 | 2400 | 4400 | 6000 | 8200 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Presley Drive | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 163 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | Yes | **AADT** | 1591 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.200 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.547 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 174 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 144 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.12 | **Density** | N/A | **PTSF** | 54.1 | **ATS** | 33.7 | **% FFS** | 84.2 |
| **FFS Delay** | 10.1 | **LOS Thresh. Delay** | 20.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 450 | 720 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 330 | 830 | 1320 | 2730 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 600 | 1700 | 4200 | 6600 | 13700 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Presley Drive | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 163 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | Yes | **AADT** | 1591 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.200 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.904 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 288 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 31 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.19 | **Density** | N/A | **PTSF** | 67.0 | **ATS** | 34.7 | **% FFS** | 86.9 |
| **FFS Delay** | 8.2 | **LOS Thresh. Delay** | 19.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 430 | 770 | 1060 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 480 | 860 | 1180 | 1650 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 600 | 2400 | 4400 | 6000 | 8300 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 19th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Clover Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 164 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | Yes | **AADT** | 10153 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.053 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.510 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 274 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 264 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.19 | **Density** | N/A | **PTSF** | 62.6 | **ATS** | 31.9 | **% FFS** | 79.7 |
| **FFS Delay** | 4.6 | **LOS Thresh. Delay** | 8.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 160 | 440 | 690 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 320 | 870 | 1360 | 2930 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1900 | 6100 | 16500 | 25700 | 55300 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 19th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Clover Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 164 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | Yes | **AADT** | 10153 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.096 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.590 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 575 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 400 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.39 | **Density** | N/A | **PTSF** | 79.8 | **ATS** | 28.9 | **% FFS** | 72.3 |
| **FFS Delay** | 6.9 | **LOS Thresh. Delay** | 10.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 200 | 470 | 770 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 110 | 340 | 800 | 1310 | 2530 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 3600 | 8400 | 13700 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 19th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Clover Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 164 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | Yes | **AADT** | 10646 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.054 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.513 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 295 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 280 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.20 | **Density** | N/A | **PTSF** | 64.0 | **ATS** | 31.7 | **% FFS** | 79.2 |
| **FFS Delay** | 4.7 | **LOS Thresh. Delay** | 8.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 160 | 440 | 690 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 320 | 860 | 1350 | 2910 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1900 | 6000 | 16000 | 25000 | 53900 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 19th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Clover Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 164 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | Yes | **AADT** | 10646 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.096 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.590 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 603 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 419 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.40 | **Density** | N/A | **PTSF** | 81.0 | **ATS** | 28.6 | **% FFS** | 71.5 |
| **FFS Delay** | 7.2 | **LOS Thresh. Delay** | 10.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 200 | 470 | 770 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 110 | 340 | 800 | 1310 | 2530 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 3600 | 8400 | 13700 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cherry Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 19th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 165 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.090 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.510 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 46 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 44 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.03 | **Density** | N/A | **PTSF** | 11.4 | **ATS** | 39.0 | **% FFS** | 97.6 |
| **FFS Delay** | 0.7 | **LOS Thresh. Delay** | 6.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 140 | 310 | 520 | 710 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 280 | 610 | 1020 | 1400 | 2790 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3200 | 6800 | 11400 | 15600 | 31000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cherry Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 19th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 165 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.151 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.540 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 82 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 69 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.06 | **Density** | N/A | **PTSF** | 16.8 | **ATS** | 38.5 | **% FFS** | 96.2 |
| **FFS Delay** | 1.1 | **LOS Thresh. Delay** | 6.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 150 | 330 | 550 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 280 | 620 | 1020 | 1390 | 2630 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1900 | 4200 | 6800 | 9300 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cherry Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 19th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 165 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.090 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.511 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 46 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 44 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.03 | **Density** | N/A | **PTSF** | 11.4 | **ATS** | 39.0 | **% FFS** | 97.6 |
| **FFS Delay** | 0.7 | **LOS Thresh. Delay** | 6.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 140 | 310 | 520 | 710 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 280 | 610 | 1020 | 1390 | 2780 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3200 | 6800 | 11400 | 15500 | 30900 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Cherry Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 19th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 165 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.151 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.543 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 82 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 69 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.06 | **Density** | N/A | **PTSF** | 16.8 | **ATS** | 38.5 | **% FFS** | 96.2 |
| **FFS Delay** | 1.1 | **LOS Thresh. Delay** | 6.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 150 | 330 | 550 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 280 | 610 | 1020 | 1400 | 2620 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1900 | 4100 | 6800 | 9300 | 17400 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cherry Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 10th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 16th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 166 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.057 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.700 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 40 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 17 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.03 | **Density** | N/A | **PTSF** | 12.8 | **ATS** | 39.4 | **% FFS** | 98.4 |
| **FFS Delay** | 0.6 | **LOS Thresh. Delay** | 7.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 220 | 430 | 680 | 950 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 320 | 620 | 980 | 1360 | 2030 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 5700 | 10900 | 17200 | 23900 | 35700 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cherry Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 10th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 16th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 166 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.095 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.590 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 56 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 39 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.04 | **Density** | N/A | **PTSF** | 14.4 | **ATS** | 39.0 | **% FFS** | 97.5 |
| **FFS Delay** | 0.9 | **LOS Thresh. Delay** | 8.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 170 | 360 | 590 | 820 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 290 | 620 | 1000 | 1390 | 2410 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3100 | 6600 | 10600 | 14700 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cherry Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 10th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 16th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 166 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.057 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.702 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 40 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 17 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.03 | **Density** | N/A | **PTSF** | 12.8 | **ATS** | 39.4 | **% FFS** | 98.4 |
| **FFS Delay** | 0.6 | **LOS Thresh. Delay** | 7.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 230 | 430 | 680 | 950 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 330 | 620 | 970 | 1360 | 2030 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 5800 | 10900 | 17100 | 23900 | 35700 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Cherry Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 10th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 16th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 166 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.095 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.589 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 56 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 39 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.04 | **Density** | N/A | **PTSF** | 14.4 | **ATS** | 39.0 | **% FFS** | 97.5 |
| **FFS Delay** | 0.9 | **LOS Thresh. Delay** | 8.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 170 | 360 | 590 | 820 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 290 | 620 | 1010 | 1400 | 2420 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3100 | 6600 | 10700 | 14800 | 25500 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 10th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 167 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 10174 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.044 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.650 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 291 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 157 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.21 | **Density** | N/A | **PTSF** | 67.4 | **ATS** | 31.9 | **% FFS** | 79.9 |
| **FFS Delay** | 9.1 | **LOS Thresh. Delay** | 16.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 230 | 460 | 770 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 360 | 710 | 1190 | 2190 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2300 | 8200 | 16200 | 27100 | 49800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 10th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 167 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 10174 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.090 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.600 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 549 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 366 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.39 | **Density** | N/A | **PTSF** | 79.9 | **ATS** | 29.0 | **% FFS** | 72.4 |
| **FFS Delay** | 13.7 | **LOS Thresh. Delay** | 20.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 200 | 450 | 740 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 340 | 760 | 1240 | 2370 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3800 | 8500 | 13800 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 10th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 167 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 10733 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.045 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.603 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 291 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 192 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.21 | **Density** | N/A | **PTSF** | 68.0 | **ATS** | 31.7 | **% FFS** | 79.2 |
| **FFS Delay** | 9.5 | **LOS Thresh. Delay** | 16.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 200 | 450 | 740 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 340 | 750 | 1230 | 2360 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2000 | 7600 | 16700 | 27400 | 52500 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 10th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 167 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 10733 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.090 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.602 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 582 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 384 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.41 | **Density** | N/A | **PTSF** | 81.4 | **ATS** | 28.6 | **% FFS** | 71.5 |
| **FFS Delay** | 14.4 | **LOS Thresh. Delay** | 21.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 200 | 450 | 740 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 340 | 750 | 1230 | 2360 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3800 | 8400 | 13700 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 8th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 10th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 168a AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.100 | **Median** | No | **AADT** | 5693 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.044 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.600 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 150 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 100 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.11 | **Density** | N/A | **PTSF** | 52.6 | **ATS** | 34.9 | **% FFS** | 87.2 |
| **FFS Delay** | 1.3 | **LOS Thresh. Delay** | 3.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 200 | 450 | 740 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 340 | 760 | 1240 | 2370 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2100 | 7800 | 17300 | 28200 | 53900 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 8th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 10th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 168a PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.100 | **Median** | No | **AADT** | 5693 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.087 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.510 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 253 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 243 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.18 | **Density** | N/A | **PTSF** | 62.1 | **ATS** | 32.0 | **% FFS** | 79.9 |
| **FFS Delay** | 2.3 | **LOS Thresh. Delay** | 4.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 40 | 150 | 420 | 650 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 80 | 300 | 830 | 1280 | 2790 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3500 | 9600 | 14800 | 32100 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 8th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 10th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 168a AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.100 | **Median** | No | **AADT** | 18310 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.071 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.584 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 759 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 541 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.53 | **Density** | N/A | **PTSF** | 86.3 | **ATS** | 26.3 | **% FFS** | 65.7 |
| **FFS Delay** | 4.7 | **LOS Thresh. Delay** | 6.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 190 | 450 | 720 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 780 | 1240 | 2440 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1300 | 4700 | 11000 | 17500 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 8th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 10th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 168a PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.100 | **Median** | No | **AADT** | 18310 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.097 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.565 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1003 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 773 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.70 | **Density** | N/A | **PTSF** | 91.1 | **ATS** | 22.4 | **% FFS** | 56.0 |
| **FFS Delay** | 7.1 | **LOS Thresh. Delay** | 8.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 440 | 710 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 320 | 780 | 1260 | 2520 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3300 | 8100 | 13000 | 26000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 2nd Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 8th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 168b AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 5693 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.044 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.600 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 150 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 100 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.11 | **Density** | N/A | **PTSF** | 27.3 | **ATS** | 37.4 | **% FFS** | 93.4 |
| **FFS Delay** | 1.9 | **LOS Thresh. Delay** | 7.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 180 | 370 | 590 | 830 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 300 | 620 | 990 | 1390 | 2370 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 6900 | 14100 | 22500 | 31600 | 53900 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 2nd Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 8th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 168b PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 5693 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.087 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.510 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 253 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 243 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.18 | **Density** | N/A | **PTSF** | 41.1 | **ATS** | 34.4 | **% FFS** | 86.1 |
| **FFS Delay** | 4.4 | **LOS Thresh. Delay** | 9.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 140 | 310 | 520 | 710 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 280 | 610 | 1020 | 1400 | 2790 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3300 | 7100 | 11800 | 16100 | 32100 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 2nd Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 8th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 168b AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 18310 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.071 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.584 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 759 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 541 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.53 | **Density** | N/A | **PTSF** | 78.3 | **ATS** | 27.6 | **% FFS** | 68.9 |
| **FFS Delay** | 12.2 | **LOS Thresh. Delay** | 17.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 170 | 360 | 580 | 810 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 300 | 620 | 1000 | 1390 | 2440 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4300 | 8800 | 14100 | 19600 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Pleasant Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 2nd Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 8th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 168b PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 18310 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.087 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.565 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 900 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 693 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.63 | **Density** | N/A | **PTSF** | 83.7 | **ATS** | 24.9 | **% FFS** | 62.3 |
| **FFS Delay** | 16.3 | **LOS Thresh. Delay** | 21.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 160 | 340 | 570 | 790 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 290 | 610 | 1010 | 1400 | 2520 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3400 | 7100 | 11700 | 16100 | 29000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cherry Tree Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 169 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 2576 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.035 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.700 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 63 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 27 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.05 | **Density** | N/A | **PTSF** | 43.3 | **ATS** | 41.7 | **% FFS** | 92.8 |
| **FFS Delay** | 5.0 | **LOS Thresh. Delay** | 11.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 300 | 590 | 950 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 130 | 430 | 850 | 1360 | 2030 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3800 | 12300 | 24300 | 38900 | 58000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cherry Tree Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 169 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 2576 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.109 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.550 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 154 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 126 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.11 | **Density** | N/A | **PTSF** | 52.3 | **ATS** | 39.1 | **% FFS** | 86.9 |
| **FFS Delay** | 9.7 | **LOS Thresh. Delay** | 16.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 200 | 540 | 810 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 130 | 370 | 990 | 1480 | 2590 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 3400 | 9100 | 13600 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cherry Tree Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 169 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 3239 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.038 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.623 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 77 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 46 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.06 | **Density** | N/A | **PTSF** | 43.6 | **ATS** | 41.4 | **% FFS** | 92.1 |
| **FFS Delay** | 5.5 | **LOS Thresh. Delay** | 11.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 240 | 570 | 890 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 130 | 390 | 920 | 1430 | 2280 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3500 | 10300 | 24300 | 37700 | 60000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Cherry Tree Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 169 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 3239 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.109 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.581 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 205 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 148 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.15 | **Density** | N/A | **PTSF** | 59.2 | **ATS** | 38.0 | **% FFS** | 84.4 |
| **FFS Delay** | 11.8 | **LOS Thresh. Delay** | 18.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 220 | 550 | 850 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 380 | 950 | 1470 | 2450 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1300 | 3500 | 8800 | 13500 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Willowview Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 171st Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 170 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1473 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.042 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.710 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 44 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 18 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.03 | **Density** | N/A | **PTSF** | 41.1 | **ATS** | 46.9 | **% FFS** | 93.8 |
| **FFS Delay** | 2.4 | **LOS Thresh. Delay** | 2.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 120 | 350 | 720 | 1110 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 500 | 1020 | 1570 | 2000 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4100 | 12000 | 24300 | 37400 | 47700 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Willowview Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 171st Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 170 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1473 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.070 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.560 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 58 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 45 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.04 | **Density** | N/A | **PTSF** | 38.2 | **ATS** | 46.5 | **% FFS** | 93.0 |
| **FFS Delay** | 2.7 | **LOS Thresh. Delay** | 2.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 280 | 630 | 930 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 500 | 1130 | 1670 | 2540 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2500 | 7200 | 16200 | 23900 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Willowview Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 171st Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 170 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1905 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.042 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.763 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 61 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 19 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.04 | **Density** | N/A | **PTSF** | 45.5 | **ATS** | 46.7 | **% FFS** | 93.5 |
| **FFS Delay** | 2.5 | **LOS Thresh. Delay** | 2.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 130 | 400 | 730 | 1150 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 530 | 960 | 1510 | 1870 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4300 | 12700 | 22900 | 36000 | 44600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Willowview Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 171st Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 170 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1905 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.073 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.514 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 71 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 68 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.05 | **Density** | N/A | **PTSF** | 37.0 | **ATS** | 46.2 | **% FFS** | 92.4 |
| **FFS Delay** | 3.0 | **LOS Thresh. Delay** | 3.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 280 | 590 | 860 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 160 | 550 | 1150 | 1680 | 2770 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2200 | 7600 | 15800 | 23100 | 38000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Mill Creek Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 171 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1415 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.059 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.720 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 18 | **Peak Dir. Hrly. Vol.** | 60 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 23 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.04 | **Density** | N/A | **PTSF** | 28.0 | **ATS** | 49.0 | **% FFS** | 98.0 |
| **FFS Delay** | 0.7 | **LOS Thresh. Delay** | 0.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 270 | 550 | 880 | 1240 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 380 | 770 | 1230 | 1730 | 1980 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 6500 | 13100 | 20900 | 29400 | 33600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Mill Creek Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 171 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1415 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.079 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.590 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 18 | **Peak Dir. Hrly. Vol.** | 66 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 46 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.05 | **Density** | N/A | **PTSF** | 26.7 | **ATS** | 48.7 | **% FFS** | 97.5 |
| **FFS Delay** | 0.9 | **LOS Thresh. Delay** | 0.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 200 | 450 | 750 | 1030 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 340 | 770 | 1280 | 1750 | 2410 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4400 | 9800 | 16300 | 22200 | 30600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Mill Creek Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 171 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 5119 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.059 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.675 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 18 | **Peak Dir. Hrly. Vol.** | 204 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 98 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.15 | **Density** | N/A | **PTSF** | 46.0 | **ATS** | 46.8 | **% FFS** | 93.5 |
| **FFS Delay** | 2.5 | **LOS Thresh. Delay** | 2.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 250 | 520 | 840 | 1170 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 380 | 780 | 1250 | 1740 | 2110 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 6500 | 13300 | 21200 | 29500 | 35800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Mill Creek Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 32 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 171 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 5119 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.080 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.588 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 18 | **Peak Dir. Hrly. Vol.** | 241 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 169 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.17 | **Density** | N/A | **PTSF** | 50.6 | **ATS** | 45.0 | **% FFS** | 89.9 |
| **FFS Delay** | 4.0 | **LOS Thresh. Delay** | 4.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 200 | 450 | 750 | 1030 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 350 | 770 | 1280 | 1760 | 2420 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4400 | 9700 | 16000 | 22000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 169th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Gray Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 173 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3158 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.065 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.590 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 121 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 84 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.09 | **Density** | N/A | **PTSF** | 48.3 | **ATS** | 45.5 | **% FFS** | 91.0 |
| **FFS Delay** | 6.7 | **LOS Thresh. Delay** | 6.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 650 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 500 | 1110 | 1650 | 2410 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2700 | 7700 | 17100 | 25400 | 37100 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 169th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Gray Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 173 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3158 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.120 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.530 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 201 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 178 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.14 | **Density** | N/A | **PTSF** | 58.1 | **ATS** | 42.5 | **% FFS** | 85.1 |
| **FFS Delay** | 12.0 | **LOS Thresh. Delay** | 12.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 280 | 610 | 880 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 530 | 1160 | 1670 | 2680 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1500 | 4500 | 9700 | 14000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 169th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Gray Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 173 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 4600 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.066 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.616 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 187 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 117 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.13 | **Density** | N/A | **PTSF** | 57.4 | **ATS** | 44.0 | **% FFS** | 88.0 |
| **FFS Delay** | 9.3 | **LOS Thresh. Delay** | 9.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 670 | 1010 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 480 | 1090 | 1640 | 2310 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2600 | 7300 | 16600 | 24900 | 35000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 169th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Gray Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 173 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 4600 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.135 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.500 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 311 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 311 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.22 | **Density** | N/A | **PTSF** | 64.9 | **ATS** | 41.3 | **% FFS** | 82.6 |
| **FFS Delay** | 14.4 | **LOS Thresh. Delay** | 14.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 270 | 580 | 830 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 160 | 540 | 1160 | 1660 | 2840 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 4000 | 8600 | 12300 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 169th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Semoinole Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 174 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1441 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.076 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.650 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 75 | **Peak Dir. Hrly. Vol.** | 71 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 38 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.05 | **Density** | N/A | **PTSF** | 42.7 | **ATS** | 46.7 | **% FFS** | 93.4 |
| **FFS Delay** | 2.6 | **LOS Thresh. Delay** | 2.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 120 | 320 | 710 | 1060 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 190 | 500 | 1100 | 1640 | 2190 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2600 | 6600 | 14500 | 21600 | 28900 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 169th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Semoinole Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 174 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1441 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.108 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.530 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 75 | **Peak Dir. Hrly. Vol.** | 82 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 73 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.06 | **Density** | N/A | **PTSF** | 38.4 | **ATS** | 46.2 | **% FFS** | 92.5 |
| **FFS Delay** | 2.9 | **LOS Thresh. Delay** | 2.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 300 | 630 | 900 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 570 | 1190 | 1700 | 2680 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 5300 | 11100 | 15800 | 24900 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 169th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Semoinole Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 174 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1908 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.076 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.690 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 75 | **Peak Dir. Hrly. Vol.** | 100 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 45 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.07 | **Density** | N/A | **PTSF** | 47.3 | **ATS** | 46.3 | **% FFS** | 92.7 |
| **FFS Delay** | 2.8 | **LOS Thresh. Delay** | 2.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 130 | 340 | 740 | 1110 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 190 | 500 | 1080 | 1610 | 2060 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2600 | 6600 | 14300 | 21200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 169th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Semoinole Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 174 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1908 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.111 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.588 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 75 | **Peak Dir. Hrly. Vol.** | 125 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 87 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.09 | **Density** | N/A | **PTSF** | 47.9 | **ATS** | 45.6 | **% FFS** | 91.2 |
| **FFS Delay** | 3.5 | **LOS Thresh. Delay** | 3.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 110 | 310 | 670 | 980 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 190 | 530 | 1140 | 1670 | 2420 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1800 | 4800 | 10300 | 15100 | 21900 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 171st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Seminole Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Willowview Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 175 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1578 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.091 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.680 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 85 | **Peak Dir. Hrly. Vol.** | 98 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 46 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.07 | **Density** | N/A | **PTSF** | 47.1 | **ATS** | 36.4 | **% FFS** | 91.0 |
| **FFS Delay** | 4.5 | **LOS Thresh. Delay** | 13.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 260 | 480 | 800 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 110 | 390 | 710 | 1180 | 2090 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1300 | 4300 | 7900 | 13000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 171st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Seminole Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Willowview Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 175 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1578 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.124 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.530 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 85 | **Peak Dir. Hrly. Vol.** | 104 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 92 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.07 | **Density** | N/A | **PTSF** | 42.6 | **ATS** | 35.7 | **% FFS** | 89.2 |
| **FFS Delay** | 5.4 | **LOS Thresh. Delay** | 14.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 170 | 430 | 680 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 120 | 330 | 820 | 1290 | 2680 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 2700 | 6700 | 10500 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 171st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Seminole Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Willowview Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 175 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 2110 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.091 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.604 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 85 | **Peak Dir. Hrly. Vol.** | 116 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 76 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.08 | **Density** | N/A | **PTSF** | 47.6 | **ATS** | 35.9 | **% FFS** | 89.8 |
| **FFS Delay** | 5.1 | **LOS Thresh. Delay** | 14.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 210 | 470 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 350 | 780 | 1250 | 2360 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1100 | 3900 | 8600 | 13800 | 26000 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 171st Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Seminole Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Willowview Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 175 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 2110 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.140 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.554 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 85 | **Peak Dir. Hrly. Vol.** | 164 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 132 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.12 | **Density** | N/A | **PTSF** | 53.2 | **ATS** | 34.0 | **% FFS** | 85.0 |
| **FFS Delay** | 8.0 | **LOS Thresh. Delay** | 17.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 180 | 450 | 700 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 110 | 330 | 820 | 1270 | 2570 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 800 | 2400 | 5900 | 9100 | 18400 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 171st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Willowview Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cherry Tree Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 176 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1570 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.075 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.670 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 79 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 39 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.06 | **Density** | N/A | **PTSF** | 44.8 | **ATS** | 36.5 | **% FFS** | 91.2 |
| **FFS Delay** | 4.3 | **LOS Thresh. Delay** | 13.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 240 | 460 | 780 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 360 | 690 | 1170 | 2120 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 4800 | 9200 | 15600 | 28300 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 171st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Willowview Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cherry Tree Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 176 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1570 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.141 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.580 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 128 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 93 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.09 | **Density** | N/A | **PTSF** | 48.9 | **ATS** | 35.3 | **% FFS** | 88.2 |
| **FFS Delay** | 6.0 | **LOS Thresh. Delay** | 15.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 190 | 450 | 720 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 780 | 1250 | 2450 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 700 | 2400 | 5600 | 8900 | 17400 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 171st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Willowview Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cherry Tree Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 176 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1973 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.075 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.649 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 96 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 52 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.07 | **Density** | N/A | **PTSF** | 46.5 | **ATS** | 36.2 | **% FFS** | 90.5 |
| **FFS Delay** | 4.7 | **LOS Thresh. Delay** | 13.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 230 | 460 | 770 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 360 | 710 | 1190 | 2190 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1400 | 4800 | 9500 | 15900 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 171st Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Willowview Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cherry Tree Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 176 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1973 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.145 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.613 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 175 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 111 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.12 | **Density** | N/A | **PTSF** | 55.9 | **ATS** | 34.3 | **% FFS** | 85.8 |
| **FFS Delay** | 7.4 | **LOS Thresh. Delay** | 16.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 210 | 450 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 350 | 740 | 1230 | 2320 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 700 | 2500 | 5200 | 8500 | 16100 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Allisonville Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Pleasant Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Christian Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 177 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 9908 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.063 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.660 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 412 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 212 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.29 | **Density** | N/A | **PTSF** | 73.3 | **ATS** | 30.5 | **% FFS** | 76.3 |
| **FFS Delay** | 8.4 | **LOS Thresh. Delay** | 13.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 240 | 460 | 780 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 370 | 700 | 1190 | 2160 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 5900 | 11200 | 18900 | 34300 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Allisonville Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Pleasant Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Christian Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 177 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 9908 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.102 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.640 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 647 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 364 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.46 | **Density** | N/A | **PTSF** | 83.7 | **ATS** | 28.1 | **% FFS** | 70.1 |
| **FFS Delay** | 11.5 | **LOS Thresh. Delay** | 16.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 220 | 460 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 350 | 720 | 1190 | 2220 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3500 | 7100 | 11700 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Allisonville Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Pleasant Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Christian Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 177 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 20137 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.082 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.501 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 827 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 824 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.58 | **Density** | N/A | **PTSF** | 86.9 | **ATS** | 23.6 | **% FFS** | 59.0 |
| **FFS Delay** | 18.8 | **LOS Thresh. Delay** | 24.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 40 | 150 | 410 | 640 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 80 | 300 | 820 | 1280 | 2840 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3700 | 10100 | 15700 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Allisonville Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Pleasant Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Christian Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 177 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 20137 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.102 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.624 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1282 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 772 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.90 | **Density** | N/A | **PTSF** | 93.9 | **ATS** | 19.8 | **% FFS** | 49.6 |
| **FFS Delay** | 27.5 | **LOS Thresh. Delay** | 32.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 210 | 450 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 340 | 730 | 1210 | 2280 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3400 | 7200 | 11900 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 16th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Greenfield Avenue | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 178 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 1322 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.059 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.580 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 45 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 33 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.03 | **Density** | N/A | **PTSF** | 37.3 | **ATS** | 36.9 | **% FFS** | 92.1 |
| **FFS Delay** | 4.6 | **LOS Thresh. Delay** | 15.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 190 | 450 | 720 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 780 | 1250 | 2450 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 5600 | 13300 | 21200 | 41600 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 16th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Greenfield Avenue | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 178 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 1322 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.083 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.600 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 66 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 44 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.05 | **Density** | N/A | **PTSF** | 41.5 | **ATS** | 36.6 | **% FFS** | 91.4 |
| **FFS Delay** | 5.1 | **LOS Thresh. Delay** | 15.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 200 | 450 | 740 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 340 | 760 | 1240 | 2370 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1100 | 4100 | 9200 | 15000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 16th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Greenfield Avenue | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 178 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 1322 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.059 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.577 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 45 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 33 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.03 | **Density** | N/A | **PTSF** | 37.3 | **ATS** | 36.9 | **% FFS** | 92.1 |
| **FFS Delay** | 4.6 | **LOS Thresh. Delay** | 15.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 190 | 450 | 720 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 780 | 1250 | 2470 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 5600 | 13300 | 21200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 16th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Greenfield Avenue | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 178 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 1322 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.083 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.600 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 66 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 44 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.05 | **Density** | N/A | **PTSF** | 41.5 | **ATS** | 36.6 | **% FFS** | 91.4 |
| **FFS Delay** | 5.1 | **LOS Thresh. Delay** | 15.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 200 | 450 | 740 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 340 | 760 | 1240 | 2370 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1100 | 4100 | 9200 | 15000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Mercantile Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Town and Country Blvd | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 179 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | Yes | **AADT** | 8790 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.055 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.540 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 261 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 222 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.18 | **Density** | N/A | **PTSF** | 62.8 | **ATS** | 32.0 | **% FFS** | 80.1 |
| **FFS Delay** | 8.9 | **LOS Thresh. Delay** | 16.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 450 | 720 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 340 | 840 | 1340 | 2760 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1900 | 6200 | 15300 | 24400 | 50200 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Mercantile Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Town and Country Blvd | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 179 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | Yes | **AADT** | 8790 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.108 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.520 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 494 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 456 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.33 | **Density** | N/A | **PTSF** | 74.9 | **ATS** | 29.4 | **% FFS** | 73.6 |
| **FFS Delay** | 12.9 | **LOS Thresh. Delay** | 20.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 170 | 440 | 700 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 330 | 850 | 1350 | 2870 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3100 | 7900 | 12500 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Mercantile Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Town and Country Blvd | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 179 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | Yes | **AADT** | 9120 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.056 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.520 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 266 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 245 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.18 | **Density** | N/A | **PTSF** | 62.6 | **ATS** | 32.0 | **% FFS** | 79.9 |
| **FFS Delay** | 9.0 | **LOS Thresh. Delay** | 16.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 170 | 440 | 700 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 330 | 850 | 1350 | 2870 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1800 | 5900 | 15200 | 24200 | 51300 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Mercantile Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Town and Country Blvd | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Pleasant Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 179 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | Yes | **AADT** | 9120 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.108 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.518 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 510 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 475 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.34 | **Density** | N/A | **PTSF** | 75.4 | **ATS** | 29.2 | **% FFS** | 73.0 |
| **FFS Delay** | 13.3 | **LOS Thresh. Delay** | 20.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 160 | 440 | 690 | 1490 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 310 | 850 | 1340 | 2880 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 2900 | 7900 | 12500 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 185 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.032 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.530 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 46 | **Peak Dir. Hrly. Vol.** | 17 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 15 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 26.4 | **ATS** | 48.6 | **% FFS** | 97.3 |
| **FFS Delay** | 1.0 | **LOS Thresh. Delay** | 1.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 130 | 370 | 660 | 920 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 250 | 700 | 1250 | 1740 | 2680 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 7900 | 21900 | 39100 | 54400 | 83800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 185 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.061 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.870 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 46 | **Peak Dir. Hrly. Vol.** | 53 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 8 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.04 | **Density** | N/A | **PTSF** | 40.3 | **ATS** | 48.4 | **% FFS** | 96.7 |
| **FFS Delay** | 1.2 | **LOS Thresh. Delay** | 1.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 280 | 650 | 970 | 1350 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 330 | 750 | 1120 | 1560 | 1640 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 5500 | 12300 | 18400 | 25600 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 185 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1333 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.060 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.800 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 46 | **Peak Dir. Hrly. Vol.** | 64 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 16 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.05 | **Density** | N/A | **PTSF** | 41.2 | **ATS** | 48.2 | **% FFS** | 96.4 |
| **FFS Delay** | 1.4 | **LOS Thresh. Delay** | 1.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 260 | 540 | 880 | 1270 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 330 | 680 | 1100 | 1590 | 1780 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 5600 | 11400 | 18400 | 26600 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 185 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 1333 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.200 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.961 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 46 | **Peak Dir. Hrly. Vol.** | 256 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 10 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.18 | **Density** | N/A | **PTSF** | 62.6 | **ATS** | 46.4 | **% FFS** | 92.9 |
| **FFS Delay** | 2.8 | **LOS Thresh. Delay** | 2.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 310 | 750 | 1180 | 1420 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 330 | 790 | 1230 | 1480 | 1480 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1700 | 4000 | 6200 | 7400 | 7400 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Olio Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 166th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 186 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | No | **AADT** | 4038 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.085 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.610 | **Base Capacity** | 1700 |
| **Posted Speed** | 55 | **% NPZ** | 35 | **Peak Dir. Hrly. Vol.** | 209 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 60 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 134 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.15 | **Density** | N/A | **PTSF** | 51.7 | **ATS** | 54.6 | **% FFS** | 90.9 |
| **FFS Delay** | 1.2 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 190 | 530 | 910 | 1270 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 320 | 870 | 1500 | 2090 | 2330 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3800 | 10300 | 17700 | 24600 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Olio Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 166th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 186 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | No | **AADT** | 4038 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.102 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.540 | **Base Capacity** | 1700 |
| **Posted Speed** | 55 | **% NPZ** | 35 | **Peak Dir. Hrly. Vol.** | 222 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 60 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 189 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.16 | **Density** | N/A | **PTSF** | 53.5 | **ATS** | 53.6 | **% FFS** | 89.3 |
| **FFS Delay** | 1.4 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 150 | 490 | 820 | 1120 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 280 | 910 | 1520 | 2080 | 2630 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2800 | 9000 | 15000 | 20400 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Olio Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 166th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 186 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | No | **AADT** | 11824 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.085 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.629 | **Base Capacity** | 1700 |
| **Posted Speed** | 55 | **% NPZ** | 35 | **Peak Dir. Hrly. Vol.** | 632 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 60 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 373 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.45 | **Density** | N/A | **PTSF** | 78.9 | **ATS** | 48.9 | **% FFS** | 81.6 |
| **FFS Delay** | 2.7 | **LOS Thresh. Delay** | 0.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 200 | 540 | 940 | 1300 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 320 | 860 | 1500 | 2070 | 2260 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3800 | 10200 | 17700 | 24400 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Olio Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 166th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 186 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | No | **AADT** | 11824 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.109 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.573 | **Base Capacity** | 1700 |
| **Posted Speed** | 55 | **% NPZ** | 35 | **Peak Dir. Hrly. Vol.** | 738 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 60 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 550 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.52 | **Density** | N/A | **PTSF** | 82.6 | **ATS** | 46.9 | **% FFS** | 78.2 |
| **FFS Delay** | 3.3 | **LOS Thresh. Delay** | 0.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 170 | 510 | 870 | 1190 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 300 | 900 | 1520 | 2080 | 2480 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2800 | 8300 | 14000 | 19100 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 187 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1408 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.078 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.630 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 17 | **Peak Dir. Hrly. Vol.** | 69 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 41 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.05 | **Density** | N/A | **PTSF** | 27.5 | **ATS** | 48.8 | **% FFS** | 97.5 |
| **FFS Delay** | 1.7 | **LOS Thresh. Delay** | 1.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 220 | 480 | 800 | 1100 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 350 | 770 | 1270 | 1750 | 2260 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4500 | 9900 | 16300 | 22500 | 29000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 187 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1408 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.099 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.600 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 17 | **Peak Dir. Hrly. Vol.** | 84 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 56 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.06 | **Density** | N/A | **PTSF** | 29.1 | **ATS** | 48.5 | **% FFS** | 96.9 |
| **FFS Delay** | 2.2 | **LOS Thresh. Delay** | 2.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 200 | 460 | 770 | 1050 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 340 | 770 | 1290 | 1760 | 2370 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3500 | 7800 | 13100 | 17800 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 187 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 4774 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.078 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.557 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 17 | **Peak Dir. Hrly. Vol.** | 207 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 165 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.15 | **Density** | N/A | **PTSF** | 46.2 | **ATS** | 45.3 | **% FFS** | 90.6 |
| **FFS Delay** | 7.1 | **LOS Thresh. Delay** | 7.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 180 | 430 | 710 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 330 | 780 | 1280 | 1750 | 2550 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4300 | 10000 | 16500 | 22500 | 32700 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 187 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 4774 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.166 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.741 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 17 | **Peak Dir. Hrly. Vol.** | 587 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 205 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.41 | **Density** | N/A | **PTSF** | 71.7 | **ATS** | 41.4 | **% FFS** | 82.9 |
| **FFS Delay** | 14.1 | **LOS Thresh. Delay** | 14.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 290 | 560 | 900 | 1260 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 400 | 760 | 1220 | 1710 | 1920 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2500 | 4600 | 7400 | 10400 | 11600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Boden Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 38 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 188 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 5507 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.058 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.750 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 48 | **Peak Dir. Hrly. Vol.** | 240 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 80 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.17 | **Density** | N/A | **PTSF** | 59.2 | **ATS** | 45.8 | **% FFS** | 91.6 |
| **FFS Delay** | 2.6 | **LOS Thresh. Delay** | 2.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 230 | 470 | 840 | 1220 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 310 | 630 | 1120 | 1630 | 1900 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 5400 | 10900 | 19400 | 28200 | 32800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Boden Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 38 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 188 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 5507 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.096 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.580 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 48 | **Peak Dir. Hrly. Vol.** | 307 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 222 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.22 | **Density** | N/A | **PTSF** | 64.2 | **ATS** | 42.8 | **% FFS** | 85.5 |
| **FFS Delay** | 4.9 | **LOS Thresh. Delay** | 4.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 150 | 390 | 710 | 1000 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 260 | 680 | 1230 | 1730 | 2450 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2800 | 7100 | 12900 | 18100 | 25600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Boden Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 38 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 188 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 13875 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.062 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.665 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 48 | **Peak Dir. Hrly. Vol.** | 572 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 288 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.40 | **Density** | N/A | **PTSF** | 77.6 | **ATS** | 40.0 | **% FFS** | 79.9 |
| **FFS Delay** | 7.2 | **LOS Thresh. Delay** | 7.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 190 | 420 | 780 | 1120 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 290 | 640 | 1180 | 1690 | 2140 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4700 | 10400 | 19100 | 27300 | 34600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Boden Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 38 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 188 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 13875 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.096 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.580 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 48 | **Peak Dir. Hrly. Vol.** | 773 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 559 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.54 | **Density** | N/A | **PTSF** | 84.9 | **ATS** | 36.7 | **% FFS** | 73.3 |
| **FFS Delay** | 10.5 | **LOS Thresh. Delay** | 10.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 150 | 390 | 710 | 1000 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 260 | 680 | 1230 | 1730 | 2450 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2800 | 7100 | 12900 | 18100 | 25600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Boden Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 189 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3846 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.067 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.530 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 30 | **Peak Dir. Hrly. Vol.** | 137 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 121 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.10 | **Density** | N/A | **PTSF** | 41.3 | **ATS** | 46.6 | **% FFS** | 93.1 |
| **FFS Delay** | 5.1 | **LOS Thresh. Delay** | 5.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 160 | 400 | 670 | 920 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 310 | 760 | 1270 | 1740 | 2680 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4700 | 11400 | 19000 | 26000 | 40000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Boden Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 189 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3846 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.119 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.550 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 30 | **Peak Dir. Hrly. Vol.** | 252 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 206 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.18 | **Density** | N/A | **PTSF** | 55.8 | **ATS** | 44.2 | **% FFS** | 88.3 |
| **FFS Delay** | 9.0 | **LOS Thresh. Delay** | 9.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 170 | 410 | 700 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 310 | 750 | 1280 | 1750 | 2590 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2700 | 6400 | 10800 | 14800 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Boden Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 189 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 7955 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.067 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.662 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 30 | **Peak Dir. Hrly. Vol.** | 353 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 180 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.25 | **Density** | N/A | **PTSF** | 63.3 | **ATS** | 43.4 | **% FFS** | 86.9 |
| **FFS Delay** | 10.3 | **LOS Thresh. Delay** | 10.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 220 | 480 | 810 | 1140 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 340 | 730 | 1230 | 1730 | 2150 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 5100 | 10900 | 18400 | 25900 | 32100 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Boden Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 189 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 7955 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.121 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.593 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 30 | **Peak Dir. Hrly. Vol.** | 571 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 392 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.40 | **Density** | N/A | **PTSF** | 76.0 | **ATS** | 39.9 | **% FFS** | 79.8 |
| **FFS Delay** | 17.3 | **LOS Thresh. Delay** | 17.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 190 | 440 | 750 | 1030 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 330 | 750 | 1270 | 1740 | 2400 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2800 | 6200 | 10500 | 14400 | 19900 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Summer Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 190 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 6266 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.061 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.690 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 264 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 118 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.19 | **Density** | N/A | **PTSF** | 65.4 | **ATS** | 43.2 | **% FFS** | 86.5 |
| **FFS Delay** | 10.7 | **LOS Thresh. Delay** | 10.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 120 | 330 | 720 | 1090 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 480 | 1050 | 1580 | 2060 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3000 | 7900 | 17300 | 26000 | 33800 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Summer Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 190 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 6266 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.061 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.690 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 264 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 118 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.19 | **Density** | N/A | **PTSF** | 65.4 | **ATS** | 43.2 | **% FFS** | 86.5 |
| **FFS Delay** | 10.7 | **LOS Thresh. Delay** | 10.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 120 | 330 | 720 | 1090 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 480 | 1050 | 1580 | 2060 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3000 | 7900 | 17300 | 26000 | 33800 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Summer Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 190 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 12099 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.063 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.751 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 572 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 190 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.40 | **Density** | N/A | **PTSF** | 80.0 | **ATS** | 39.1 | **% FFS** | 78.2 |
| **FFS Delay** | 19.1 | **LOS Thresh. Delay** | 19.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 130 | 390 | 730 | 1140 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 520 | 980 | 1520 | 1900 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2900 | 8300 | 15600 | 24200 | 30200 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Summer Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 190 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 12099 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.111 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.593 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 796 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 547 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.56 | **Density** | N/A | **PTSF** | 87.5 | **ATS** | 35.8 | **% FFS** | 71.6 |
| **FFS Delay** | 27.1 | **LOS Thresh. Delay** | 27.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 660 | 980 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 490 | 1120 | 1660 | 2400 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 4500 | 10100 | 15000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Mercantile Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 191 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3103 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.076 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.740 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 175 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 61 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.12 | **Density** | N/A | **PTSF** | 57.9 | **ATS** | 45.3 | **% FFS** | 90.5 |
| **FFS Delay** | 7.1 | **LOS Thresh. Delay** | 7.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 130 | 380 | 730 | 1130 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 520 | 990 | 1530 | 1920 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2400 | 6900 | 13100 | 20200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Mercantile Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 191 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3103 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.122 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.600 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 227 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 151 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.16 | **Density** | N/A | **PTSF** | 61.5 | **ATS** | 42.7 | **% FFS** | 85.4 |
| **FFS Delay** | 11.7 | **LOS Thresh. Delay** | 11.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 660 | 990 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 490 | 1100 | 1660 | 2370 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1400 | 4100 | 9100 | 13700 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Mercantile Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 191 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 8303 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.077 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.723 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 462 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 177 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.33 | **Density** | N/A | **PTSF** | 74.5 | **ATS** | 40.1 | **% FFS** | 80.3 |
| **FFS Delay** | 16.8 | **LOS Thresh. Delay** | 16.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 120 | 360 | 730 | 1120 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 500 | 1010 | 1550 | 1970 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2300 | 6500 | 13200 | 20200 | 25600 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 166th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Mercantile Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 191 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 8303 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.122 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.657 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 666 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 347 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.47 | **Density** | N/A | **PTSF** | 84.1 | **ATS** | 37.9 | **% FFS** | 75.9 |
| **FFS Delay** | 21.8 | **LOS Thresh. Delay** | 21.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 110 | 300 | 700 | 1050 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 460 | 1070 | 1600 | 2170 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1400 | 3800 | 8800 | 13200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Town and Country Blvd | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Mercantile Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 192 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 4754 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.048 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.710 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 162 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 66 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.12 | **Density** | N/A | **PTSF** | 55.6 | **ATS** | 40.4 | **% FFS** | 89.9 |
| **FFS Delay** | 8.1 | **LOS Thresh. Delay** | 15.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 310 | 590 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 150 | 440 | 840 | 1360 | 2000 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3200 | 9200 | 17600 | 28400 | 41700 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Town and Country Blvd | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Mercantile Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 192 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 4754 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.105 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.610 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 304 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 195 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.22 | **Density** | N/A | **PTSF** | 69.3 | **ATS** | 36.6 | **% FFS** | 81.2 |
| **FFS Delay** | 16.6 | **LOS Thresh. Delay** | 23.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 240 | 570 | 880 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 400 | 940 | 1450 | 2330 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1400 | 3900 | 9000 | 13900 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Town and Country Blvd | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Mercantile Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 192 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 6143 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.055 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.604 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 204 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 134 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.15 | **Density** | N/A | **PTSF** | 59.3 | **ATS** | 38.4 | **% FFS** | 85.3 |
| **FFS Delay** | 12.4 | **LOS Thresh. Delay** | 19.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 230 | 560 | 870 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 390 | 930 | 1450 | 2360 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2600 | 7100 | 17000 | 26400 | 43000 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Town and Country Blvd | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Mercantile Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 192 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 6143 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.105 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.561 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 362 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 283 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.26 | **Density** | N/A | **PTSF** | 69.4 | **ATS** | 35.9 | **% FFS** | 79.7 |
| **FFS Delay** | 18.3 | **LOS Thresh. Delay** | 25.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 210 | 540 | 830 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 130 | 380 | 970 | 1480 | 2540 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1300 | 3700 | 9300 | 14100 | 24200 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Allisonville Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 193 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 14100 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.067 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.530 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 501 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 444 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.35 | **Density** | N/A | **PTSF** | 76.5 | **ATS** | 29.1 | **% FFS** | 72.8 |
| **FFS Delay** | 16.8 | **LOS Thresh. Delay** | 25.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 160 | 420 | 670 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 310 | 800 | 1270 | 2680 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1500 | 4700 | 12000 | 19000 | 40000 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Allisonville Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 193 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 14100 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.110 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.620 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 962 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 589 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.68 | **Density** | N/A | **PTSF** | 91.1 | **ATS** | 24.1 | **% FFS** | 60.3 |
| **FFS Delay** | 29.6 | **LOS Thresh. Delay** | 38.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 210 | 450 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 340 | 730 | 1210 | 2300 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3100 | 6700 | 11000 | 21000 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Allisonville Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 193 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 34245 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.077 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.654 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1725 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 912 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.21 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 230 | 460 | 770 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 360 | 710 | 1180 | 2180 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1300 | 4700 | 9300 | 15400 | 28400 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Allisonville Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 193 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 34245 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.110 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.504 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1899 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1868 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.33 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 40 | 150 | 410 | 650 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 80 | 300 | 820 | 1290 | 2820 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 800 | 2800 | 7500 | 11800 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Allisonville Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 193 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 34245 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.077 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.654 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1725 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 912 | **Adjusted Capacity** | 1565 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.60 | **Density** | 25.3 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 10.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 830 | 1410 | 2000 | 2530 | 2800 |
| 3 | 1250 | 2120 | 3000 | 3790 | 4200 |
| 4 | 1660 | 2830 | 4000 | 5060 | 5600 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1270 | 2160 | 3060 | 3870 | 4290 |
| 6 | 1920 | 3250 | 4590 | 5800 | 6430 |
| 8 | 2540 | 4330 | 6120 | 7740 | 8570 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 16500 | 28100 | 39800 | 50300 | 55800 |
| 6 | 25000 | 42300 | 59700 | 75400 | 83600 |
| 8 | 33000 | 56300 | 79500 | 100600 | 111300 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Allisonville Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 193 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 34245 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.110 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.504 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1899 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1868 | **Adjusted Capacity** | 1565 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.66 | **Density** | 27.8 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 10.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 680 | 1150 | 1630 | 2110 | 2570 |
| 3 | 1020 | 1730 | 2450 | 3170 | 3860 |
| 4 | 1360 | 2310 | 3270 | 4220 | 5150 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1350 | 2290 | 3240 | 4190 | 5100 |
| 6 | 2030 | 3440 | 4870 | 6290 | 7660 |
| 8 | 2700 | 4590 | 6490 | 8380 | 10220 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 12300 | 20900 | 29500 | 38100 | 46400 |
| 6 | 18500 | 31300 | 44300 | 57200 | 69700 |
| 8 | 24600 | 41800 | 59000 | 76200 | 93000 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cherry Tree Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 161st Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 194 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 2498 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.065 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.710 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 115 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 47 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.08 | **Density** | N/A | **PTSF** | 50.2 | **ATS** | 41.1 | **% FFS** | 91.3 |
| **FFS Delay** | 7.3 | **LOS Thresh. Delay** | 14.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 310 | 590 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 150 | 440 | 840 | 1360 | 2000 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2400 | 6800 | 13000 | 21000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Cherry Tree Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 161st Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 194 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 2498 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.108 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.510 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 138 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 132 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.10 | **Density** | N/A | **PTSF** | 49.0 | **ATS** | 39.1 | **% FFS** | 86.8 |
| **FFS Delay** | 11.5 | **LOS Thresh. Delay** | 19.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 200 | 510 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 400 | 1000 | 1500 | 2790 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1300 | 3800 | 9300 | 13900 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cherry Tree Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 161st Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 194 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 2554 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.065 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.711 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 118 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 48 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.08 | **Density** | N/A | **PTSF** | 50.6 | **ATS** | 41.0 | **% FFS** | 91.2 |
| **FFS Delay** | 7.4 | **LOS Thresh. Delay** | 15.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 310 | 600 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 150 | 440 | 850 | 1360 | 2000 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2400 | 6800 | 13100 | 21000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Cherry Tree Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 161st Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 171st Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 194 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 2554 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.108 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.516 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 142 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 134 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.10 | **Density** | N/A | **PTSF** | 49.7 | **ATS** | 39.0 | **% FFS** | 86.6 |
| **FFS Delay** | 11.7 | **LOS Thresh. Delay** | 19.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 200 | 520 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 390 | 1010 | 1480 | 2760 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1300 | 3700 | 9400 | 13800 | 25600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Gray Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Hazel Dell Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 196 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 4975 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.073 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.640 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 232 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 131 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.17 | **Density** | N/A | **PTSF** | 62.3 | **ATS** | 38.2 | **% FFS** | 85.0 |
| **FFS Delay** | 13.5 | **LOS Thresh. Delay** | 21.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 260 | 580 | 910 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 150 | 410 | 910 | 1430 | 2220 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2100 | 5700 | 12500 | 19600 | 30500 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Gray Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Hazel Dell Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 196 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 4975 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.125 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.530 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 330 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 292 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.23 | **Density** | N/A | **PTSF** | 67.1 | **ATS** | 36.2 | **% FFS** | 80.4 |
| **FFS Delay** | 18.6 | **LOS Thresh. Delay** | 26.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 200 | 520 | 780 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 380 | 990 | 1480 | 2680 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 3100 | 8000 | 11900 | 21500 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Gray Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Hazel Dell Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 196 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 7768 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.073 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.525 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 298 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 269 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.21 | **Density** | N/A | **PTSF** | 65.4 | **ATS** | 36.5 | **% FFS** | 81.1 |
| **FFS Delay** | 17.7 | **LOS Thresh. Delay** | 25.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 200 | 520 | 780 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 390 | 1000 | 1490 | 2710 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2000 | 5400 | 13700 | 20500 | 37200 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Gray Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Hazel Dell Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 196 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 7768 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.125 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.507 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 492 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 479 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.35 | **Density** | N/A | **PTSF** | 75.1 | **ATS** | 34.1 | **% FFS** | 75.7 |
| **FFS Delay** | 24.4 | **LOS Thresh. Delay** | 32.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 200 | 510 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 400 | 1010 | 1480 | 2810 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 3200 | 8100 | 11900 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Seminole Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 197 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 2872 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.060 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.720 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 124 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 48 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.09 | **Density** | N/A | **PTSF** | 51.8 | **ATS** | 41.0 | **% FFS** | 91.0 |
| **FFS Delay** | 3.1 | **LOS Thresh. Delay** | 6.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 320 | 600 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 450 | 840 | 1350 | 1980 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2400 | 7600 | 14000 | 22600 | 33000 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Seminole Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 197 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 2872 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.060 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.720 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 124 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 48 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.09 | **Density** | N/A | **PTSF** | 51.8 | **ATS** | 41.0 | **% FFS** | 91.0 |
| **FFS Delay** | 3.1 | **LOS Thresh. Delay** | 6.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 320 | 600 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 450 | 840 | 1350 | 1980 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2400 | 7600 | 14000 | 22600 | 33000 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Seminole Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 197 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 3500 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.060 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.662 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 139 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 71 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.10 | **Density** | N/A | **PTSF** | 52.1 | **ATS** | 40.6 | **% FFS** | 90.2 |
| **FFS Delay** | 3.5 | **LOS Thresh. Delay** | 6.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 270 | 590 | 930 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 410 | 900 | 1410 | 2150 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2400 | 6900 | 15000 | 23600 | 35900 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Hazel Dell Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Seminole Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 197 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 3500 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.141 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.640 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 316 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 178 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.22 | **Density** | N/A | **PTSF** | 69.9 | **ATS** | 36.5 | **% FFS** | 81.0 |
| **FFS Delay** | 7.5 | **LOS Thresh. Delay** | 10.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 260 | 580 | 910 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 150 | 410 | 910 | 1430 | 2220 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1100 | 3000 | 6500 | 10200 | 15800 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Seminole Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cherry Tree Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 198 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | No | **AADT** | 2864 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.034 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.590 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 57 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 40 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.04 | **Density** | N/A | **PTSF** | 39.6 | **ATS** | 41.7 | **% FFS** | 92.6 |
| **FFS Delay** | 7.0 | **LOS Thresh. Delay** | 15.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 220 | 560 | 860 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 380 | 950 | 1460 | 2410 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4200 | 11200 | 28000 | 43000 | 70900 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Seminole Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cherry Tree Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 198 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | No | **AADT** | 2864 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.173 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.510 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 253 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 243 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.18 | **Density** | N/A | **PTSF** | 62.1 | **ATS** | 37.0 | **% FFS** | 82.1 |
| **FFS Delay** | 19.2 | **LOS Thresh. Delay** | 28.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 200 | 510 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 400 | 1000 | 1500 | 2790 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 900 | 2400 | 5800 | 8700 | 16200 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Seminole Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cherry Tree Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 198 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | No | **AADT** | 5913 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.073 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.806 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 348 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 84 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.25 | **Density** | N/A | **PTSF** | 72.3 | **ATS** | 38.5 | **% FFS** | 85.6 |
| **FFS Delay** | 14.9 | **LOS Thresh. Delay** | 23.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 110 | 410 | 640 | 1000 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 510 | 800 | 1250 | 1770 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2000 | 7000 | 11000 | 17200 | 24300 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 161st Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Seminole Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cherry Tree Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 198 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | No | **AADT** | 5913 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.173 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.587 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 600 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 422 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.42 | **Density** | N/A | **PTSF** | 81.8 | **ATS** | 33.3 | **% FFS** | 73.9 |
| **FFS Delay** | 31.0 | **LOS Thresh. Delay** | 39.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 220 | 550 | 850 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 380 | 940 | 1450 | 2420 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 900 | 2200 | 5500 | 8400 | 14000 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 199a AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 4809 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.087 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.610 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 42 | **Peak Dir. Hrly. Vol.** | 255 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 163 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.18 | **Density** | N/A | **PTSF** | 57.9 | **ATS** | 39.4 | **% FFS** | 87.4 |
| **FFS Delay** | 10.3 | **LOS Thresh. Delay** | 17.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 170 | 420 | 700 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 280 | 690 | 1150 | 1580 | 2330 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3300 | 8000 | 13300 | 18200 | 26800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 199a PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 4809 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.108 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.630 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 42 | **Peak Dir. Hrly. Vol.** | 327 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 192 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.23 | **Density** | N/A | **PTSF** | 64.6 | **ATS** | 38.6 | **% FFS** | 85.7 |
| **FFS Delay** | 12.0 | **LOS Thresh. Delay** | 19.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 180 | 420 | 720 | 990 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 290 | 670 | 1150 | 1580 | 2260 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2700 | 6300 | 10700 | 14700 | 21000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 199a AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 4920 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.087 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.617 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 42 | **Peak Dir. Hrly. Vol.** | 264 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 164 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.19 | **Density** | N/A | **PTSF** | 58.7 | **ATS** | 39.2 | **% FFS** | 87.2 |
| **FFS Delay** | 10.6 | **LOS Thresh. Delay** | 17.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 180 | 420 | 710 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 300 | 690 | 1160 | 1580 | 2310 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3500 | 8000 | 13400 | 18200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 199a PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 4920 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.110 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.636 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 42 | **Peak Dir. Hrly. Vol.** | 344 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 197 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.24 | **Density** | N/A | **PTSF** | 65.4 | **ATS** | 38.4 | **% FFS** | 85.3 |
| **FFS Delay** | 12.4 | **LOS Thresh. Delay** | 19.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 190 | 420 | 730 | 1000 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 300 | 670 | 1150 | 1580 | 2240 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2800 | 6100 | 10500 | 14400 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 199b AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 4809 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.087 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.610 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 255 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 163 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.18 | **Density** | N/A | **PTSF** | 64.0 | **ATS** | 32.1 | **% FFS** | 80.3 |
| **FFS Delay** | 13.3 | **LOS Thresh. Delay** | 24.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 210 | 450 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 350 | 740 | 1230 | 2330 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1100 | 4100 | 8600 | 14200 | 26800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 199b PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 4809 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.108 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.630 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 327 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 192 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.23 | **Density** | N/A | **PTSF** | 70.5 | **ATS** | 31.3 | **% FFS** | 78.4 |
| **FFS Delay** | 14.9 | **LOS Thresh. Delay** | 25.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 220 | 460 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 350 | 740 | 1210 | 2260 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3300 | 6900 | 11300 | 21000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 199b AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 4920 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.087 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.617 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 264 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 164 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.19 | **Density** | N/A | **PTSF** | 64.9 | **ATS** | 32.0 | **% FFS** | 80.0 |
| **FFS Delay** | 13.5 | **LOS Thresh. Delay** | 24.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 210 | 450 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 350 | 730 | 1220 | 2310 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 4100 | 8400 | 14100 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 199b PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 4920 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.110 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.636 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 344 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 197 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.24 | **Density** | N/A | **PTSF** | 71.1 | **ATS** | 31.2 | **% FFS** | 78.0 |
| **FFS Delay** | 15.3 | **LOS Thresh. Delay** | 26.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 220 | 460 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 350 | 730 | 1200 | 2240 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3200 | 6700 | 11000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 199c AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | No | **AADT** | 4809 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.087 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.610 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 255 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 163 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.18 | **Density** | N/A | **PTSF** | 64.0 | **ATS** | 32.1 | **% FFS** | 80.3 |
| **FFS Delay** | 4.4 | **LOS Thresh. Delay** | 8.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 210 | 450 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 350 | 740 | 1230 | 2330 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1100 | 4100 | 8600 | 14200 | 26800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 199c PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | No | **AADT** | 4809 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.108 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.630 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 327 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 192 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.23 | **Density** | N/A | **PTSF** | 70.5 | **ATS** | 31.3 | **% FFS** | 78.4 |
| **FFS Delay** | 5.0 | **LOS Thresh. Delay** | 8.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 220 | 460 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 350 | 740 | 1210 | 2260 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3300 | 6900 | 11300 | 21000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 199c AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | No | **AADT** | 4920 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.087 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.617 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 264 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 164 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.19 | **Density** | N/A | **PTSF** | 64.9 | **ATS** | 32.0 | **% FFS** | 80.0 |
| **FFS Delay** | 4.5 | **LOS Thresh. Delay** | 8.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 210 | 450 | 750 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 350 | 730 | 1220 | 2310 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 4100 | 8400 | 14100 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | River Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 160th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 32 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 199c PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | No | **AADT** | 4920 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.110 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.636 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 344 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 197 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.24 | **Density** | N/A | **PTSF** | 71.1 | **ATS** | 31.2 | **% FFS** | 78.0 |
| **FFS Delay** | 5.1 | **LOS Thresh. Delay** | 8.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 220 | 460 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 350 | 730 | 1200 | 2240 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3200 | 6700 | 11000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Allisonville Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 146th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Christian Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 200 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 2.500 | **Median** | No | **AADT** | 10669 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.074 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.590 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 466 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 324 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.33 | **Density** | N/A | **PTSF** | 75.4 | **ATS** | 39.9 | **% FFS** | 79.7 |
| **FFS Delay** | 45.7 | **LOS Thresh. Delay** | 45.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 650 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 500 | 1110 | 1650 | 2410 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2300 | 6800 | 15000 | 22300 | 32600 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Allisonville Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 146th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Christian Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 200 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 2.500 | **Median** | No | **AADT** | 10669 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.103 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.600 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 659 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 440 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.46 | **Density** | N/A | **PTSF** | 84.0 | **ATS** | 37.6 | **% FFS** | 75.2 |
| **FFS Delay** | 59.4 | **LOS Thresh. Delay** | 59.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 660 | 990 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 490 | 1100 | 1660 | 2370 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1700 | 4800 | 10700 | 16200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Allisonville Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 146th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Christian Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 200 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 2.500 | **Median** | No | **AADT** | 10748 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.075 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.588 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 474 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 332 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.33 | **Density** | N/A | **PTSF** | 75.7 | **ATS** | 39.8 | **% FFS** | 79.6 |
| **FFS Delay** | 46.2 | **LOS Thresh. Delay** | 46.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 650 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 500 | 1110 | 1650 | 2420 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2400 | 6700 | 14800 | 22000 | 32300 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Allisonville Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 146th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Christian Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 200 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 2.500 | **Median** | No | **AADT** | 10748 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.103 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.598 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 662 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 445 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.47 | **Density** | N/A | **PTSF** | 84.0 | **ATS** | 37.5 | **% FFS** | 75.1 |
| **FFS Delay** | 59.8 | **LOS Thresh. Delay** | 59.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 660 | 980 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 490 | 1110 | 1640 | 2380 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1700 | 4800 | 10800 | 16000 | 23200 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 201 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 14267 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.065 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.590 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 547 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 380 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.39 | **Density** | N/A | **PTSF** | 79.8 | **ATS** | 28.9 | **% FFS** | 72.3 |
| **FFS Delay** | 13.8 | **LOS Thresh. Delay** | 21.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 190 | 450 | 730 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 770 | 1240 | 2410 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1400 | 5100 | 11900 | 19100 | 37100 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 201 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 14267 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.100 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.580 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 827 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 599 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.58 | **Density** | N/A | **PTSF** | 88.1 | **ATS** | 25.3 | **% FFS** | 63.3 |
| **FFS Delay** | 20.9 | **LOS Thresh. Delay** | 28.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 190 | 450 | 720 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 780 | 1250 | 2450 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3400 | 7800 | 12600 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 201 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 36400 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.072 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.634 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1662 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 959 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.17 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 220 | 460 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 350 | 730 | 1200 | 2240 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1400 | 4900 | 10200 | 16700 | 31200 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 201 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 36400 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.100 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.524 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1907 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1733 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.34 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 160 | 420 | 670 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 310 | 810 | 1280 | 2710 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3200 | 8200 | 12800 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 201 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 36400 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.072 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.634 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1662 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 959 | **Adjusted Capacity** | 1565 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.58 | **Density** | 24.4 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 8.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 680 | 1150 | 1630 | 2110 | 2570 |
| 3 | 1020 | 1730 | 2450 | 3170 | 3860 |
| 4 | 1360 | 2310 | 3270 | 4220 | 5150 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1080 | 1820 | 2580 | 3330 | 4060 |
| 6 | 1610 | 2730 | 3870 | 5000 | 6090 |
| 8 | 2150 | 3650 | 5160 | 6660 | 8130 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 15000 | 25300 | 35900 | 46300 | 56400 |
| 6 | 22400 | 38000 | 53800 | 69500 | 84600 |
| 8 | 29900 | 50700 | 71700 | 92500 | 113000 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 16th Street | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 201 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 36400 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.100 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.524 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1907 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1733 | **Adjusted Capacity** | 1565 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.66 | **Density** | 28.0 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 8.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 680 | 1150 | 1630 | 2110 | 2570 |
| 3 | 1020 | 1730 | 2450 | 3170 | 3860 |
| 4 | 1360 | 2310 | 3270 | 4220 | 5150 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1300 | 2200 | 3120 | 4030 | 4910 |
| 6 | 1950 | 3310 | 4680 | 6050 | 7370 |
| 8 | 2600 | 4410 | 6250 | 8060 | 9830 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 13000 | 22000 | 31200 | 40400 | 49200 |
| 6 | 19600 | 33200 | 46800 | 60600 | 73800 |
| 8 | 26000 | 44200 | 62600 | 80600 | 98400 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Herriman Boulevard | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Before Curve Heading | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 202 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3383 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.084 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.560 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 159 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 125 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.11 | **Density** | N/A | **PTSF** | 53.1 | **ATS** | 34.1 | **% FFS** | 85.2 |
| **FFS Delay** | 14.9 | **LOS Thresh. Delay** | 32.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 440 | 700 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 790 | 1250 | 2540 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1100 | 4000 | 9500 | 14900 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Herriman Boulevard | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Before Curve Heading | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 202 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3383 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.163 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.570 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 314 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 237 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.22 | **Density** | N/A | **PTSF** | 68.2 | **ATS** | 31.4 | **% FFS** | 78.5 |
| **FFS Delay** | 23.4 | **LOS Thresh. Delay** | 40.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 440 | 710 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 320 | 780 | 1250 | 2500 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 600 | 2000 | 4800 | 7700 | 15400 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Herriman Boulevard | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | Before Curve Heading | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 202 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3383 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.084 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.562 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 160 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 124 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.11 | **Density** | N/A | **PTSF** | 53.4 | **ATS** | 34.1 | **% FFS** | 85.2 |
| **FFS Delay** | 14.8 | **LOS Thresh. Delay** | 31.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 440 | 700 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 790 | 1250 | 2530 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1100 | 4000 | 9500 | 14900 | 30200 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Herriman Boulevard | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Before Curve Heading | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 202 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3383 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.163 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.565 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 312 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 240 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.22 | **Density** | N/A | **PTSF** | 67.9 | **ATS** | 31.4 | **% FFS** | 78.5 |
| **FFS Delay** | 23.4 | **LOS Thresh. Delay** | 40.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 440 | 710 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 320 | 780 | 1260 | 2520 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 600 | 2000 | 4800 | 7800 | 15500 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 203 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 14892 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.065 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.570 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 552 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 416 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.39 | **Density** | N/A | **PTSF** | 79.7 | **ATS** | 28.7 | **% FFS** | 71.8 |
| **FFS Delay** | 10.6 | **LOS Thresh. Delay** | 16.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 440 | 710 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 320 | 780 | 1250 | 2500 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1400 | 5000 | 12000 | 19300 | 38500 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 203 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 14892 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.108 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.590 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 949 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 659 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.67 | **Density** | N/A | **PTSF** | 90.4 | **ATS** | 23.8 | **% FFS** | 59.6 |
| **FFS Delay** | 18.3 | **LOS Thresh. Delay** | 23.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 190 | 450 | 730 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 770 | 1240 | 2410 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 900 | 3100 | 7200 | 11500 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 203 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 35426 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.075 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.638 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1695 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 962 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.19 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 220 | 460 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 350 | 730 | 1200 | 2230 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1400 | 4700 | 9800 | 16000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 203 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 35426 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.108 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.514 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1967 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1859 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.38 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 160 | 420 | 660 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 320 | 820 | 1290 | 2770 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 3000 | 7600 | 12000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 203 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 35426 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.075 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.638 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1695 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 962 | **Adjusted Capacity** | 1565 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.59 | **Density** | 24.9 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 6.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 680 | 1150 | 1630 | 2110 | 2570 |
| 3 | 1020 | 1730 | 2450 | 3170 | 3860 |
| 4 | 1360 | 2310 | 3270 | 4220 | 5150 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1070 | 1810 | 2560 | 3310 | 4030 |
| 6 | 1600 | 2720 | 3850 | 4970 | 6060 |
| 8 | 2140 | 3630 | 5130 | 6620 | 8080 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 14300 | 24200 | 34200 | 44200 | 53800 |
| 6 | 21400 | 36300 | 51400 | 66300 | 80800 |
| 8 | 28600 | 48400 | 68400 | 88300 | 107800 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Herriman Blvd | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 203 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 35426 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.108 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.514 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1967 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1859 | **Adjusted Capacity** | 1565 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.68 | **Density** | 28.8 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 6.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 680 | 1150 | 1630 | 2110 | 2570 |
| 3 | 1020 | 1730 | 2450 | 3170 | 3860 |
| 4 | 1360 | 2310 | 3270 | 4220 | 5150 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1330 | 2240 | 3180 | 4110 | 5000 |
| 6 | 1990 | 3370 | 4770 | 6170 | 7510 |
| 8 | 2650 | 4500 | 6370 | 8220 | 10020 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 12400 | 20800 | 29500 | 38100 | 46300 |
| 6 | 18500 | 31300 | 44200 | 57200 | 69600 |
| 8 | 24600 | 41700 | 59000 | 76200 | 92800 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cumberland Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 204 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 4794 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.066 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.560 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 177 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 139 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.13 | **Density** | N/A | **PTSF** | 55.9 | **ATS** | 33.5 | **% FFS** | 83.8 |
| **FFS Delay** | 10.4 | **LOS Thresh. Delay** | 21.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 180 | 440 | 700 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 790 | 1250 | 2540 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1400 | 5000 | 12000 | 19000 | 38500 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cumberland Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 204 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 5267 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.121 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.580 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 370 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 268 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.26 | **Density** | N/A | **PTSF** | 70.4 | **ATS** | 30.8 | **% FFS** | 77.1 |
| **FFS Delay** | 16.0 | **LOS Thresh. Delay** | 26.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 50 | 190 | 450 | 720 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 330 | 780 | 1250 | 2450 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 800 | 2800 | 6500 | 10400 | 20300 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cumberland Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 204 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 9298 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.075 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.713 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 497 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 200 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.35 | **Density** | N/A | **PTSF** | 76.2 | **ATS** | 29.8 | **% FFS** | 74.4 |
| **FFS Delay** | 18.5 | **LOS Thresh. Delay** | 29.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 270 | 470 | 810 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 90 | 380 | 660 | 1140 | 2000 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 5100 | 8800 | 15200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Cumberland Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 204 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.600 | **Median** | No | **AADT** | 9298 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.121 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.658 | **Base Capacity** | 1700 |
| **Posted Speed** | 35 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 740 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 40 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 385 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.52 | **Density** | N/A | **PTSF** | 86.5 | **ATS** | 27.1 | **% FFS** | 67.8 |
| **FFS Delay** | 25.6 | **LOS Thresh. Delay** | 36.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 60 | 240 | 460 | 780 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 100 | 370 | 700 | 1190 | 2160 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 900 | 3100 | 5800 | 9900 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Union Chapel Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 205 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | No | **AADT** | 8993 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.062 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.560 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 312 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 245 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.22 | **Density** | N/A | **PTSF** | 67.7 | **ATS** | 36.4 | **% FFS** | 80.9 |
| **FFS Delay** | 20.8 | **LOS Thresh. Delay** | 29.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 210 | 540 | 820 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 130 | 380 | 970 | 1470 | 2540 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2100 | 6200 | 15700 | 23800 | 41000 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Union Chapel Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 205 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | No | **AADT** | 8993 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.119 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.560 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 599 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 471 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.42 | **Density** | N/A | **PTSF** | 80.8 | **ATS** | 33.1 | **% FFS** | 73.5 |
| **FFS Delay** | 31.7 | **LOS Thresh. Delay** | 40.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 210 | 540 | 820 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 130 | 380 | 970 | 1470 | 2540 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1100 | 3200 | 8200 | 12400 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Union Chapel Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 205 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | No | **AADT** | 16277 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.080 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.639 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 832 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 470 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.58 | **Density** | N/A | **PTSF** | 88.6 | **ATS** | 31.0 | **% FFS** | 68.8 |
| **FFS Delay** | 39.9 | **LOS Thresh. Delay** | 48.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 260 | 580 | 910 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 150 | 410 | 910 | 1430 | 2230 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1900 | 5200 | 11400 | 17900 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Union Chapel Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 205 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.100 | **Median** | No | **AADT** | 16277 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.119 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.585 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1133 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 804 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.80 | **Density** | N/A | **PTSF** | 93.2 | **ATS** | 25.9 | **% FFS** | 57.6 |
| **FFS Delay** | 64.7 | **LOS Thresh. Delay** | 73.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 220 | 550 | 850 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 380 | 950 | 1460 | 2430 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 3200 | 8000 | 12300 | 20500 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Summer Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166h Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 206 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3156 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.084 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.760 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 85 | **Peak Dir. Hrly. Vol.** | 201 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 64 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.14 | **Density** | N/A | **PTSF** | 60.5 | **ATS** | 45.1 | **% FFS** | 90.2 |
| **FFS Delay** | 7.5 | **LOS Thresh. Delay** | 7.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 130 | 410 | 740 | 1160 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 540 | 980 | 1530 | 1870 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2200 | 6500 | 11700 | 18300 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Summer Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166h Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 206 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3156 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.135 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.560 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 85 | **Peak Dir. Hrly. Vol.** | 239 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 187 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.17 | **Density** | N/A | **PTSF** | 61.5 | **ATS** | 42.2 | **% FFS** | 84.5 |
| **FFS Delay** | 12.6 | **LOS Thresh. Delay** | 12.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 640 | 930 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 520 | 1150 | 1670 | 2540 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1400 | 3900 | 8600 | 12400 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Summer Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166h Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 206 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3238 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.084 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.765 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 85 | **Peak Dir. Hrly. Vol.** | 208 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 64 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.15 | **Density** | N/A | **PTSF** | 61.3 | **ATS** | 45.0 | **% FFS** | 90.0 |
| **FFS Delay** | 7.6 | **LOS Thresh. Delay** | 7.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 140 | 410 | 740 | 1160 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 190 | 540 | 970 | 1520 | 1860 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2300 | 6500 | 11600 | 18100 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Summer Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 166h Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 206 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 3238 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.136 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.546 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 85 | **Peak Dir. Hrly. Vol.** | 240 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 200 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.17 | **Density** | N/A | **PTSF** | 61.3 | **ATS** | 42.2 | **% FFS** | 84.4 |
| **FFS Delay** | 12.6 | **LOS Thresh. Delay** | 12.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 290 | 630 | 910 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 540 | 1160 | 1670 | 2610 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1300 | 4000 | 8600 | 12300 | 19200 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Boden Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 207 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 8383 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.049 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.790 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 6 | **Peak Dir. Hrly. Vol.** | 325 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 86 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.23 | **Density** | N/A | **PTSF** | 46.5 | **ATS** | 45.9 | **% FFS** | 91.8 |
| **FFS Delay** | 6.1 | **LOS Thresh. Delay** | 6.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 320 | 600 | 960 | 1330 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 410 | 760 | 1220 | 1690 | 1800 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 8400 | 15600 | 24900 | 34500 | 36800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Boden Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 207 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 8383 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.102 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.540 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 6 | **Peak Dir. Hrly. Vol.** | 462 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 393 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.33 | **Density** | N/A | **PTSF** | 63.9 | **ATS** | 41.1 | **% FFS** | 82.2 |
| **FFS Delay** | 14.8 | **LOS Thresh. Delay** | 14.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 170 | 420 | 690 | 940 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 320 | 780 | 1280 | 1750 | 2630 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3200 | 7700 | 12600 | 17200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Boden Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 207 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 19676 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.057 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.719 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 6 | **Peak Dir. Hrly. Vol.** | 806 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 315 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.57 | **Density** | N/A | **PTSF** | 78.0 | **ATS** | 38.5 | **% FFS** | 76.9 |
| **FFS Delay** | 20.5 | **LOS Thresh. Delay** | 20.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 270 | 550 | 880 | 1240 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 380 | 770 | 1230 | 1730 | 1980 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 6700 | 13600 | 21600 | 30400 | 34800 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Boden Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 207 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 19676 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.102 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.548 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 6 | **Peak Dir. Hrly. Vol.** | 1100 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 907 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.77 | **Density** | N/A | **PTSF** | 89.9 | **ATS** | 31.0 | **% FFS** | 62.0 |
| **FFS Delay** | 41.9 | **LOS Thresh. Delay** | 41.9 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 180 | 420 | 700 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 330 | 770 | 1280 | 1760 | 2600 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3300 | 7600 | 12600 | 17300 | 25500 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Olio Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 208 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 5010 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.079 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.570 | **Base Capacity** | 1700 |
| **Posted Speed** | 55 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 226 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 60 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 170 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.16 | **Density** | N/A | **PTSF** | 42.9 | **ATS** | 54.4 | **% FFS** | 90.7 |
| **FFS Delay** | 5.9 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 200 | 530 | 880 | 1190 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 360 | 930 | 1550 | 2090 | 2500 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4600 | 11800 | 19700 | 26500 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | Danah | **Highway Name** | Olio Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 208 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 5010 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.104 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.560 | **Base Capacity** | 1700 |
| **Posted Speed** | 55 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 292 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 60 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 229 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.21 | **Density** | N/A | **PTSF** | 51.0 | **ATS** | 53.4 | **% FFS** | 89.0 |
| **FFS Delay** | 7.0 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 190 | 520 | 860 | 1170 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 340 | 930 | 1540 | 2090 | 2540 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3300 | 9000 | 14900 | 20100 | 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.**

# HIGHPLAN 2012 Conceptual Planning Analysis

## Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Olio Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/20/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 208 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 25981 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.082 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.720 | **Base Capacity** | 1700 |
| **Posted Speed** | 55 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 1534 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 60 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 597 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.08 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 290 | 640 | 1060 | 1420 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 410 | 890 | 1480 | 1980 | 1980 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 5100 | 10900 | 18100 | 24200 | 24200 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Olio Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 208 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 25981 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.104 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.562 | **Base Capacity** | 1700 |
| **Posted Speed** | 55 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 1519 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 60 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1183 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.07 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 190 | 520 | 870 | 1170 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 340 | 930 | 1550 | 2090 | 2530 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3300 | 9000 | 15000 | 20100 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Olio Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 208 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.000 | **Median** | No | **AADT** | 25981 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.104 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.577 | **Base Capacity** | 2200 |
| **Posted Speed** | 55 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1559 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 60 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1143 | **Adjusted Capacity** | 1812 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.47 | **Density** | 17.1 | **PTSF** | N/A | **ATS** | 60.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 900 | 1540 | 2170 | 2720 | 2930 |
| 3 | 1360 | 2310 | 3260 | 4080 | 4400 |
| 4 | 1810 | 3090 | 4350 | 5440 | 5870 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1560 | 2670 | 3770 | 4720 | 5080 |
| 6 | 2360 | 4010 | 5650 | 7080 | 7630 |
| 8 | 3140 | 5360 | 7540 | 9430 | 10180 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| 4 | 15000 | 25700 | 36300 | 45400 | 48900 |
| 6 | 22700 | 38600 | 54400 | 68100 | 73400 |
| 8 | 30200 | 51600 | 72600 | 90700 | 97900 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Olio Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 166th Street | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 208 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 1.000 | **Median** | No | **AADT** | 25981 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.082 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.720 | **Base Capacity** | 2200 |
| **Posted Speed** | 55 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1534 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 60 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 597 | **Adjusted Capacity** | 1812 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.46 | **Density** | 16.9 | **PTSF** | N/A | **ATS** | 60.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 900 | 1540 | 2170 | 2720 | 2930 |
| 3 | 1360 | 2310 | 3260 | 4080 | 4400 |
| 4 | 1810 | 3090 | 4350 | 5440 | 5870 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1260 | 2140 | 3020 | 3780 | 4070 |
| 6 | 1890 | 3210 | 4530 | 5670 | 6120 |
| 8 | 2520 | 4300 | 6050 | 7560 | 8160 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| 4 | 15400 | 26100 | 36900 | 46100 | 49700 |
| 6 | 23100 | 39200 | 55300 | 69200 | 74700 |
| 8 | 30800 | 52500 | 73800 | 92200 | 99600 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Prairie Baptist Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 38 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 209 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 1820 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.078 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.720 | **Base Capacity** | 1700 |
| **Posted Speed** | 50 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 102 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 55 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 40 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.07 | **Density** | N/A | **PTSF** | 27.5 | **ATS** | 53.2 | **% FFS** | 96.6 |
| **FFS Delay** | 2.0 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 280 | 590 | 970 | 1350 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 390 | 820 | 1350 | 1880 | 1980 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 5000 | 10600 | 17400 | 24200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Prairie Baptist Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 38 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 209 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 1820 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.078 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.720 | **Base Capacity** | 1700 |
| **Posted Speed** | 50 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 102 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 55 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 40 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.07 | **Density** | N/A | **PTSF** | 27.5 | **ATS** | 53.2 | **% FFS** | 96.6 |
| **FFS Delay** | 2.0 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 280 | 590 | 970 | 1350 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 390 | 820 | 1350 | 1880 | 1980 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 5000 | 10600 | 17400 | 24200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Prairie Baptist Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 38 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 209 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 15531 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.101 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.813 | **Base Capacity** | 1700 |
| **Posted Speed** | 50 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 1275 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 55 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 293 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.90 | **Density** | N/A | **PTSF** | 89.0 | **ATS** | 39.1 | **% FFS** | 71.1 |
| **FFS Delay** | 24.0 | **LOS Thresh. Delay** | 18.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 350 | 670 | 1080 | 1420 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 440 | 830 | 1330 | 1750 | 1750 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4400 | 8300 | 13200 | 17400 | 17400 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Prairie Baptist Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | SR 38 | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 209 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 15531 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.128 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.620 | **Base Capacity** | 1700 |
| **Posted Speed** | 50 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 1233 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 55 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 755 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.87 | **Density** | N/A | **PTSF** | 91.3 | **ATS** | 36.1 | **% FFS** | 65.6 |
| **FFS Delay** | 30.9 | **LOS Thresh. Delay** | 25.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 220 | 520 | 860 | 1190 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 360 | 840 | 1390 | 1920 | 2300 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2900 | 6600 | 10900 | 15000 | 18000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cyntheanne Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 210 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.700 | **Median** | No | **AADT** | 1875 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.081 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.660 | **Base Capacity** | 1700 |
| **Posted Speed** | 50 | **% NPZ** | 25 | **Peak Dir. Hrly. Vol.** | 100 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 55 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 52 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.07 | **Density** | N/A | **PTSF** | 34.5 | **ATS** | 52.9 | **% FFS** | 96.1 |
| **FFS Delay** | 1.8 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 230 | 540 | 900 | 1260 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 350 | 820 | 1370 | 1910 | 2160 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4400 | 10200 | 17000 | 23600 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cyntheanne Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 210 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.700 | **Median** | No | **AADT** | 1875 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.103 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.500 | **Base Capacity** | 1700 |
| **Posted Speed** | 50 | **% NPZ** | 25 | **Peak Dir. Hrly. Vol.** | 97 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 55 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 97 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.07 | **Density** | N/A | **PTSF** | 30.6 | **ATS** | 52.3 | **% FFS** | 95.1 |
| **FFS Delay** | 2.4 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 150 | 420 | 710 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 300 | 840 | 1420 | 1920 | 2840 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3000 | 8200 | 13800 | 18700 | 27600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Cyntheanne Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 210 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.700 | **Median** | No | **AADT** | 2670 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.090 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.540 | **Base Capacity** | 1700 |
| **Posted Speed** | 50 | **% NPZ** | 25 | **Peak Dir. Hrly. Vol.** | 130 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 55 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 111 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.09 | **Density** | N/A | **PTSF** | 37.2 | **ATS** | 51.7 | **% FFS** | 93.9 |
| **FFS Delay** | 3.0 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 170 | 450 | 760 | 1030 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 320 | 840 | 1410 | 1910 | 2630 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3600 | 9400 | 15700 | 21300 | 29300 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Cyntheanne Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 210 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.700 | **Median** | No | **AADT** | 2670 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.103 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.505 | **Base Capacity** | 1700 |
| **Posted Speed** | 50 | **% NPZ** | 25 | **Peak Dir. Hrly. Vol.** | 139 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 55 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 136 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.10 | **Density** | N/A | **PTSF** | 38.6 | **ATS** | 51.0 | **% FFS** | 92.8 |
| **FFS Delay** | 3.6 | **LOS Thresh. Delay** | 0.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 150 | 430 | 710 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 300 | 860 | 1410 | 1930 | 2820 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3000 | 8400 | 13700 | 18800 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Atlantic Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 211 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.020 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.550 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 11 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 9 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 7.2 | **ATS** | 49.6 | **% FFS** | 99.2 |
| **FFS Delay** | 0.2 | **LOS Thresh. Delay** | 0.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 180 | 430 | 710 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 330 | 790 | 1300 | 1750 | 2590 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 16600 | 39600 | 65000 | 87600 | 129600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Atlantic Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 211 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.053 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.830 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 44 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 9 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.03 | **Density** | N/A | **PTSF** | 12.7 | **ATS** | 49.3 | **% FFS** | 98.6 |
| **FFS Delay** | 0.4 | **LOS Thresh. Delay** | 0.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 350 | 660 | 1010 | 1380 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 430 | 800 | 1220 | 1670 | 1720 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 8200 | 15100 | 23100 | 31600 | 32500 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Atlantic Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 211 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.032 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.594 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 19 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 13 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 9.3 | **ATS** | 49.5 | **% FFS** | 99.0 |
| **FFS Delay** | 0.3 | **LOS Thresh. Delay** | 0.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 200 | 460 | 760 | 1040 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 340 | 780 | 1280 | 1760 | 2400 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 10700 | 24400 | 40000 | 55000 | 75000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Atlantic Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 38 | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 211 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.076 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.789 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 60 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 16 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.04 | **Density** | N/A | **PTSF** | 15.7 | **ATS** | 49.1 | **% FFS** | 98.2 |
| **FFS Delay** | 0.5 | **LOS Thresh. Delay** | 0.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 320 | 600 | 960 | 1320 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 410 | 770 | 1220 | 1680 | 1800 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 5400 | 10200 | 16100 | 22200 | 23700 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Cyntheanne Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Atlantic Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 212 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.010 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 1.000 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 10 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 0 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 6.2 | **ATS** | 49.7 | **% FFS** | 99.4 |
| **FFS Delay** | 0.4 | **LOS Thresh. Delay** | 0.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 420 | 870 | 1320 | 1420 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 420 | 880 | 1320 | 1420 | 1420 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 42000 | 88000 | 132000 | 142000 | 142000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Cyntheanne Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Atlantic Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 212 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.010 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 1.000 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 10 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 0 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 6.2 | **ATS** | 49.7 | **% FFS** | 99.4 |
| **FFS Delay** | 0.4 | **LOS Thresh. Delay** | 0.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 420 | 870 | 1320 | 1420 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 420 | 880 | 1320 | 1420 | 1420 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 42000 | 88000 | 132000 | 142000 | 142000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Cyntheanne Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Atlantic Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 212 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.010 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 1.000 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 10 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 0 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 6.2 | **ATS** | 49.7 | **% FFS** | 99.4 |
| **FFS Delay** | 0.4 | **LOS Thresh. Delay** | 0.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 420 | 870 | 1320 | 1420 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 420 | 880 | 1320 | 1420 | 1420 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 42000 | 88000 | 132000 | 142000 | 142000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Cyntheanne Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Atlantic Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 212 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.010 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 1.000 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 10 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 0 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 6.2 | **ATS** | 49.7 | **% FFS** | 99.4 |
| **FFS Delay** | 0.4 | **LOS Thresh. Delay** | 0.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 420 | 870 | 1320 | 1420 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 420 | 880 | 1320 | 1420 | 1420 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 42000 | 88000 | 132000 | 142000 | 142000 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Prairie Baptist Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cyntheanne Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 213 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.010 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.830 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 8 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 2 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 7.3 | **ATS** | 49.7 | **% FFS** | 99.4 |
| **FFS Delay** | 0.4 | **LOS Thresh. Delay** | 0.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 350 | 660 | 1010 | 1380 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 430 | 800 | 1220 | 1670 | 1720 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 43000 | 80000 | 122000 | 167000 | 172000 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Prairie Baptist Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cyntheanne Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 213 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.026 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.540 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 14 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 12 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 7.4 | **ATS** | 49.6 | **% FFS** | 99.1 |
| **FFS Delay** | 0.6 | **LOS Thresh. Delay** | 0.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 170 | 420 | 690 | 940 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 320 | 780 | 1280 | 1750 | 2630 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 12400 | 30000 | 49300 | 67400 | 101200 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Prairie Baptist Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cyntheanne Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 213 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.013 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.692 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 9 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 4 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 8.3 | **ATS** | 49.7 | **% FFS** | 99.4 |
| **FFS Delay** | 0.4 | **LOS Thresh. Delay** | 0.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 260 | 530 | 860 | 1200 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 380 | 770 | 1250 | 1740 | 2060 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 29300 | 59300 | 96200 | 133900 | 158500 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Prairie Baptist Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cyntheanne Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 213 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.051 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.667 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 34 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 17 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.02 | **Density** | N/A | **PTSF** | 11.9 | **ATS** | 49.3 | **% FFS** | 98.6 |
| **FFS Delay** | 1.0 | **LOS Thresh. Delay** | 1.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 240 | 510 | 830 | 1160 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 360 | 770 | 1250 | 1740 | 2130 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 7100 | 15100 | 24600 | 34200 | 41800 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Prairie Baptist Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 214 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.012 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.920 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 11 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 14.9 | **ATS** | 44.8 | **% FFS** | 99.5 |
| **FFS Delay** | 0.4 | **LOS Thresh. Delay** | 8.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 350 | 730 | 1090 | 1420 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 390 | 800 | 1190 | 1550 | 1550 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 32600 | 66700 | 99200 | 129200 | 129200 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Prairie Baptist Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 214 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.021 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.620 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 13 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 8 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.01 | **Density** | N/A | **PTSF** | 14.7 | **ATS** | 44.7 | **% FFS** | 99.3 |
| **FFS Delay** | 0.5 | **LOS Thresh. Delay** | 8.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 210 | 430 | 710 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 340 | 700 | 1150 | 1570 | 2300 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 16200 | 33400 | 54800 | 74800 | 109600 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Prairie Baptist Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 214 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 6200 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.045 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.728 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 203 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 76 | **Adjusted Capacity** | 1547 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.14 | **Density** | N/A | **PTSF** | 39.3 | **ATS** | 47.2 | **% FFS** | 94.3 |
| **FFS Delay** | 4.1 | **LOS Thresh. Delay** | 4.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 280 | 550 | 890 | 1250 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 390 | 760 | 1230 | 1720 | 1960 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 8700 | 16900 | 27400 | 38300 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Prairie Baptist Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 214 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 6200 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.103 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.563 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 10 | **Peak Dir. Hrly. Vol.** | 360 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 279 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.25 | **Density** | N/A | **PTSF** | 56.9 | **ATS** | 42.9 | **% FFS** | 85.8 |
| **FFS Delay** | 11.3 | **LOS Thresh. Delay** | 11.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 190 | 430 | 720 | 980 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 340 | 770 | 1280 | 1750 | 2530 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 3400 | 7500 | 12500 | 17000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 215 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.041 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.630 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 26 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 15 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.02 | **Density** | N/A | **PTSF** | 37.0 | **ATS** | 47.1 | **% FFS** | 94.2 |
| **FFS Delay** | 4.2 | **LOS Thresh. Delay** | 4.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 110 | 290 | 680 | 1020 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 470 | 1080 | 1620 | 2260 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 4400 | 11500 | 26400 | 39600 | 55200 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 215 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 1000 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.063 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.570 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 36 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 27 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.03 | **Density** | N/A | **PTSF** | 35.7 | **ATS** | 46.9 | **% FFS** | 93.8 |
| **FFS Delay** | 4.5 | **LOS Thresh. Delay** | 4.5 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 280 | 640 | 940 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 500 | 1130 | 1650 | 2500 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2900 | 8000 | 18000 | 26200 | 39700 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 215 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 12651 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.063 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.630 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 502 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 295 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.35 | **Density** | N/A | **PTSF** | 77.5 | **ATS** | 39.6 | **% FFS** | 79.2 |
| **FFS Delay** | 18.0 | **LOS Thresh. Delay** | 18.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 110 | 290 | 680 | 1020 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 470 | 1080 | 1620 | 2260 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2900 | 7500 | 17200 | 25800 | 35900 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Olio Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 215 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 12651 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.109 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.582 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 803 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 576 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.56 | **Density** | N/A | **PTSF** | 87.6 | **ATS** | 35.6 | **% FFS** | 71.1 |
| **FFS Delay** | 27.7 | **LOS Thresh. Delay** | 27.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 650 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 500 | 1120 | 1650 | 2440 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1700 | 4600 | 10300 | 15200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Summer Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 216 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 2038 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.110 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.730 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 164 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 61 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.12 | **Density** | N/A | **PTSF** | 56.4 | **ATS** | 45.4 | **% FFS** | 90.8 |
| **FFS Delay** | 7.0 | **LOS Thresh. Delay** | 7.0 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 120 | 370 | 730 | 1130 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 510 | 1000 | 1550 | 1950 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 4700 | 9100 | 14100 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Summer Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 216 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 2038 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.144 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.540 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 158 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 135 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.11 | **Density** | N/A | **PTSF** | 52.8 | **ATS** | 43.8 | **% FFS** | 87.5 |
| **FFS Delay** | 9.7 | **LOS Thresh. Delay** | 9.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 280 | 620 | 900 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 520 | 1150 | 1670 | 2630 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 3700 | 8000 | 11600 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Summer Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 216 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 5355 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.110 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.581 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 342 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 247 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.24 | **Density** | N/A | **PTSF** | 69.6 | **ATS** | 41.1 | **% FFS** | 82.3 |
| **FFS Delay** | 14.8 | **LOS Thresh. Delay** | 14.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 280 | 650 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 490 | 1120 | 1660 | 2450 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1700 | 4500 | 10200 | 15100 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Boden Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Summer Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 216 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.950 | **Median** | No | **AADT** | 5355 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.166 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.529 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 470 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 419 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.33 | **Density** | N/A | **PTSF** | 75.1 | **ATS** | 39.4 | **% FFS** | 78.9 |
| **FFS Delay** | 18.3 | **LOS Thresh. Delay** | 18.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 280 | 610 | 880 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 530 | 1160 | 1670 | 2690 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1100 | 3200 | 7000 | 10100 | 16300 |
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Summer Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 217 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 2519 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.081 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.890 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 182 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 22 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.13 | **Density** | N/A | **PTSF** | 61.2 | **ATS** | 45.6 | **% FFS** | 91.2 |
| **FFS Delay** | 2.8 | **LOS Thresh. Delay** | 2.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 150 | 550 | 900 | 1230 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 620 | 1020 | 1390 | 1600 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2100 | 7700 | 12600 | 17200 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Summer Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 217 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 2519 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.093 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.630 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 148 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 87 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.11 | **Density** | N/A | **PTSF** | 52.7 | **ATS** | 45.2 | **% FFS** | 90.4 |
| **FFS Delay** | 3.1 | **LOS Thresh. Delay** | 3.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 110 | 290 | 680 | 1020 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 470 | 1080 | 1620 | 2260 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2000 | 5100 | 11700 | 17500 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Summer Road | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Southbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 217 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 2605 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.081 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.896 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 189 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 22 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.13 | **Density** | N/A | **PTSF** | 61.6 | **ATS** | 45.5 | **% FFS** | 91.0 |
| **FFS Delay** | 2.8 | **LOS Thresh. Delay** | 2.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 150 | 560 | 920 | 1250 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 630 | 1030 | 1400 | 1590 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2100 | 7800 | 12800 | 17300 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Summer Road | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Northbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 217 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.400 | **Median** | No | **AADT** | 2605 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.096 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.592 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 148 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 102 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.11 | **Density** | N/A | **PTSF** | 52.1 | **ATS** | 44.8 | **% FFS** | 89.5 |
| **FFS Delay** | 3.4 | **LOS Thresh. Delay** | 3.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 660 | 980 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 490 | 1120 | 1660 | 2400 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1800 | 5200 | 11700 | 17300 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 218 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 10805 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.077 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.720 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 599 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 233 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.42 | **Density** | N/A | **PTSF** | 81.8 | **ATS** | 38.8 | **% FFS** | 77.6 |
| **FFS Delay** | 16.7 | **LOS Thresh. Delay** | 16.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 120 | 360 | 720 | 1120 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 500 | 1000 | 1560 | 1980 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2300 | 6500 | 13000 | 20300 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 218 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 10805 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.134 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.590 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 854 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 594 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.60 | **Density** | N/A | **PTSF** | 88.9 | **ATS** | 35.0 | **% FFS** | 70.0 |
| **FFS Delay** | 24.7 | **LOS Thresh. Delay** | 24.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 650 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 500 | 1110 | 1650 | 2410 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1300 | 3800 | 8300 | 12400 | 18000 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 218 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 29978 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.088 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.546 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1440 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1198 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.01 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 280 | 620 | 910 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 520 | 1140 | 1670 | 2610 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2000 | 6000 | 13000 | 19000 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 218 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 29978 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.134 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.557 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 2237 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1780 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.57 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 280 | 630 | 920 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 510 | 1140 | 1660 | 2550 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1300 | 3900 | 8600 | 12400 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 218 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 29978 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.088 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.546 | **Base Capacity** | 2000 |
| **Posted Speed** | 45 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1440 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1198 | **Adjusted Capacity** | 1647 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.48 | **Density** | 19.0 | **PTSF** | N/A | **ATS** | 50.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 9.6 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 750 | 1280 | 1810 | 2320 | 2690 |
| 3 | 1130 | 1930 | 2720 | 3480 | 4040 |
| 4 | 1510 | 2570 | 3630 | 4650 | 5390 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1380 | 2350 | 3320 | 4250 | 4930 |
| 6 | 2070 | 3540 | 4990 | 6380 | 7400 |
| 8 | 2770 | 4710 | 6650 | 8520 | 9880 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 15700 | 26800 | 37800 | 48300 | 56100 |
| 6 | 23600 | 40300 | 56800 | 72600 | 84100 |
| 8 | 31500 | 53600 | 75600 | 96900 | 112300 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | 156th Street | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 218 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 29978 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.134 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.557 | **Base Capacity** | 2000 |
| **Posted Speed** | 45 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 2237 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1780 | **Adjusted Capacity** | 1647 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.74 | **Density** | 29.7 | **PTSF** | N/A | **ATS** | 49.8 | **% FFS** | 99.5 |
| **FFS Delay** | 0.3 | **LOS Thresh. Delay** | 9.9 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 750 | 1280 | 1810 | 2320 | 2690 |
| 3 | 1130 | 1930 | 2720 | 3480 | 4040 |
| 4 | 1510 | 2570 | 3630 | 4650 | 5390 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1350 | 2300 | 3250 | 4170 | 4830 |
| 6 | 2030 | 3470 | 4890 | 6250 | 7260 |
| 8 | 2720 | 4620 | 6520 | 8350 | 9680 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 10100 | 17200 | 24300 | 31200 | 36100 |
| 6 | 15200 | 25900 | 36500 | 46700 | 54200 |
| 8 | 20300 | 34500 | 48700 | 62400 | 72300 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 219 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 1434 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.117 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.780 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 131 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 37 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.09 | **Density** | N/A | **PTSF** | 55.0 | **ATS** | 45.9 | **% FFS** | 91.8 |
| **FFS Delay** | 5.8 | **LOS Thresh. Delay** | 5.8 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 130 | 420 | 740 | 1170 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 540 | 950 | 1500 | 1830 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1500 | 4700 | 8200 | 12900 | 15700 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 219 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 1434 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.171 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.630 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 154 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 91 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.11 | **Density** | N/A | **PTSF** | 53.4 | **ATS** | 45.0 | **% FFS** | 90.0 |
| **FFS Delay** | 7.2 | **LOS Thresh. Delay** | 7.2 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 110 | 290 | 680 | 1020 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 470 | 1080 | 1620 | 2260 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1100 | 2800 | 6400 | 9500 | 13300 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 219 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 4547 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.117 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.776 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 413 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 119 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.29 | **Density** | N/A | **PTSF** | 75.1 | **ATS** | 41.8 | **% FFS** | 83.7 |
| **FFS Delay** | 12.6 | **LOS Thresh. Delay** | 12.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 130 | 420 | 740 | 1160 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 550 | 960 | 1500 | 1830 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1500 | 4800 | 8300 | 12900 | 15700 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | 156th Street | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Summer Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Greenfield Avenue | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 219 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.900 | **Median** | No | **AADT** | 4547 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.185 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.581 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 489 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 352 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.34 | **Density** | N/A | **PTSF** | 76.7 | **ATS** | 39.6 | **% FFS** | 79.1 |
| **FFS Delay** | 17.1 | **LOS Thresh. Delay** | 17.1 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 280 | 650 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 180 | 490 | 1120 | 1660 | 2450 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1000 | 2700 | 6100 | 9000 | 13300 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Union Chapel Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 220 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 13143 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.064 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.720 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 606 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 236 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.43 | **Density** | N/A | **PTSF** | 82.2 | **ATS** | 38.7 | **% FFS** | 77.4 |
| **FFS Delay** | 6.3 | **LOS Thresh. Delay** | 6.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 120 | 360 | 720 | 1120 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 500 | 1000 | 1560 | 1980 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2700 | 7900 | 15700 | 24400 | 31000 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Union Chapel Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 220 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 13143 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.111 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.590 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 861 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 598 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.60 | **Density** | N/A | **PTSF** | 89.1 | **ATS** | 34.9 | **% FFS** | 69.8 |
| **FFS Delay** | 9.3 | **LOS Thresh. Delay** | 9.3 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 290 | 650 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 500 | 1110 | 1650 | 2410 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 4600 | 10000 | 14900 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Union Chapel Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 220 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 41468 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.070 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.504 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1463 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1440 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.03 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 270 | 590 | 840 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 160 | 540 | 1180 | 1670 | 2820 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2300 | 7800 | 16900 | 23900 | 40300 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Union Chapel Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 220 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 41468 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.111 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.541 | **Base Capacity** | 1700 |
| **Posted Speed** | 45 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 2490 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 2113 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.75 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 90 | 280 | 620 | 900 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 170 | 520 | 1150 | 1670 | 2630 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1600 | 4700 | 10400 | 15100 | 23700 |
| | | | | | |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Union Chapel Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 220 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 41468 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.070 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.504 | **Base Capacity** | 2000 |
| **Posted Speed** | 45 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1463 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1440 | **Adjusted Capacity** | 1647 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.48 | **Density** | 19.3 | **PTSF** | N/A | **ATS** | 50.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 3.6 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 750 | 1280 | 1810 | 2320 | 2690 |
| 3 | 1130 | 1930 | 2720 | 3480 | 4040 |
| 4 | 1510 | 2570 | 3630 | 4650 | 5390 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1490 | 2540 | 3600 | 4610 | 5340 |
| 6 | 2250 | 3830 | 5400 | 6910 | 8020 |
| 8 | 3000 | 5100 | 7210 | 9230 | 10700 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 21300 | 36300 | 51500 | 65900 | 76300 |
| 6 | 32200 | 54800 | 77200 | 98800 | 114600 |
| 8 | 42900 | 72900 | 103000 | 131900 | 152900 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | 156th Street | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Union Chapel Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 220 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 41468 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.111 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.541 | **Base Capacity** | 2000 |
| **Posted Speed** | 45 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 2490 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 50 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 2113 | **Adjusted Capacity** | 1647 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.82 | **Density** | 33.6 | **PTSF** | N/A | **ATS** | 48.9 | **% FFS** | 97.9 |
| **FFS Delay** | 0.5 | **LOS Thresh. Delay** | 4.1 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 750 | 1280 | 1810 | 2320 | 2690 |
| 3 | 1130 | 1930 | 2720 | 3480 | 4040 |
| 4 | 1510 | 2570 | 3630 | 4650 | 5390 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1390 | 2370 | 3350 | 4290 | 4980 |
| 6 | 2090 | 3570 | 5030 | 6440 | 7470 |
| 8 | 2800 | 4760 | 6710 | 8600 | 9970 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 12600 | 21400 | 30200 | 38700 | 44900 |
| 6 | 18900 | 32200 | 45400 | 58100 | 67300 |
| 8 | 25300 | 42900 | 60500 | 77500 | 89900 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Howe Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 221 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 12073 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.074 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.710 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 634 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 259 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.45 | **Density** | N/A | **PTSF** | 83.2 | **ATS** | 33.4 | **% FFS** | 74.2 |
| **FFS Delay** | 8.3 | **LOS Thresh. Delay** | 10.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 310 | 590 | 960 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 150 | 440 | 840 | 1360 | 2000 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2100 | 6000 | 11400 | 18400 | 27100 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Howe Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 221 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 12073 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.123 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.600 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 891 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 594 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.63 | **Density** | N/A | **PTSF** | 89.8 | **ATS** | 29.8 | **% FFS** | 66.1 |
| **FFS Delay** | 12.3 | **LOS Thresh. Delay** | 14.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 230 | 560 | 870 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 390 | 940 | 1460 | 2370 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 3200 | 7700 | 11900 | 19300 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Howe Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 221 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 37374 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.077 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.510 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1468 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1410 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.03 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 200 | 510 | 760 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 400 | 1000 | 1500 | 2790 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1900 | 5200 | 13000 | 19500 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Howe Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 221 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 37374 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.123 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.534 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 2455 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 2142 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.72 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 200 | 530 | 790 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 380 | 1000 | 1480 | 2660 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 3100 | 8200 | 12100 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Howe Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 221 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 37374 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.077 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.510 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1468 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1410 | **Adjusted Capacity** | 1565 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.51 | **Density** | 21.5 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 6.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 680 | 1150 | 1630 | 2110 | 2570 |
| 3 | 1020 | 1730 | 2450 | 3170 | 3860 |
| 4 | 1360 | 2310 | 3270 | 4220 | 5150 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1340 | 2260 | 3200 | 4140 | 5040 |
| 6 | 2000 | 3400 | 4810 | 6220 | 7570 |
| 8 | 2670 | 4530 | 6420 | 8280 | 10100 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 17500 | 29400 | 41600 | 53800 | 65500 |
| 6 | 26000 | 44200 | 62500 | 80800 | 98400 |
| 8 | 34700 | 58900 | 83400 | 107600 | 131200 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Union Chapel Road | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Howe Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 221 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.300 | **Median** | No | **AADT** | 37374 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.123 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.534 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 2455 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 2142 | **Adjusted Capacity** | 1565 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.85 | **Density** | 36.8 | **PTSF** | N/A | **ATS** | 44.1 | **% FFS** | 97.9 |
| **FFS Delay** | 0.5 | **LOS Thresh. Delay** | 6.5 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 680 | 1150 | 1630 | 2110 | 2570 |
| 3 | 1020 | 1730 | 2450 | 3170 | 3860 |
| 4 | 1360 | 2310 | 3270 | 4220 | 5150 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1280 | 2160 | 3060 | 3960 | 4820 |
| 6 | 1920 | 3240 | 4590 | 5940 | 7230 |
| 8 | 2550 | 4330 | 6130 | 7910 | 9650 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 10500 | 17600 | 24900 | 32200 | 39200 |
| 6 | 15700 | 26400 | 37400 | 48300 | 58800 |
| 8 | 20800 | 35300 | 49900 | 64400 | 78500 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Howe Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 222 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 13269 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.065 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.730 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 630 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 233 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.44 | **Density** | N/A | **PTSF** | 83.5 | **ATS** | 33.5 | **% FFS** | 74.4 |
| **FFS Delay** | 22.0 | **LOS Thresh. Delay** | 28.4 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 100 | 330 | 600 | 970 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 460 | 830 | 1330 | 1950 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2200 | 7100 | 12800 | 20500 | 30000 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Howe Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 222 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 13269 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.112 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.570 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 847 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 639 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.60 | **Density** | N/A | **PTSF** | 88.3 | **ATS** | 29.9 | **% FFS** | 66.5 |
| **FFS Delay** | 32.3 | **LOS Thresh. Delay** | 38.7 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 80 | 210 | 550 | 840 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 150 | 370 | 970 | 1480 | 2500 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1400 | 3400 | 8700 | 13300 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | Howe Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 222 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 42116 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.070 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.519 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 1530 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1418 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.08 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 200 | 520 | 770 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 140 | 390 | 1010 | 1490 | 2740 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 2000 | 5600 | 14500 | 21300 | 39200 |

| |
|---|
| 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Howe Road | **Analysis Type** | Two-Lane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 222 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 42116 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.112 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.539 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 100 | **Peak Dir. Hrly. Vol.** | 2542 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 2175 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.79 | **Density** | N/A | **PTSF** | 100.0 | **ATS** | 0.0 | **% FFS** | 0.0 |
| **FFS Delay** | Infinity | **LOS Thresh. Delay** | Infinity | **Service Measure** | vcRatio | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 70 | 200 | 530 | 800 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 130 | 380 | 990 | 1490 | 2640 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 1200 | 3400 | 8900 | 13400 | 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Howe Road | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 222 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 42116 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.070 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.519 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1530 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1418 | **Adjusted Capacity** | 1565 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.53 | **Density** | 22.4 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 16.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 680 | 1150 | 1630 | 2110 | 2570 |
| 3 | 1020 | 1730 | 2450 | 3170 | 3860 |
| 4 | 1360 | 2310 | 3270 | 4220 | 5150 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1320 | 2220 | 3150 | 4070 | 4960 |
| 6 | 1970 | 3340 | 4730 | 6110 | 7440 |
| 8 | 2630 | 4460 | 6310 | 8140 | 9930 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 18900 | 31800 | 45000 | 58200 | 70900 |
| 6 | 28200 | 47800 | 67600 | 87300 | 106300 |
| 8 | 37600 | 63800 | 90200 | 116300 | 141900 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | Howe Road | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 222 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.800 | **Median** | No | **AADT** | 42116 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.112 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.539 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 2542 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 2175 | **Adjusted Capacity** | 1565 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.88 | **Density** | 38.4 | **PTSF** | N/A | **ATS** | 43.7 | **% FFS** | 97.1 |
| **FFS Delay** | 1.9 | **LOS Thresh. Delay** | 17.9 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 680 | 1150 | 1630 | 2110 | 2570 |
| 3 | 1020 | 1730 | 2450 | 3170 | 3860 |
| 4 | 1360 | 2310 | 3270 | 4220 | 5150 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1270 | 2140 | 3030 | 3920 | 4770 |
| 6 | 1900 | 3210 | 4550 | 5890 | 7170 |
| 8 | 2530 | 4290 | 6070 | 7830 | 9560 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 11400 | 19200 | 27100 | 35000 | 42600 |
| 6 | 17000 | 28700 | 40700 | 52600 | 64100 |
| 8 | 22600 | 38400 | 54200 | 70000 | 85400 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 223 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | Yes | **AADT** | 20708 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.062 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.570 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 732 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 552 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.24 | **Density** | 10.2 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 4.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 710 | 1220 | 1720 | 2220 | 2710 |
| 3 | 1070 | 1830 | 2580 | 3330 | 4060 |
| 4 | 1430 | 2440 | 3440 | 4450 | 5420 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1250 | 2150 | 3020 | 3900 | 4760 |
| 6 | 1880 | 3220 | 4530 | 5850 | 7130 |
| 8 | 2510 | 4290 | 6040 | 7810 | 9510 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 20200 | 34700 | 48800 | 63000 | 76800 |
| 6 | 30400 | 52000 | 73100 | 94400 | 115000 |
| 8 | 40500 | 69200 | 97500 | 126000 | 153400 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 223 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | Yes | **AADT** | 20708 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.095 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.510 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 1003 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 964 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.33 | **Density** | 14.0 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 4.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 710 | 1220 | 1720 | 2220 | 2710 |
| 3 | 1070 | 1830 | 2580 | 3330 | 4060 |
| 4 | 1430 | 2440 | 3440 | 4450 | 5420 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1400 | 2400 | 3380 | 4360 | 5320 |
| 6 | 2100 | 3590 | 5060 | 6530 | 7970 |
| 8 | 2810 | 4790 | 6750 | 8730 | 10630 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 14800 | 25300 | 35600 | 45900 | 56000 |
| 6 | 22200 | 37800 | 53300 | 68800 | 83900 |
| 8 | 29600 | 50500 | 71100 | 91900 | 111900 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | TR | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 9/13/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 223 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | Yes | **AADT** | 59905 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.062 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.625 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 2321 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1393 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.77 | **Density** | 32.4 | **PTSF** | N/A | **ATS** | 44.8 | **% FFS** | 99.7 |
| **FFS Delay** | 0.1 | **LOS Thresh. Delay** | 4.1 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 710 | 1220 | 1720 | 2220 | 2710 |
| 3 | 1070 | 1830 | 2580 | 3330 | 4060 |
| 4 | 1430 | 2440 | 3440 | 4450 | 5420 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1140 | 1960 | 2760 | 3560 | 4340 |
| 6 | 1720 | 2930 | 4130 | 5330 | 6500 |
| 8 | 2290 | 3910 | 5510 | 7120 | 8680 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 18400 | 31700 | 44600 | 57500 | 70000 |
| 6 | 27800 | 47300 | 66700 | 86000 | 104900 |
| 8 | 37000 | 63100 | 88900 | 114900 | 140000 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 223 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | Yes | **AADT** | 59905 | **PHF** | 0.920 |
| **# Thru Lanes** | 4 | **Left Turn Impact** | No | **K** | 0.095 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.574 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 3267 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 2424 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 1.08 | **Density** | 49.8 | **PTSF** | N/A | **ATS** | 41.1 | **% FFS** | 91.3 |
| **FFS Delay** | 1.5 | **LOS Thresh. Delay** | 5.5 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 710 | 1220 | 1720 | 2220 | 2710 |
| 3 | 1070 | 1830 | 2580 | 3330 | 4060 |
| 4 | 1430 | 2440 | 3440 | 4450 | 5420 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1240 | 2130 | 3000 | 3870 | 4730 |
| 6 | 1870 | 3190 | 4500 | 5810 | 7080 |
| 8 | 2500 | 4260 | 6000 | 7760 | 9450 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 13100 | 22500 | 31600 | 40800 | 49800 |
| 6 | 19700 | 33600 | 47400 | 61200 | 74600 |
| 8 | 26400 | 44900 | 63200 | 81700 | 99500 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Eastbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 223 AM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | Yes | **AADT** | 59905 | **PHF** | 0.920 |
| **# Thru Lanes** | 6 | **Left Turn Impact** | No | **K** | 0.062 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.625 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 2321 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 1393 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.51 | **Density** | 21.6 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 4.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 710 | 1220 | 1720 | 2220 | 2710 |
| 3 | 1070 | 1830 | 2580 | 3330 | 4060 |
| 4 | 1430 | 2440 | 3440 | 4450 | 5420 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1140 | 1960 | 2760 | 3560 | 4340 |
| 6 | 1720 | 2930 | 4130 | 5330 | 6500 |
| 8 | 2290 | 3910 | 5510 | 7120 | 8680 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 18400 | 31700 | 44600 | 57500 | 70000 |
| 6 | 27800 | 47300 | 66700 | 86000 | 104900 |
| 8 | 37000 | 63100 | 88900 | 114900 | 140000 |

*** 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

| | | | | | |
|---|---|---|---|---|---|
| **Analyst** | SK | **Highway Name** | Greenfield Avenue | **Study Period** | **Kother** |
| **Date Prepared** | 12/4/2023 10:58:32 AM | **From** | SR 37 | **Analysis Type** | Multilane Segment |
| **Agency** | A & F Engineering LLC | **To** | Cumberland Road | **Program** | HIGHPLAN 2012 |
| **Area Type** | Transitioning/Urban | **Peak Direction** | Westbound | **Version Date** | 12/12/2012 |
| **File Name** | Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 223 PM.xhp | | | | |
| **User Notes** | | | | | |

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.200 | **Median** | Yes | **AADT** | 59905 | **PHF** | 0.920 |
| **# Thru Lanes** | 6 | **Left Turn Impact** | No | **K** | 0.095 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.574 | **Base Capacity** | 1900 |
| **Posted Speed** | 40 | **% NPZ** | N/A | **Peak Dir. Hrly. Vol.** | 3267 | **Local Adj. Factor** | 0.88 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 2424 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.72 | **Density** | 30.3 | **PTSF** | N/A | **ATS** | 45.0 | **% FFS** | 100.0 |
| **FFS Delay** | 0.0 | **LOS Thresh. Delay** | 4.0 | **Service Measure** | Density | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | | | | | |
| 2 | 710 | 1220 | 1720 | 2220 | 2710 |
| 3 | 1070 | 1830 | 2580 | 3330 | 4060 |
| 4 | 1430 | 2440 | 3440 | 4450 | 5420 |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | | | | | |
| 4 | 1240 | 2130 | 3000 | 3870 | 4730 |
| 6 | 1870 | 3190 | 4500 | 5810 | 7080 |
| 8 | 2500 | 4260 | 6000 | 7760 | 9450 |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | | | | | |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 13100 | 22500 | 31600 | 40800 | 49800 |
| 6 | 19700 | 33600 | 47400 | 61200 | 74600 |
| 8 | 26400 | 44900 | 63200 | 81700 | 99500 |

*** 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

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

## Highway Data

| Roadway Variables | | | | Traffic Variables | | | |
|---|---|---|---|---|---|---|---|
| **Segment Length** | 0.500 | **Median** | No | **AADT** | 2892 | **PHF** | 0.920 |
| **# Thru Lanes** | 2 | **Left Turn Impact** | No | **K** | 0.060 | **% Heavy Vehicles** | 3.0 |
| **Terrain** | Level | **Pass Lane Length** | N/A | **D** | 0.790 | **Base Capacity** | 1700 |
| **Posted Speed** | 40 | **% NPZ** | 0 | **Peak Dir. Hrly. Vol.** | 137 | **Local Adj. Factor** | 0.91 |
| **Free Flow Speed** | 45 | **Class** | 3 | **Off Peak Dir. Hrly. Vol.** | 36 | **Adjusted Capacity** | 1428 |

## LOS Results

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **v/c Ratio** | 0.10 | **Density** | N/A | **PTSF** | 25.2 | **ATS** | 43.3 | **% FFS** | 96.1 |
| **FFS Delay** | 1.6 | **LOS Thresh. Delay** | 5.6 | **Service Measure** | PctFFS | **LOS** | 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 |
|---|---|---|---|---|---|
| **Lanes** | **Hourly Volume In Peak Direction** | | | | |
| 1 | 300 | 570 | 880 | 1190 | 1420 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| **Lanes** | **Hourly Volume In Both Directions** | | | | |
| 2 | 380 | 730 | 1120 | 1510 | 1800 |
| 4 | | | | | |
| 6 | | | | | |
| 8 | | | | | |
| **Lanes** | **Annual Average Daily Traffic** | | | | |
| 2 | 6400 | 12200 | 18700 | 25200 | 30000 |
| 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.**