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# TRAFFIC IMPACT STUDY

## RIVENDALE SD

**Neversink Drive**

Town of Deerpark

Orange County, New York

February 26, 2020


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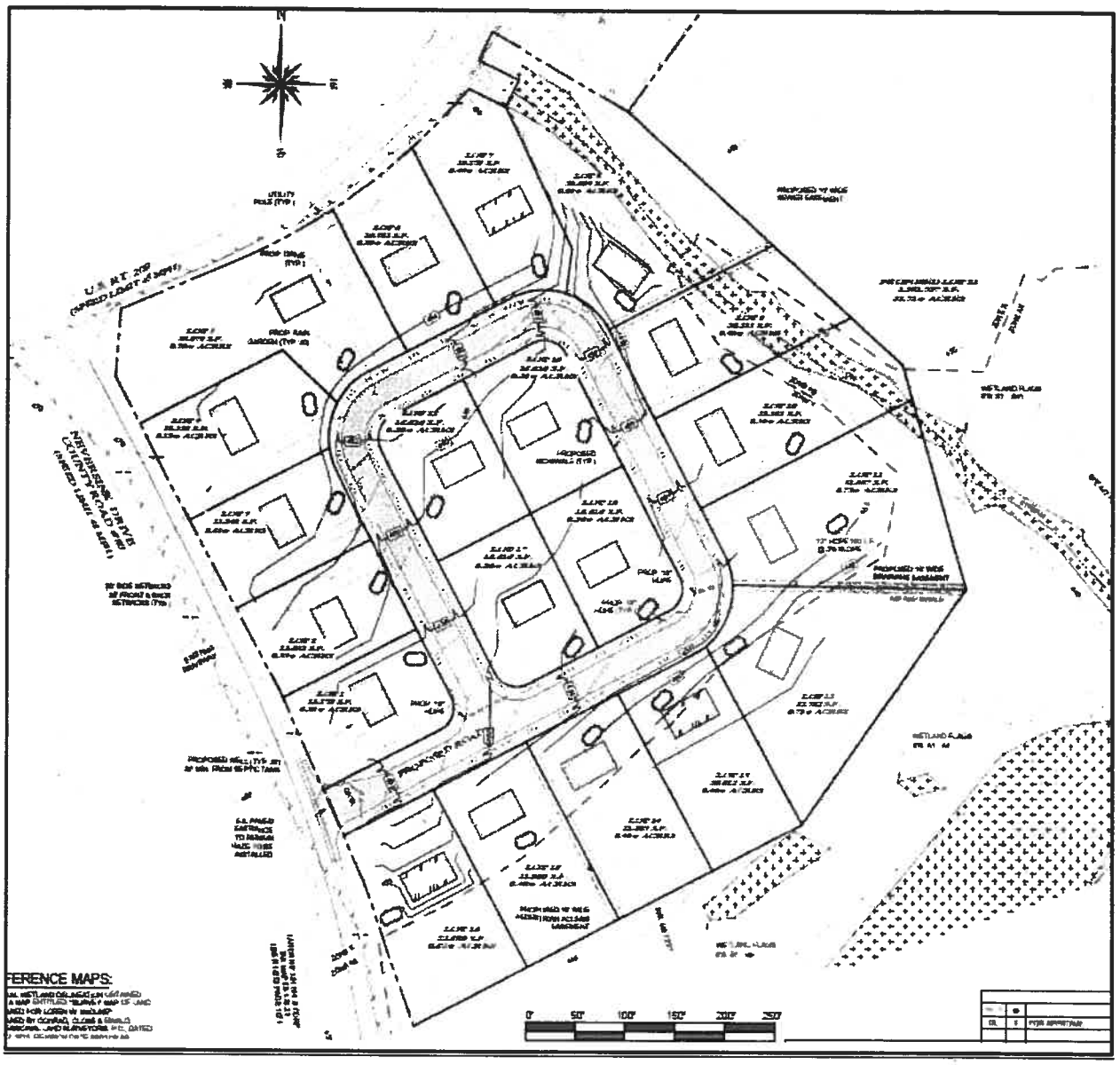
The purpose of this Traffic Impact Study is to identify potential adverse traffic issues that may result due to the development of a residential subdivision on property located on Neversink Drive and Route 209 in the Town of Deerpark, New York. The proposed project would be a total of 20 single family homes. The home sites will have access from a new driveway from Neversink Drive. There will be no access from Route 209, which is under the jurisdiction of the New York State Department of Transportation (DOT). Neversink Drive is a designated County Road – CR-80. The project build-out is estimated to be about two years, i.e. completed and occupied in 2022.

The site and its environs are shown in the map and plan – an aerial map showing the approximate boundaries of the site and the grading plan from the subdivision plan set prepared by John D. Fuller, P.E., P.C.:

**SITE LOCATION MAP**


Source: Google Earth

**SUBDIVISION PLAN**



Source: John D. Fuller, P.E., P.C

## Existing Conditions

The following is a description of existing travel conditions near the site of the proposed Rivendale Subdivision:

## Roadways

**Route 209** is a two-lane generally north/south major arterial running through the Town and just west of the Project site. Route 209 directly serves both residential and commercial uses – including a large developed property (possibly a film studio), located at the same Route 209/Neversink Drive intersection as the Project Site. Some residential uses have direct access

to Route 209 and in the vicinity of the site there are several intersecting side roads – including Hanger Drive to the south in Deerpark. Hanger Drive provides partial access to a large residential trailer park property known as the Huguenot.

There is no on-street parking on Route 209 and the pavement is in good condition. There are two different posted speed limits - 45 mph at the Project Site starting north of the Huguenot property and continuing northward, and 40 mph to the south through Deerpark and past Hanger Drive. At the intersections of Route 209 with Neversink and Hanger Drives, traffic on the side roads is controlled by a Stop sign while Route 209 traffic is free flowing. Travel lanes are 12 feet in width and there are 5-foot wide shoulders on both sides.

**Neversink Drive** is a two-lane County Road (CR-80) that intersects Route 209 at the Project Site. Its alignment at Route 209 is generally east/west, however, farther south, Neversink Drive curves to a more north/south alignment. It serves primarily residential land uses and accommodates the entrance to the large development site across Neversink Drive from the Rivendale site. The pavement is in good condition and the posted speed limit is 45 mph.

At one time, the speed limit on Neversink Drive was 55 mph and was the subject of a 2015 resolution from the Town Council to the Orange County DPW to review speeds and safety conditions that residents and the Town felt were excessive. We assume that study led to the reduction of the limit to the now posted 45 mph and a number of curve warning signs accompanied by lower advisory speed limits.

Parking is not prohibited on Neversink Drive; however, street parking is rare as virtually all abutting properties have driveways and off-street parking spaces. The roadway width is 22 to 24 feet near the approach to Route 209.

**Traffic Volumes**

As proposed, the development will include 20 single family homes. To evaluate the potential "worst-case" impacts of this type of development, manual turning movement counts were conducted at two key intersections on typical weekday (i.e., non-holiday/recess, school in session) mornings and evenings. The times were 7:00 to 9:00 AM and 4:00 to 6:00 PM on February 19, 2020. The counted intersections were as follows:

1. Route 209 and Neversink Drive
2. Route 209 and Hanger Drive

The AM and PM peak hour volumes (i.e., the highest 60-minute periods) were reduced from the collected 2-hour volumes. Since the counts were conducted in February, which is typically a lower volume month when compared to other non-winter periods, the counts were increased by 9% as suggested in the NY State DOT's database for seasonal volume variations. Those volumes are shown graphically in Figures 1 and 2 in **Appendix A** for the AM and PM peak hours, respectively.

**Level of Service Analysis – Existing Conditions**

The *2016 Highway Capacity Manual – 6th Edition* (HCM), published by the Transportation Research Board, defines Level of Service (LOS) for signalized and unsignalized intersections as a function of the average vehicle control delay. LOS may be calculated per movement or per approach for any intersection configuration, but LOS for the intersection as a whole is only defined for signalized and all-way stop configurations. In this analysis, the study locations are both two-way Stop controlled intersections with "T" shaped configurations.

Delay is defined in the *HCM 2016* as "the additional travel time experienced by a driver, passenger, bicyclist, or pedestrian beyond that which is required to travel at the desired speed."

For unsignalized intersections (i.e. stop sign controlled), the major road has free through movements while movements from the minor road are controlled by a stop sign. The movements that are subject to control delays are rated on a scale of "A" to "F", with LOS "A" exhibiting very short delays – 10 seconds or less on average – and LOS "F" exhibiting much longer delays – 50 seconds or more per vehicle on average. The relationship of LOS to delay times is shown in the following table:

**TABLE 1: LEVEL OF SERVICE VS. DELAY TIMES**
**STOP/YIELD SIGN CONTROLLED INTERSECTIONS**

| LOS (Unsignalized Intersections) | Average Control Delay (sec/vehicle) |
|---|---|
| A | ≤10 sec |
| B | >10–15 sec |
| C | >15–25 sec |
| D | >25–35 sec |
| E | >35–50 sec |
| F | >50 sec |

In the two-way Stop controlled Level of Service analyses, the through movements on the major road and right turns from the major road are assumed to have no delay. LOS for those movements is not an integral part of the analysis, because LOS is determined by control delay, and for these "free" movements, the control delay is zero.

Movements that are subject to small to moderate control delays include left turns from the major road, through movements on the minor road and right turns from the minor road. Movements that are most affected by control delay include left turns from the minor road.

Generally accepted software (Synchro) was used to compute control delays and Levels of Service. Synchro uses the methodologies published in the Highway Capacity Manual and

requires input from the user specific to the intersections being studied. Among other items, that input information includes the following:

1. Traffic Volumes – from the manual counts noted above.
2. Speeds – from field observations as noted above.
3. Lane Configuration and Width – from field measurements.
4. Traffic Control – from field observations that included Stop/Yield control or timings and phasing if signal controlled.
5. Peak Hour Factor – from the manual counts noted above.
6. Vehicle Mix/Classification – from NYSDOT counts, which indicate 7% heavy trucks/buses on Route 209 and 5% heavy vehicles on Neversink Drive.
7. Buses – from field observations indicating no route buses with stops on Route 209 or Neversink Drive.
8. Pedestrians/Bicycles – from field observations indicating few if any pedestrians and bicycles.

The Levels of Service and corresponding control delays for the study locations are summarized in the following Table for the AM and PM peak hours. The detailed LOS summary reports are contained in **Appendix B**.

**TABLE 2: LEVEL OF SERVICE SUMMARY – EXISTING CONDITIONS**

| INTERSECTION | MVMT. | EXISTING | | | |
|---|---|---|---|---|---|
| | | AM | | PM | |
| | | DELAY (SEC) | LOS | DELAY (SEC) | LOS |
| Route 209 at Neversink Dr (stop sign control) | WB | 9.6 | A | 10.2 | B |
| | SB Left | 7.6 | A | 7.7 | A |
| Route 209 at Hanger Dr (stop sign control) | EB | 10.0 | A | 11.0 | B |
| | NB Left | 7.5 | A | 7.7 | A |
| Neversink Dr at Site Dr (stop sign control) | EB Left | n/a | | n/a | |
| | SB | n/a | | n/a | |

Upon review of the summary table for existing LOS at the key intersection, it is noted that control delays are low – all below 11 seconds with all Levels of Service A and B. These results are indicative of very good operating levels with little or no delay at the intersections.

## Future Traffic Conditions

### Background Traffic

As noted above, the project is scheduled to be completed and occupied by the year 2022 – about two years from now. We would expect that general background traffic growth would occur to account for some minor increases in traffic volumes. This study included a background growth factor, increasing all existing traffic volumes by 4.0 percent.

The resulting traffic volumes – projected future traffic without the proposed project – are shown in Figures 3 and 4 in **Appendix A** for the AM and PM peak hours, respectively. This study refers to this future condition as the "No Build" scenario.

### The Proposed Project

The site is proposed to have 20 single family homes.

The industry standard trip generation reference (*The Trip Generation Manual – 10th Edition*) from the Institute of Transportation Engineers (ITE) was referenced to estimate traffic for the proposed project. The ITE Land Use #210: Single-Family Detached Housing was the data source used in this analysis.

The results of the ITE data and the application of that information as used in this study, with the trip volumes used in the subsequent analyses at two key study intersection, are summarized as follows:

**TABLE 3: TRIP GENERATION**

| Land Use 210 – Single Family Detached Housing | | Trip Generation – 20 Homes | | | |
|---|---|---|---|---|---|
| | | Rate | | Volume | |
| Day | Time | Enter | Exit | Enter | Exit |
| AM | Peak Hour of Generator | 0.20 | 0.56 | 4 | 11 |
| PM | Peak Hour of Generator | 0.64 | 0.36 | 13 | 7 |

Traffic from the proposed development was distributed to the surrounding street network generally in accordance with the existing travel patterns exhibited in the recent manual counts. The resulting trip volume distributions are shown in Figures 5 and 6 of **Appendix A** for the AM and PM peak times, respectively.

The traffic generated by the site was then added to the above-described No Build traffic scenario resulting in the Build scenario – the future traffic volumes with both other background growth traffic and traffic from the proposed development. The resulting Build traffic is shown in Figures 7 and 8 in **Appendix A** for the AM and PM peak hours, respectively.

Level of Service (LOS) analyses were run for the No Build and Build traffic scenarios, using the same methodology as used for the existing condition analysis. The results are summarized in the following table:

**TABLE 4: LEVEL OF SERVICE SUMMARY – NO BUILD TO BUILD COMPARISON**

| INTERSECTION | MVMT. | NO BUILD | | | | BUILD | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | AM | | PM | | AM | | PM | |
| | | DELAY (SEC) | LOS | DELAY (SEC) | LOS | DELAY (SEC) | LOS | DELAY (SEC) | LOS |
| Route 209 at Neversink Dr | WB | 9.7 | A | 10.3 | B | 9.8 | A | 10.4 | B |
| (stop sign control) | SB Left | 7.6 | A | 7.7 | A | 7.6 | A | 7.7 | A |
| Route 209 at Hanger Dr | EB | 10.1 | B | 11.2 | B | 10.2 | B | 11.2 | B |
| (stop sign control) | NB Left | 7.5 | A | 7.7 | A | 7.5 | A | 7.7 | A |
| Neversink Dr at Site Dr | EB Left | n/a | | n/a | | 7.4 | A | 7.4 | A |
| (stop sign control) | SB | n/a | | n/a | | 8.9 | A | 8.9 | A |

The Build scenario shows **no change in Level of Service** from the No Build condition at the key study intersections for any peak hour. In fact, the associated delay times increase by no more than one tenth of a second or not at all. Therefore, with such minimal changes in delay time, the impacts at the study intersections would not be noticeable in terms of LOS. This is an indication that traffic related impacts for the proposed development will be minimal.

## Traffic Impacts During Construction

Impacts due to construction traffic will be temporary in nature, lasting for the duration of the on-going building program at the site. Traffic would consist of occasional heavy trucks delivering building materials to the project site and daily traffic from vehicles belonging to construction workers. Typically, large pieces of construction equipment such as bulldozers and excavators are brought to the site (if needed) at the beginning of the project and kept on-site until no longer needed. Construction may also require the temporary, short-term closure of traffic lanes and flagging to direct traffic during the closure. This will be coordinated with the local Police Department if required. Construction workers' vehicles would be parked on-site.

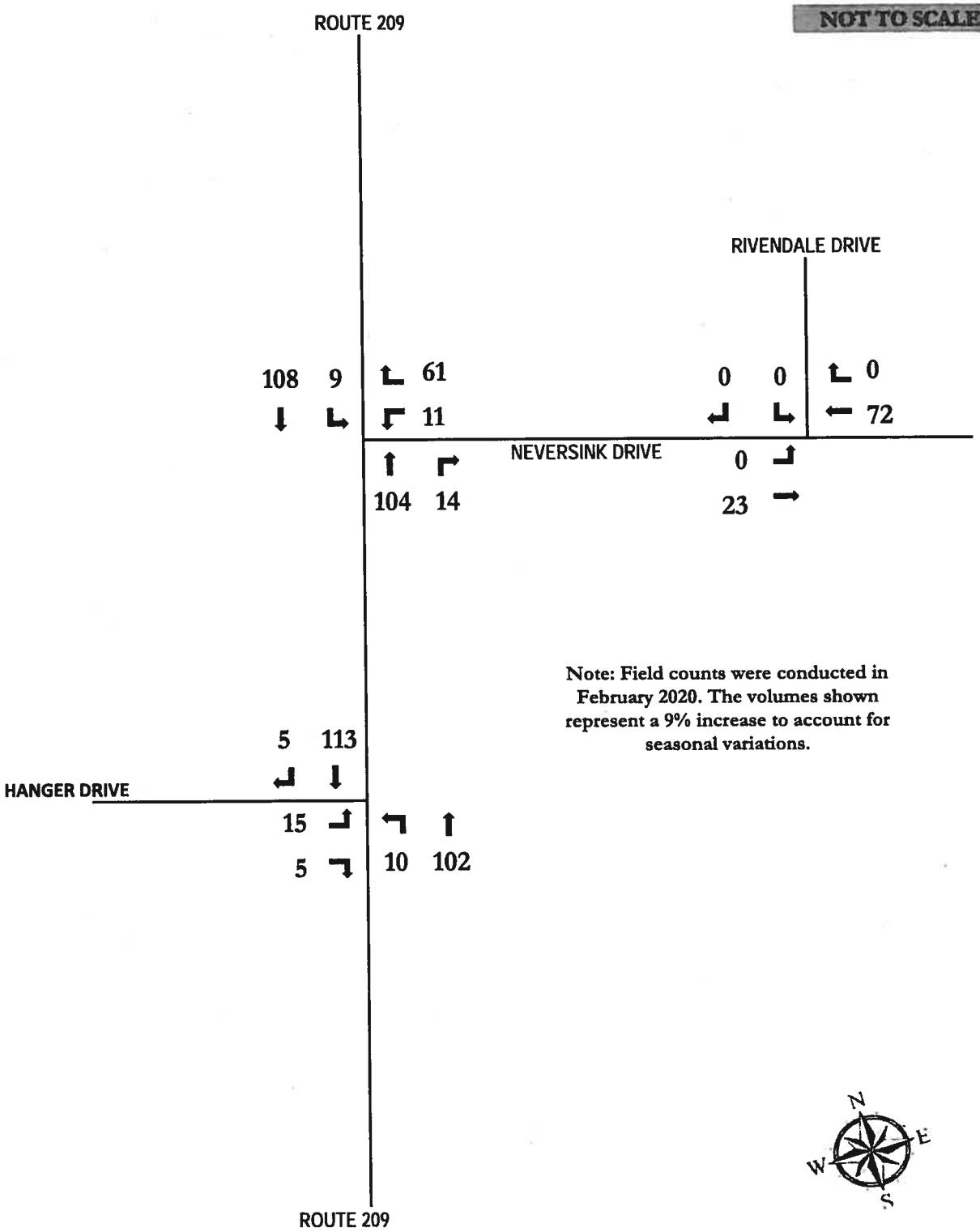
## Conclusions

This Traffic Impact Study and, in particular, the Level of Service analysis summarized above indicate that, while there will be very minor increases in traffic volumes on the adjacent streets and control delay times at key intersections, traffic flows and Levels of Service would not be negatively impacted. It is concluded that the proposed project will not adversely impact traffic conditions on the adjacent streets and at intersections in the study area. Therefore, no mitigation is required.

**APPENDIX A**

**TRAFFIC VOLUME DIAGRAMS**

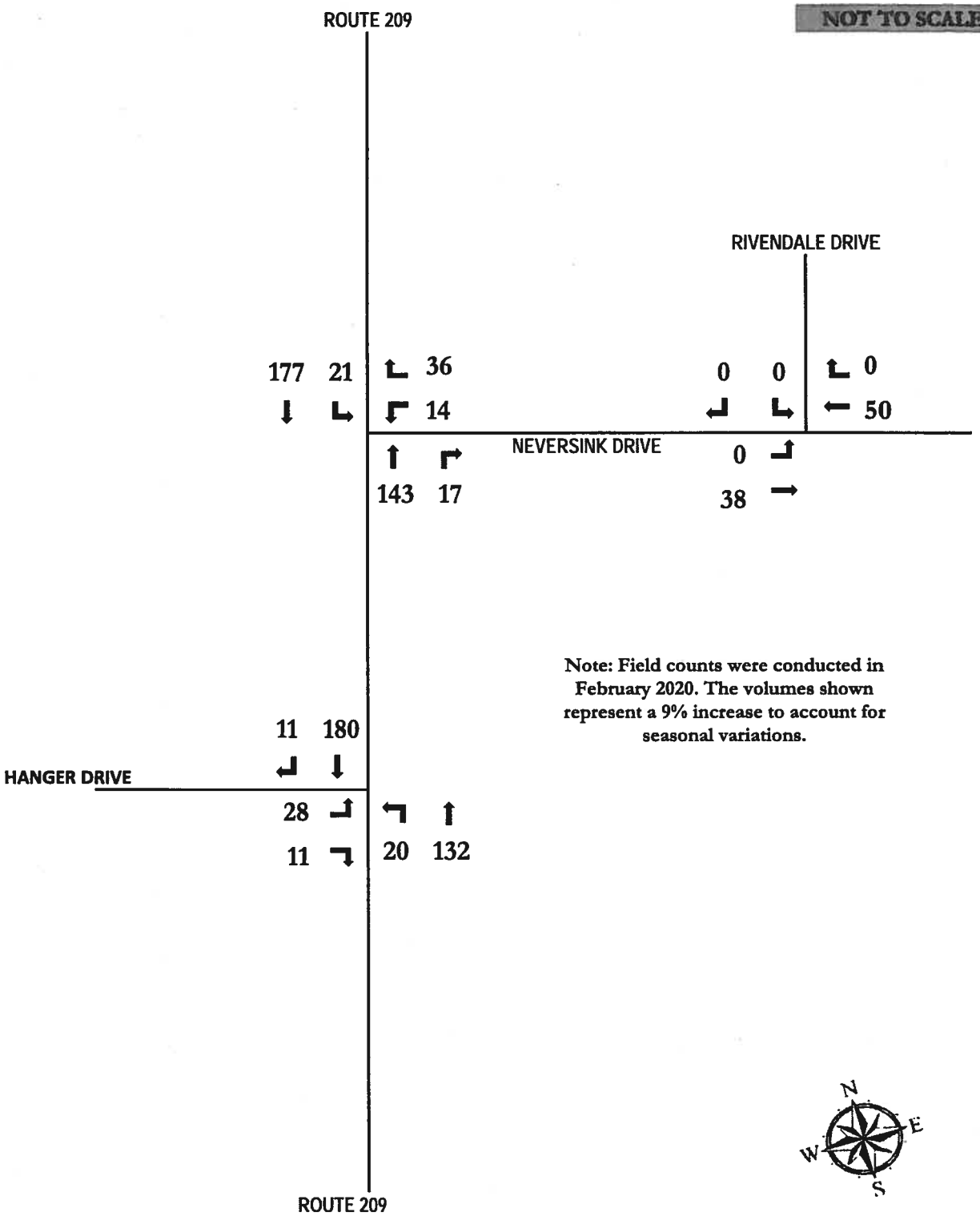
| FIGURE | TITLE | |
|---|---|---|
| 1 | AM Peak Hour | 2020 Existing Volumes |
| 2 | PM Peak Hour | 2020 Existing Volumes |
| 3 | AM Peak Hour | 2022 No Build Volumes |
| 4 | PM Peak Hour | 2022 No Build Volumes |
| 5 | AM Peak Hour | Site Generated Traffic Volumes |
| 6 | PM Peak Hour | Site Generated Traffic Volumes |
| 7 | AM Peak Hour | 2022 Build Volumes |
| 8 | PM Peak Hour | 2022 Build Volumes |




Note: Field counts were conducted in February 2020. The volumes shown represent a 9% increase to account for seasonal variations.

| |
|---|
| RIVENDALE SUBDIVISION |
| DEERPARK, NEW YORK |
| *Prepared by: STEPHAN A. MAFFIA, P.E.* |

| |
|---|
| *FIGURE 1* |
| AM PEAK HOUR |
| 2020 EXISTING |
| TRAFFIC VOLUME CONDITIONS |




**RIVENDALE SUBDIVISION**

**DEERPARK, NEW YORK**

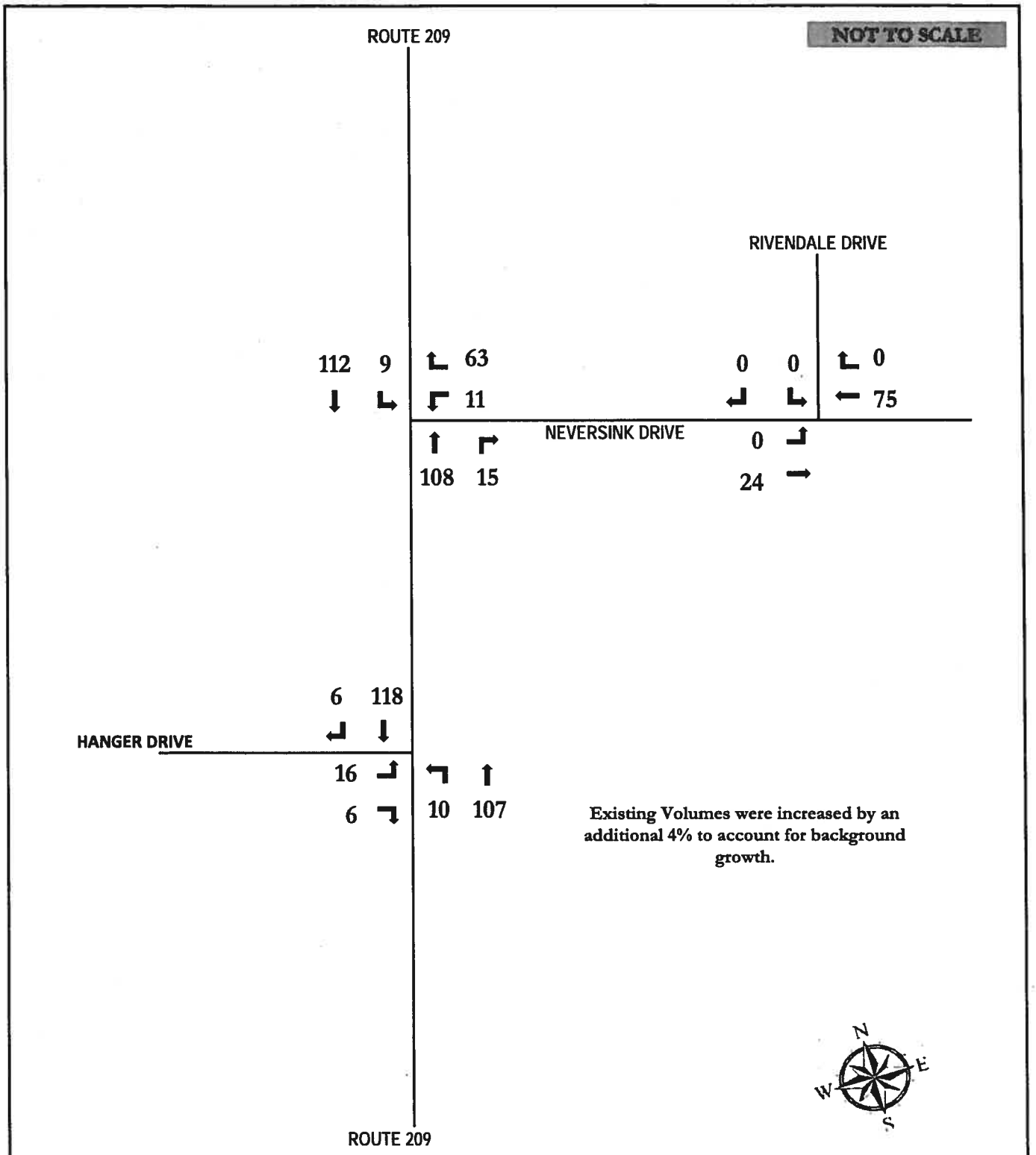
*Prepared by: STEPHAN A. MAFFIA, P.E.*

*FIGURE 2*

**PM PEAK HOUR**

**2020 EXISTING**

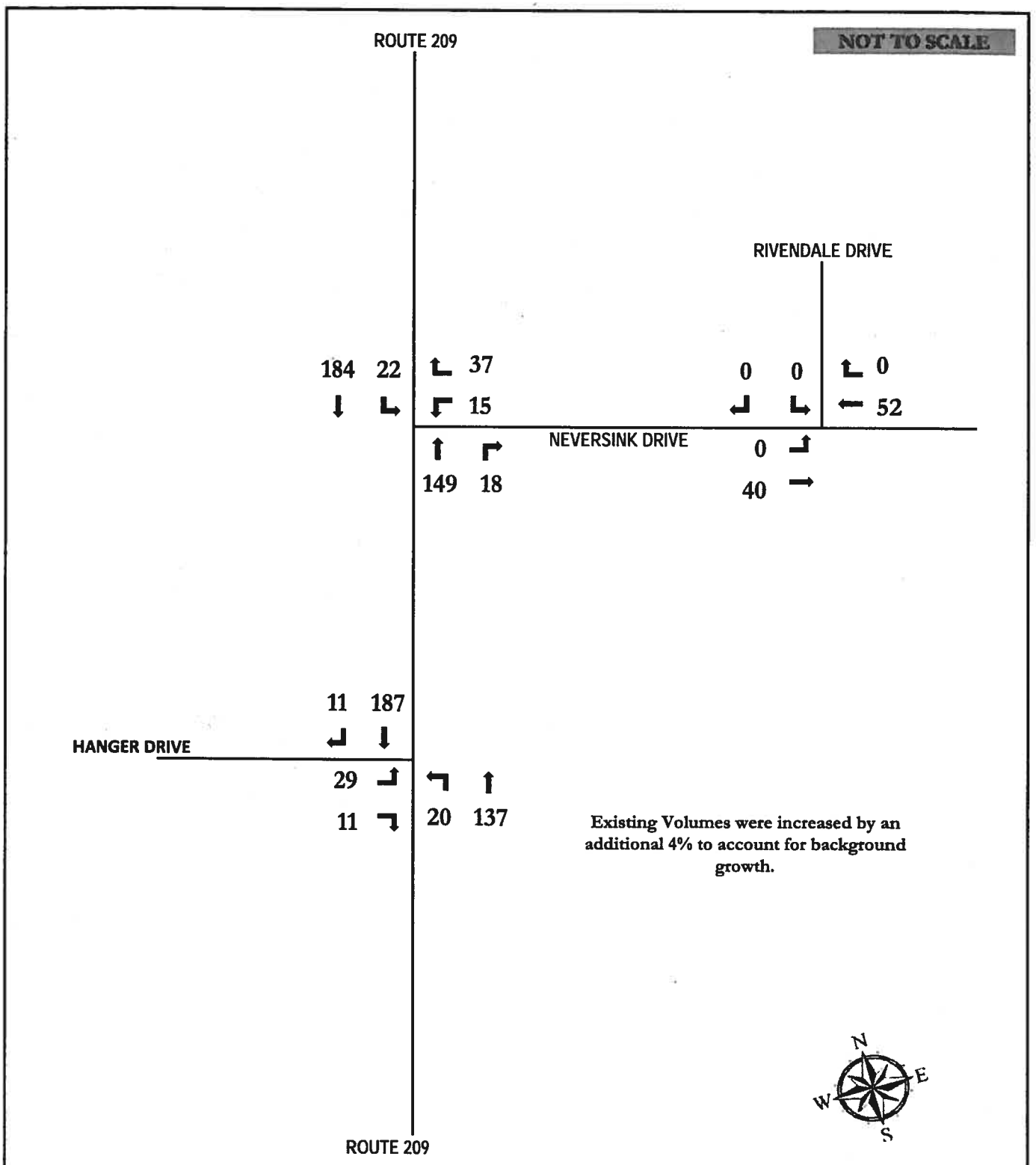
**TRAFFIC VOLUME CONDITIONS**




Existing Volumes were increased by an additional 4% to account for background growth.

| |
|---|
| RIVENDALE SUBDIVISION |
| DEERPARK, NEW YORK |
| *Prepared by: STEPHAN A. MAFFIA, P.E.* |

| |
|---|
| *FIGURE 3* |
| AM PEAK HOUR |
| 2022 NO BUILD |
| TRAFFIC VOLUME CONDITIONS |




**RIVENDALE SUBDIVISION**

**DEERPARK, NEW YORK**

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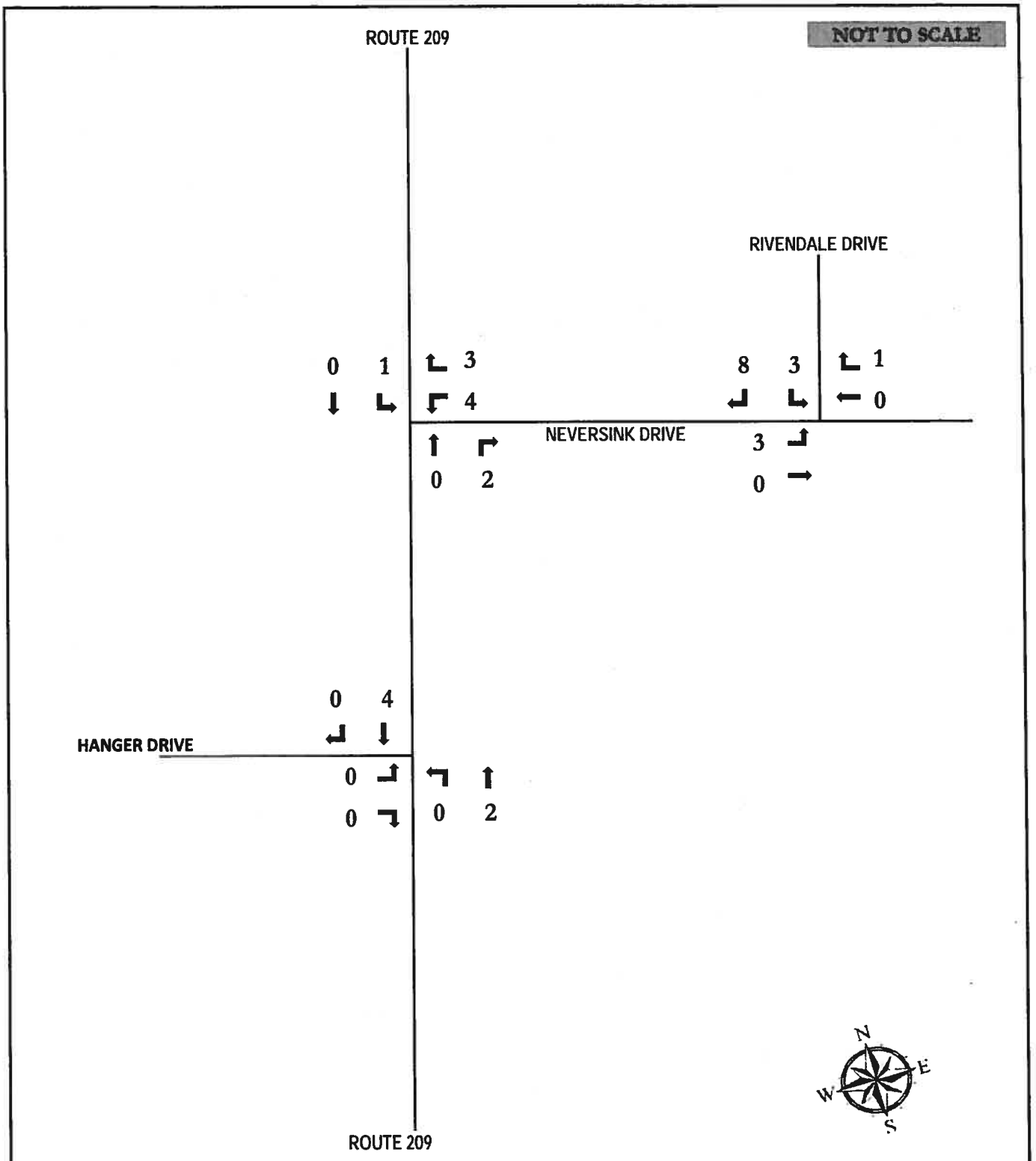
*FIGURE 4*

**PM PEAK HOUR**

**2022 NO BUILD**

**TRAFFIC VOLUME CONDITIONS**




**RIVENDALE SUBDIVISION**

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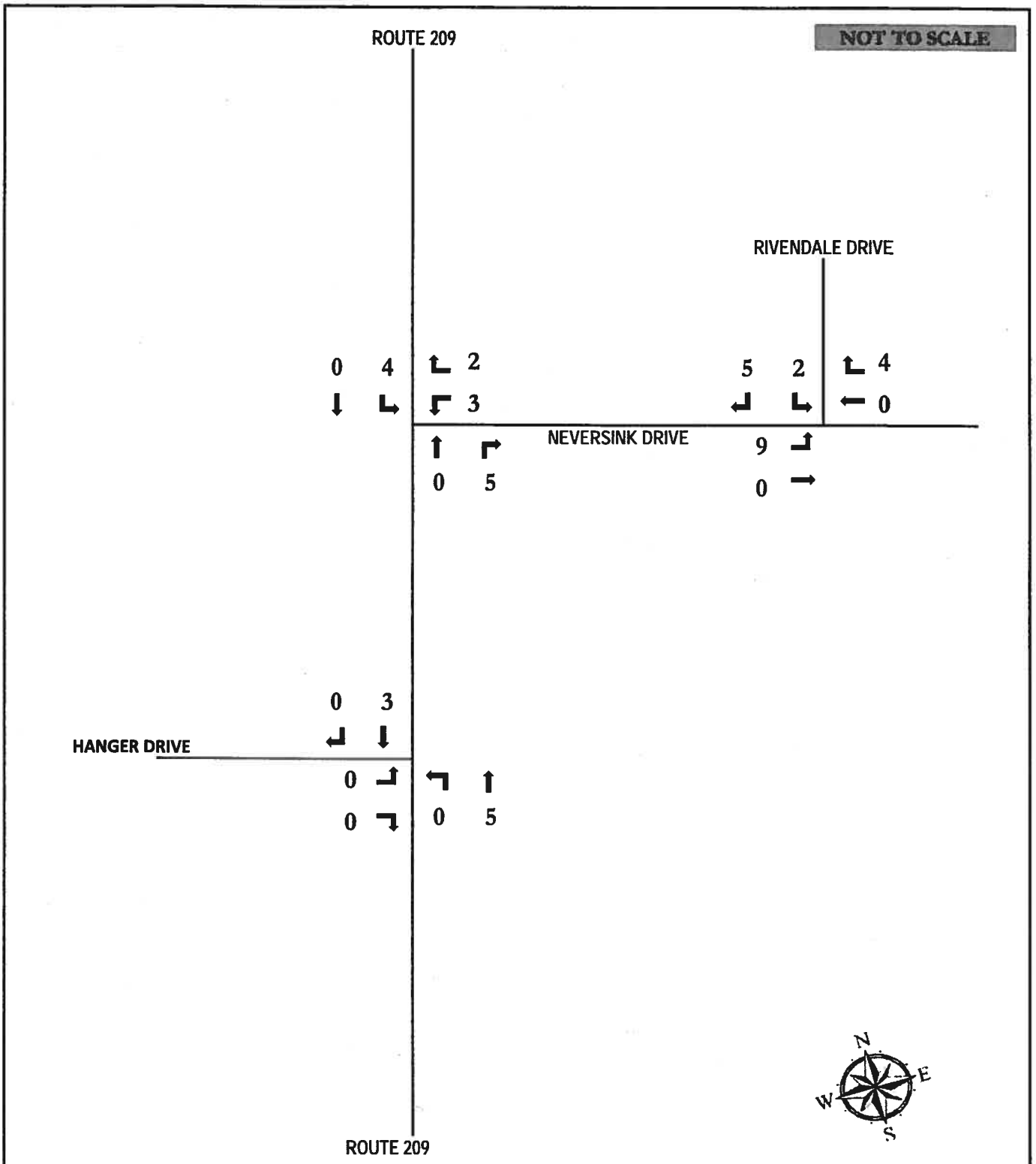
*FIGURE 5*

**AM PEAK HOUR**

**SITE GENERATED**

**TRAFFIC VOLUME CONDITIONS**




**RIVENDALE SUBDIVISION**

**DEERPARK, NEW YORK**

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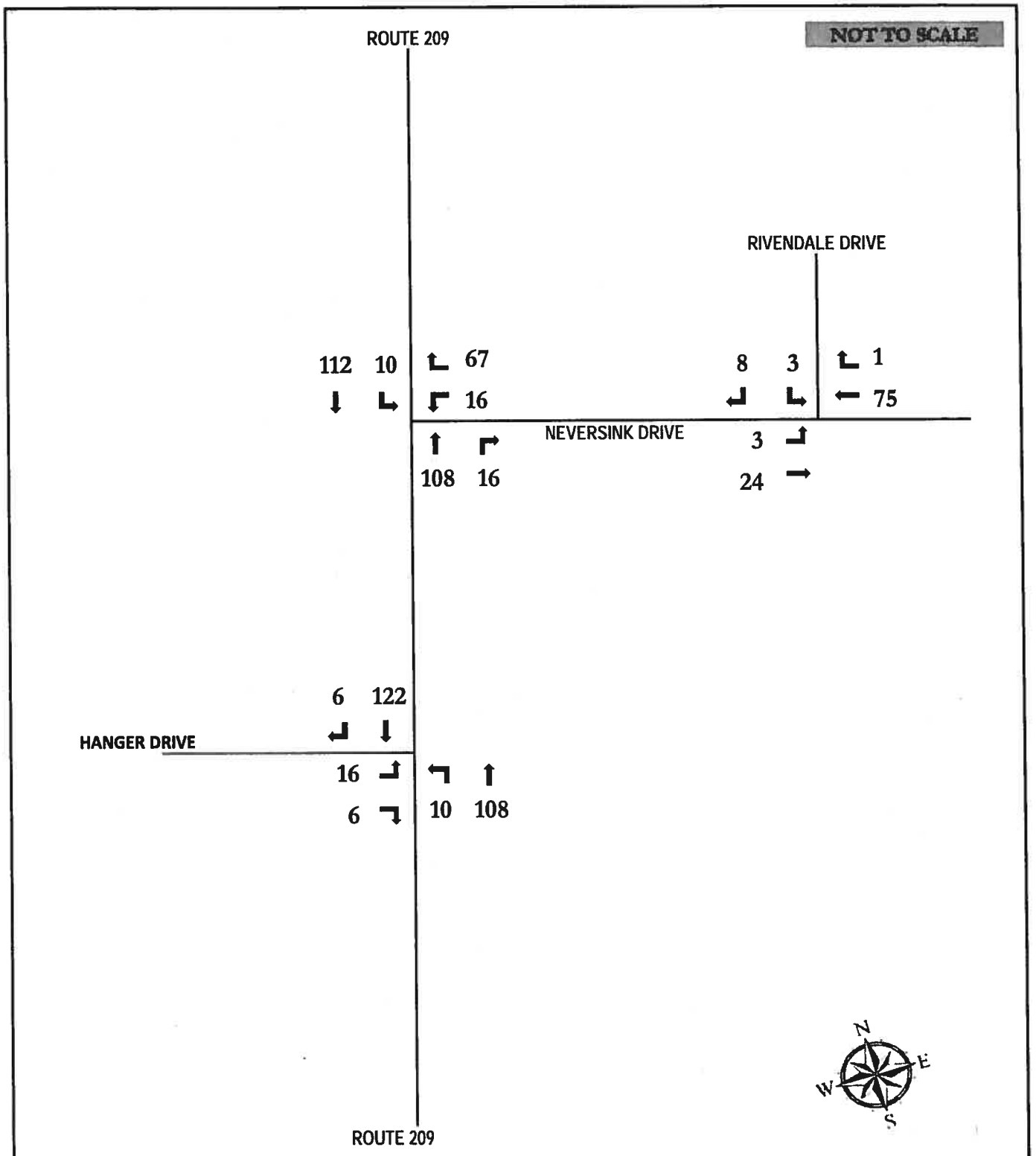
*FIGURE 6*

**PM PEAK HOUR**

**SITE GENERATED**

**TRAFFIC VOLUME CONDITIONS**

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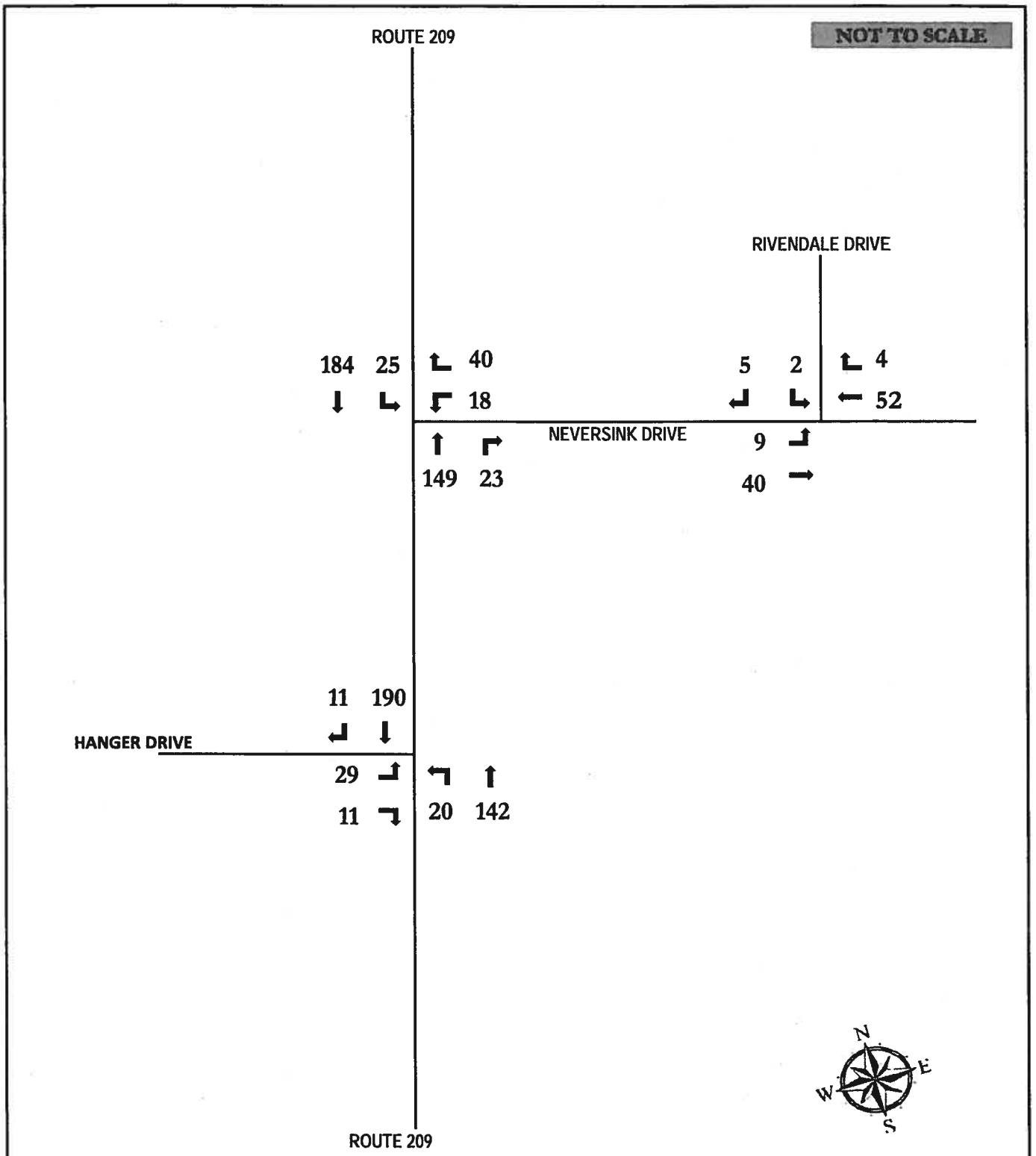
|---|
| RIVENDALE SUBDIVISION |
| DEERPARK, NEW YORK |
| *Prepared by: STEPHAN A. MAFFIA, P.E.* |

| |
|---|
| *FIGURE 7* |
| AM PEAK HOUR |
| 2022 BUILD |
| TRAFFIC VOLUME CONDITIONS |




| |
|---|
| RIVENDALE SUBDIVISION |
| DEERPARK, NEW YORK |
| *Prepared by: STEPHAN A. MAFFIA, P.E.* |

| |
|---|
| *FIGURE 8* |
| PM PEAK HOUR |
| 2022 BUILD |
| TRAFFIC VOLUME CONDITIONS |

# APPENDIX B

## DETAILED LEVEL OF SERVICE SUMMARIES

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 11 | 61 | 104 | 14 | 9 | 108 |
| Future Vol, veh/h | 11 | 61 | 104 | 14 | 9 | 108 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 5 | 5 | 7 | 5 | 5 | 7 |
| Mvmt Flow | 13 | 74 | 127 | 17 | 11 | 132 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 290 | 136 | 0 | 0 | 144 | 0 |
| Stage 1 | 136 | - | - | - | - | - |
| Stage 2 | 154 | - | - | - | - | - |
| Critical Hdwy | 6.45 | 6.25 | - | - | 4.15 | - |
| Critical Hdwy Stg 1 | 5.45 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.45 | - | - | - | - | - |
| Follow-up Hdwy | 3.545 | 3.345 | - | - | 2.245 | - |
| Pot Cap-1 Maneuver | 694 | 905 | - | - | 1420 | - |
| Stage 1 | 883 | - | - | - | - | - |
| Stage 2 | 867 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 688 | 905 | - | - | 1420 | - |
| Mov Cap-2 Maneuver | 688 | - | - | - | - | - |
| Stage 1 | 883 | - | - | - | - | - |
| Stage 2 | 860 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.6 | 0 | 0.6 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 863 | 1420 | - |
| HCM Lane V/C Ratio | - | - | 0.102 | 0.008 | - |
| HCM Control Delay (s) | - | - | 9.6 | 7.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0 | - |

| Intersection | | | | | | |
|---|---|---|---|---|---|---|
| Int Delay, s/veh | 1.1 | | | | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 15 | 5 | 10 | 102 | 113 | 5 |
| Future Vol, veh/h | 15 | 5 | 10 | 102 | 113 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 2 | 2 | 2 | 7 | 7 | 2 |
| Mvmt Flow | 18 | 6 | 12 | 124 | 138 | 6 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 289 | 141 | 144 | 0 | - | 0 |
| Stage 1 | 141 | - | - | - | - | - |
| Stage 2 | 148 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 702 | 907 | 1438 | - | - | - |
| Stage 1 | 886 | - | - | - | - | - |
| Stage 2 | 880 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 696 | 907 | 1438 | - | - | - |
| Mov Cap-2 Maneuver | 696 | - | - | - | - | - |
| Stage 1 | 878 | - | - | - | - | - |
| Stage 2 | 880 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 10 | 0.7 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1438 | - | 739 | - | - |
| HCM Lane V/C Ratio | 0.008 | - | 0.033 | - | - |
| HCM Control Delay (s) | 7.5 | 0 | 10 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.6 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 14 | 36 | 143 | 17 | 21 | 177 |
| Future Vol, veh/h | 14 | 36 | 143 | 17 | 21 | 177 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 5 | 5 | 7 | 5 | 5 | 7 |
| Mvmt Flow | 16 | 41 | 163 | 19 | 24 | 201 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 422 | 173 | 0 | 0 | 182 | 0 |
| Stage 1 | 173 | - | - | - | - | - |
| Stage 2 | 249 | - | - | - | - | - |
| Critical Hdwy | 6.45 | 6.25 | - | - | 4.15 | - |
| Critical Hdwy Stg 1 | 5.45 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.45 | - | - | - | - | - |
| Follow-up Hdwy | 3.545 | 3.345 | - | - | 2.245 | - |
| Pot Cap-1 Maneuver | 583 | 863 | - | - | 1375 | - |
| Stage 1 | 850 | - | - | - | - | - |
| Stage 2 | 785 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 571 | 863 | - | - | 1375 | - |
| Mov Cap-2 Maneuver | 571 | - | - | - | - | - |
| Stage 1 | 850 | - | - | - | - | - |
| Stage 2 | 769 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 10.2 | 0 | 0.8 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 755 | 1375 | - |
| HCM Lane V/C Ratio | - | - | 0.075 | 0.017 | - |
| HCM Control Delay (s) | - | - | 10.2 | 7.7 | 0 |
| HCM Lane LOS | - | - | B | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.5 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 28 | 11 | 20 | 132 | 180 | 11 |
| Future Vol, veh/h | 28 | 11 | 20 | 132 | 180 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 2 | 7 | 7 | 2 |
| Mvmt Flow | 32 | 13 | 23 | 150 | 205 | 13 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 408 | 212 | 218 | 0 | - | 0 |
| Stage 1 | 212 | - | - | - | - | - |
| Stage 2 | 196 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 599 | 828 | 1352 | - | - | - |
| Stage 1 | 823 | - | - | - | - | - |
| Stage 2 | 837 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 588 | 828 | 1352 | - | - | - |
| Mov Cap-2 Maneuver | 588 | - | - | - | - | - |
| Stage 1 | 807 | - | - | - | - | - |
| Stage 2 | 837 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 11 | 1 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1352 | - | 640 | - | - |
| HCM Lane V/C Ratio | 0.017 | - | 0.069 | - | - |
| HCM Control Delay (s) | 7.7 | 0 | 11 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.2 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 11 | 63 | 108 | 15 | 9 | 112 |
| Future Vol, veh/h | 11 | 63 | 108 | 15 | 9 | 112 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 5 | 5 | 7 | 5 | 5 | 7 |
| Mvmt Flow | 13 | 77 | 132 | 18 | 11 | 137 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 300 | 141 | 0 | 0 | 150 | 0 |
| Stage 1 | 141 | - | - | - | - | - |
| Stage 2 | 159 | - | - | - | - | - |
| Critical Hdwy | 6.45 | 6.25 | - | - | 4.15 | - |
| Critical Hdwy Stg 1 | 5.45 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.45 | - | - | - | - | - |
| Follow-up Hdwy | 3.545 | 3.345 | - | - | 2.245 | - |
| Pot Cap-1 Maneuver | 685 | 899 | - | - | 1413 | - |
| Stage 1 | 879 | - | - | - | - | - |
| Stage 2 | 862 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 680 | 899 | - | - | 1413 | - |
| Mov Cap-2 Maneuver | 680 | - | - | - | - | - |
| Stage 1 | 879 | - | - | - | - | - |
| Stage 2 | 855 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.7 | 0 | 0.6 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 858 | 1413 | - |
| HCM Lane V/C Ratio | - | - | 0.105 | 0.008 | - |
| HCM Control Delay (s) | - | - | 9.7 | 7.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.4 | 0 | - |

| Intersection | | | | | | |
|---|---|---|---|---|---|---|
| Int Delay, s/veh | 1.1 | | | | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 16 | 6 | 10 | 107 | 118 | 6 |
| Future Vol, veh/h | 16 | 6 | 10 | 107 | 118 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 2 | 2 | 2 | 7 | 7 | 2 |
| Mvmt Flow | 20 | 7 | 12 | 130 | 144 | 7 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 302 | 148 | 151 | 0 | - | 0 |
| Stage 1 | 148 | - | - | - | - | - |
| Stage 2 | 154 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 690 | 899 | 1430 | - | - | - |
| Stage 1 | 880 | - | - | - | - | - |
| Stage 2 | 874 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 684 | 899 | 1430 | - | - | - |
| Mov Cap-2 Maneuver | 684 | - | - | - | - | - |
| Stage 1 | 872 | - | - | - | - | - |
| Stage 2 | 874 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 10.1 | 0.6 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1430 | - | 732 | - | - |
| HCM Lane V/C Ratio | 0.009 | - | 0.037 | - | - |
| HCM Control Delay (s) | 7.5 | 0 | 10.1 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.6 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 15 | 37 | 149 | 18 | 22 | 184 |
| Future Vol, veh/h | 15 | 37 | 149 | 18 | 22 | 184 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 5 | 5 | 7 | 5 | 5 | 7 |
| Mvmt Flow | 17 | 42 | 169 | 20 | 25 | 209 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 438 | 179 | 0 | 0 | 189 | 0 |
| Stage 1 | 179 | - | - | - | - | - |
| Stage 2 | 259 | - | - | - | - | - |
| Critical Hdwy | 6.45 | 6.25 | - | - | 4.15 | - |
| Critical Hdwy Stg 1 | 5.45 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.45 | - | - | - | - | - |
| Follow-up Hdwy | 3.545 | 3.345 | - | - | 2.245 | - |
| Pot Cap-1 Maneuver | 570 | 856 | - | - | 1367 | - |
| Stage 1 | 845 | - | - | - | - | - |
| Stage 2 | 777 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 558 | 856 | - | - | 1367 | - |
| Mov Cap-2 Maneuver | 558 | - | - | - | - | - |
| Stage 1 | 845 | - | - | - | - | - |
| Stage 2 | 761 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 10.3 | 0 | 0.8 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 742 | 1367 | - |
| HCM Lane V/C Ratio | - | - | 0.08 | 0.018 | - |
| HCM Control Delay (s) | - | - | 10.3 | 7.7 | 0 |
| HCM Lane LOS | - | - | B | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |

| Intersection | | | | | | |
|---|---|---|---|---|---|---|
| Int Delay, s/veh | 1.5 | | | | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 29 | 11 | 20 | 137 | 187 | 11 |
| Future Vol, veh/h | 29 | 11 | 20 | 137 | 187 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 2 | 7 | 7 | 2 |
| Mvmt Flow | 33 | 13 | 23 | 156 | 213 | 13 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 422 | 220 | 226 | 0 | - | 0 |
| Stage 1 | 220 | - | - | - | - | - |
| Stage 2 | 202 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 588 | 820 | 1342 | - | - | - |
| Stage 1 | 817 | - | - | - | - | - |
| Stage 2 | 832 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 577 | 820 | 1342 | - | - | - |
| Mov Cap-2 Maneuver | 577 | - | - | - | - | - |
| Stage 1 | 801 | - | - | - | - | - |
| Stage 2 | 832 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 11.2 | 1 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1342 | - | 628 | - | - |
| HCM Lane V/C Ratio | 0.017 | - | 0.072 | - | - |
| HCM Control Delay (s) | 7.7 | 0 | 11.2 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.2 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.7 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 16 | 67 | 108 | 16 | 10 | 112 |
| Future Vol, veh/h | 16 | 67 | 108 | 16 | 10 | 112 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 5 | 5 | 7 | 5 | 5 | 7 |
| Mvmt Flow | 20 | 82 | 132 | 20 | 12 | 137 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 303 | 142 | 0 | 0 | 152 | 0 |
| Stage 1 | 142 | - | - | - | - | - |
| Stage 2 | 161 | - | - | - | - | - |
| Critical Hdwy | 6.45 | 6.25 | - | - | 4.15 | - |
| Critical Hdwy Stg 1 | 5.45 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.45 | - | - | - | - | - |
| Follow-up Hdwy | 3.545 | 3.345 | - | - | 2.245 | - |
| Pot Cap-1 Maneuver | 682 | 898 | - | - | 1411 | - |
| Stage 1 | 878 | - | - | - | - | - |
| Stage 2 | 861 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 676 | 898 | - | - | 1411 | - |
| Mov Cap-2 Maneuver | 676 | - | - | - | - | - |
| Stage 1 | 878 | - | - | - | - | - |
| Stage 2 | 853 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.8 | 0 | 0.6 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 845 | 1411 | - |
| HCM Lane V/C Ratio | - | - | 0.12 | 0.009 | - |
| HCM Control Delay (s) | - | - | 9.8 | 7.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.4 | 0 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.1 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 16 | 6 | 10 | 108 | 122 | 6 |
| Future Vol, veh/h | 16 | 6 | 10 | 108 | 122 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 2 | 2 | 2 | 7 | 7 | 2 |
| Mvmt Flow | 20 | 7 | 12 | 132 | 149 | 7 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 309 | 153 | 156 | 0 | - | 0 |
| Stage 1 | 153 | - | - | - | - | - |
| Stage 2 | 156 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 683 | 893 | 1424 | - | - | - |
| Stage 1 | 875 | - | - | - | - | - |
| Stage 2 | 872 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 677 | 893 | 1424 | - | - | - |
| Mov Cap-2 Maneuver | 677 | - | - | - | - | - |
| Stage 1 | 867 | - | - | - | - | - |
| Stage 2 | 872 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 10.2 | 0.6 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1424 | - | 725 | - | - |
| HCM Lane V/C Ratio | 0.009 | - | 0.037 | - | - |
| HCM Control Delay (s) | 7.5 | 0 | 10.2 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 24 | 75 | 1 | 3 | 8 |
| Future Vol, veh/h | 3 | 24 | 75 | 1 | 3 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 2 | 5 | 5 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 29 | 91 | 1 | 4 | 10 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 92 | 0 | - | 0 | 129 | 92 |
| Stage 1 | - | - | - | - | 92 | - |
| Stage 2 | - | - | - | - | 37 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1503 | - | - | - | 865 | 965 |
| Stage 1 | - | - | - | - | 932 | - |
| Stage 2 | - | - | - | - | 985 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1503 | - | - | - | 862 | 965 |
| Mov Cap-2 Maneuver | - | - | - | - | 862 | - |
| Stage 1 | - | - | - | - | 929 | - |
| Stage 2 | - | - | - | - | 985 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.8 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1503 | - | - | - | 935 |
| HCM Lane V/C Ratio | 0.002 | - | - | - | 0.014 |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 8.9 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 18 | 40 | 149 | 23 | 25 | 184 |
| Future Vol, veh/h | 18 | 40 | 149 | 23 | 25 | 184 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 5 | 5 | 7 | 5 | 5 | 7 |
| Mvmt Flow | 20 | 45 | 169 | 26 | 28 | 209 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 447 | 182 | 0 | 0 | 195 | 0 |
| Stage 1 | 182 | - | - | - | - | - |
| Stage 2 | 265 | - | - | - | - | - |
| Critical Hdwy | 6.45 | 6.25 | - | - | 4.15 | - |
| Critical Hdwy Stg 1 | 5.45 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.45 | - | - | - | - | - |
| Follow-up Hdwy | 3.545 | 3.345 | - | - | 2.245 | - |
| Pot Cap-1 Maneuver | 564 | 853 | - | - | 1360 | - |
| Stage 1 | 842 | - | - | - | - | - |
| Stage 2 | 772 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 551 | 853 | - | - | 1360 | - |
| Mov Cap-2 Maneuver | 551 | - | - | - | - | - |
| Stage 1 | 842 | - | - | - | - | - |
| Stage 2 | 754 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 10.4 | 0 | 0.9 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 729 | 1360 | - |
| HCM Lane V/C Ratio | - | - | 0.09 | 0.021 | - |
| HCM Control Delay (s) | - | - | 10.4 | 7.7 | 0 |
| HCM Lane LOS | - | - | B | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.5 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 29 | 11 | 20 | 142 | 190 | 11 |
| Future Vol, veh/h | 29 | 11 | 20 | 142 | 190 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 2 | 7 | 7 | 2 |
| Mvmt Flow | 33 | 13 | 23 | 161 | 216 | 13 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 430 | 223 | 229 | 0 | - | 0 |
| Stage 1 | 223 | - | - | - | - | - |
| Stage 2 | 207 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 582 | 817 | 1339 | - | - | - |
| Stage 1 | 814 | - | - | - | - | - |
| Stage 2 | 828 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 571 | 817 | 1339 | - | - | - |
| Mov Cap-2 Maneuver | 571 | - | - | - | - | - |
| Stage 1 | 799 | - | - | - | - | - |
| Stage 2 | 828 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 11.2 | 1 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1339 | - | 623 | - | - |
| HCM Lane V/C Ratio | 0.017 | - | 0.073 | - | - |
| HCM Control Delay (s) | 7.7 | 0 | 11.2 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.2 | - | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.3 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 40 | 52 | 4 | 4 | 5 |
| Future Vol, veh/h | 9 | 40 | 52 | 4 | 4 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 5 | 5 | 2 | 2 | 2 |
| Mvmt Flow | 10 | 45 | 59 | 5 | 5 | 6 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 64 | 0 | - | 0 | 127 | 62 |
| Stage 1 | - | - | - | - | 62 | - |
| Stage 2 | - | - | - | - | 65 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1538 | - | - | - | 868 | 1003 |
| Stage 1 | - | - | - | - | 961 | - |
| Stage 2 | - | - | - | - | 958 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1538 | - | - | - | 862 | 1003 |
| Mov Cap-2 Maneuver | - | - | - | - | 862 | - |
| Stage 1 | - | - | - | - | 954 | - |
| Stage 2 | - | - | - | - | 958 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 1.4 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1538 | - | - | - | 935 |
| HCM Lane V/C Ratio | 0.007 | - | - | - | 0.011 |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 8.9 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |