RAMEY KEMP & ASSOCIATES, INC.
TRANSPORTATION ENGINEERS

4928-A Windy Hill Drive
Raleigh, North Carolina 27609
Phone: 919.872.5115
Fax: 919.878.5416

April 8, 2005

Robert D. Swain
Community Properties, Inc.
1000 St. Albans Drive, Suite 400
Raleigh, North Carolina 27609

**Subject:** Traffic Assessment of Access Alternatives
Proposed Meadowview PUD

Dear Mr. Swain:

This letter summarizes a traffic assessment prepared by Ramey Kemp and Associates, Inc. (RKA) for the proposed Meadowview PUD to be located on the west side of Old NC 87 approximately four miles west of US 15-501. The study considers the development will include a total of 715 single-family homes with access provided via two driveways on Old NC 87 and one driveway on NC 87. The proposed Meadowview development is expected to be completed immediately south of the approved Chapel Ridge development and the two developments are expected to share access driveways on NC 87 and Old NC 87. The purpose of this study is to determine impacts to the site driveway intersections and to recommend improvements to mitigate these impacts. The study intersections were analyzed under combined (2021) weekday a.m. and p.m. peak hour traffic conditions.

**Existing Traffic Conditions**

Traffic counts were conducted by RKA on Old NC 87 in late 2002 and on NC 87 at the approximate location of the proposed site driveway in early 2003. Traffic counts were completed in 15-minute intervals during the a.m. peak period (7:00 a.m. – 9:00 a.m.) and the p.m. peak period (4:00 p.m. – 6:00 p.m.). Due to the low traffic volumes at the study intersections, the traffic counts were projected to the current year 2005 using an annual growth rate of 3%.

**Background (2021) Traffic Conditions**

Existing peak hour traffic volumes were projected to the buildout year of 2021 at a rate of 3 percent to determine background (2021) traffic conditions without site traffic. Site trips from the approved Chapel Ridge development were included under background (2021) traffic conditions. Refer to Appendix A for the trip generation, distribution, and

assignment for the Chapel Ridge development. In addition, site trips from two approved adjacent developments, the Page and Womble properties, were included under

background (2021) traffic conditions. Refer to Figure 1 for the total peak hour site trips for the Page Property and Womble Property developments.

## Trip Generation

Trips generated by the proposed development were calculated utilizing methodology contained within the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 7th Edition. At full build out of the development, it is estimated that the proposed development will generate approximately 6,352 total site trips (3,176 enter and 3,176 exit) during an average 24-hour weekday period. Of this total, approximately 509 total site trips (127 enter and 382 exit) will occur during the weekday a.m. peak hour. Approximately 630 total site trips (397 enter and 233 exit) will occur during the weekday p.m. peak hour. Refer to Table 1 for a detailed breakdown of the entering and exiting site traffic.

**TABLE 1**
**TRIP GENERATION TABLE**

| ITE Land Use (Code) | Density | 2-way Volume (vpd) | AM Peak Hour (vph) | | PM Peak Hour (vph) | |
|---|---|---|---|---|---|---|
| | | | Enter | Exit | Enter | Exit |
| Single Family Detached Housing (210) | 715 units | 6,352 | 127 | 382 | 397 | 233 |
| **TOTAL NEW TRIPS** | | **6,352** | **127** | **382** | **397** | **233** |

## Trip Distribution

Site trip distribution percentages were determined based on existing traffic patterns and engineering judgment. Refer to Figure 2 for the trip distribution percentages and Figure 3 for total peak hour site trips.

## Combined (2021) Traffic Conditions

Total peak hour site trips were added to background (2021) traffic volumes to determine combined (2021) traffic conditions. Refer to Figure 4 for combined (2021) a.m. and p.m. peak hour traffic volumes. Combined (2021) a.m. and p.m. peak hour traffic volumes at

the unsignalized study intersections were analyzed using Synchro 5.0, which is based on methodologies and procedures in the 2000 Highway Capacity Manual. Capacity analysis results are presented for combined a.m. and p.m. peak hour traffic conditions in Table 2.

Analysis indicates that the minor street approaches of the two site driveways on Old NC 87 will operate at LOS B or better during the a.m. and p.m. peak hours under combined (2021) conditions. The minor street approach of Site Driveway #2 will operate at LOS C during the a.m. peak hour and LOS E during the p.m. peak hour due to a significant left turning volume from Site Driveway #2.

**TABLE 2**

**COMBINED (2021) PEAK HOUR CAPACITY ANALYSIS RESULTS**

| INTERSECTION | APPROACH | LANE CONFIGURATIONS | WEEKDAY PEAK HOUR LEVEL OF SERVICE | |
|---|---|---|---|---|
| | | | AM PEAK | PM PEAK |
| Old NC 87 (NB/SB)<br>And<br>Site Driveway #1 (EB)<br>(Unsignalized) | NB<br>SB<br>EB | **1 LT**-TH<br>1 TH-**RT**<br>**1 LT-RT** | A[1]<br><br>A[2] | A[1]<br><br>A[2] |
| NC 87 (NB/SB)<br>And<br>Site Driveway #2 (WB)<br>(Unsignalized) | NB<br>SB<br>WB | 1 TH, **1 RT**<br>**1 LT,** 1 TH<br>**1 LT, 1 RT** | A[1]<br>C[2] | A[1]<br>E[2] |
| Old NC 87 (NB/SB)<br>And<br>Site Driveway #3 (EB)<br>(Unsignalized) | NB<br>SB<br>EB | **1 LT,** 1 TH<br>1 TH-RT<br>**1 LT-RT** | A[1]<br><br>B[2] | A[1]<br><br>B[2] |

1. Level of service for major street left turn movement.
2. Level of service for minor street approach.

**Conclusions and Recommendations**

Full build out of the proposed development is expected to include 715 single-family homes with access provided via two driveways on Old NC 87 and one driveway on NC 87. The proposed Meadowview development is expected to be completed immediately south of the approved Chapel Ridge development and the two developments are expected

to share access driveways on NC 87 and Old NC 87. Build out of the proposed development is expected to occur slowly, at a rate of approximately 48 homes per year, such that traffic growth due to the development is expected to occur gradually over 16 years. Analysis was completed for combined (2021) traffic conditions to ensure sufficient improvements are made to the adjacent roadways to mitigate impacts from the development in the future year 2021. Therefore, improvements made to the adjacent roadways by the proposed Meadowview development will be more than adequate for the years leading up to full build out of the development.

Analysis of combined (2021) conditions indicates that all approaches and movements at the two site driveway intersections on Old NC 87 will operate at acceptable levels of service during the a.m. and p.m. peak hours. Analysis indicates that the minor street approach of Site Driveway #2 at NC 87 will operate at LOS C during the a.m. peak hour and LOS E during the p.m. peak hour. This poor level of operation is due to a significant left turn volume from Site Driveway #2 at an unsignalized intersection. If left turn delays become too excessive at this intersection, left turning vehicles may exit the development via Site Driveway #3. These vehicles would make a right turn onto Old NC 87 with much less delay.

Based on analysis, geometric improvements are recommended at the study intersections. At the intersection of Site Driveway #1 and Old NC 87, the site driveway should be constructed with one ingress lane and one egress lane. At the intersection of Site Driveway #2 and NC 87, the site driveway should be constructed with one ingress lane and two egress lanes (one left turn lane and one right turn lane). A minimum storage of 250 feet should be provided for the westbound left turn lane on Site Driveway #2. Based on NCDOT traffic volume criteria for the installation of turn lanes, a northbound right turn lane and southbound left turn lane are required on NC 87 at Site Driveway #2. The northbound right turn lane should be constructed with a full-width storage length of 100 feet and a 220-foot bay taper. The southbound left turn lane should be constructed with a minimum full-width storage length of 150 feet and a 220-foot bay taper. Assuming widening on the east side of NC 87, a minimum of 660 feet of transitional taper will be needed for the construction of the southbound left turn lane. Site Driveway #3 on Old NC 87 should be constructed with one ingress lane and one egress lane. Based on NCDOT traffic volume criteria for the installation of turn lanes, a northbound left turn lane is required on Old NC 87. The northbound left turn lane should be constructed with a minimum full-width storage length of 225 feet and a 200-foot bay taper. Assuming widening on the west side of NC 87, a minimum of 660 feet of transitional taper will be needed for the construction of the northbound left turn lane. Refer to Figure 5 for the recommended improvements at study intersections.

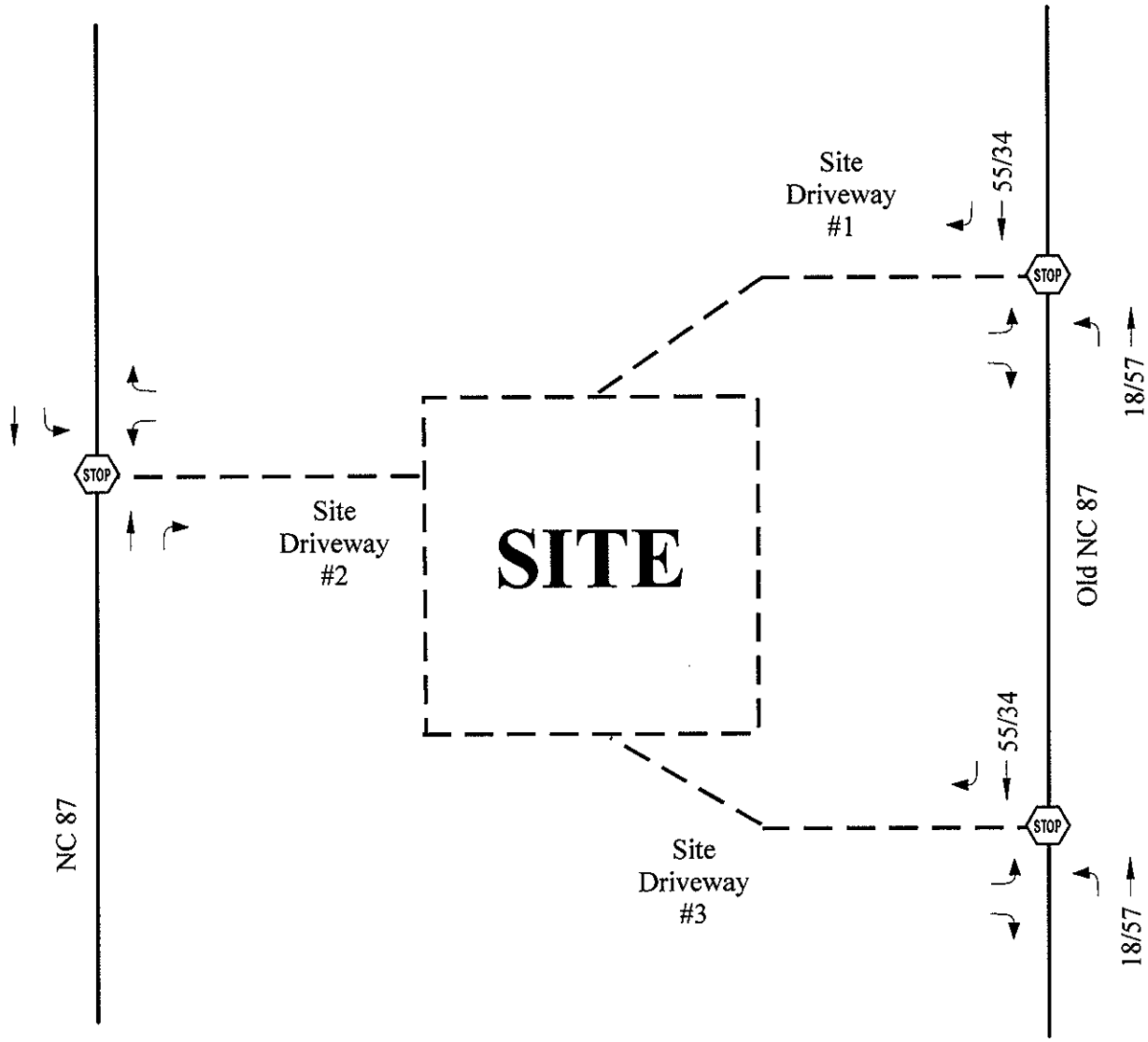
If you should have any questions, or comments, please free to contact me at (919) 872-5115.

Sincerely,
***Ramey Kemp and Associates, Inc.***

*Rynal G. Stephenson*

Rynal G. Stephenson, PE

cc: Mr. Mark Ashness, PE, ASLA, CE Group, Inc.

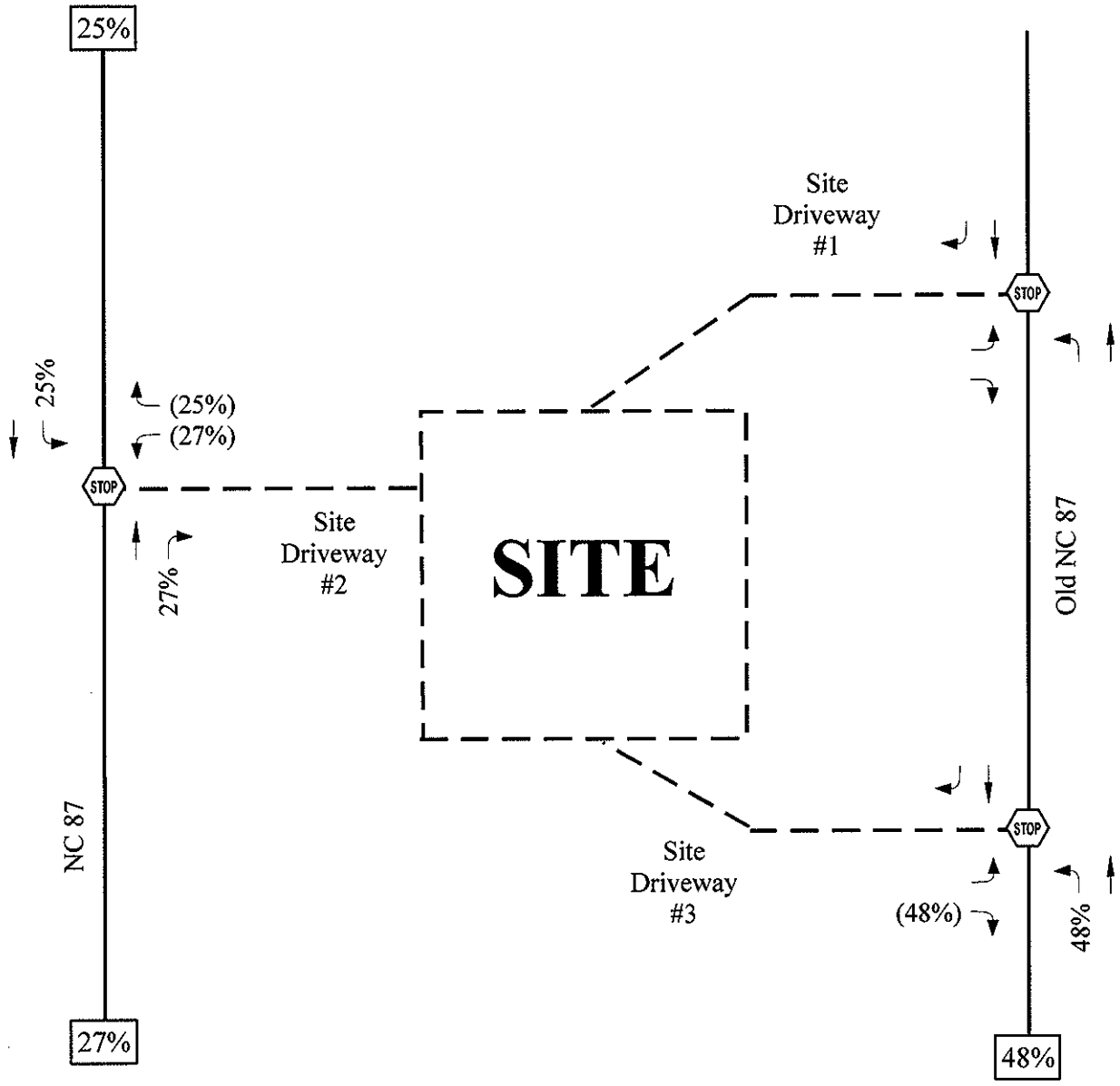



**LEGEND**

X/Y → AM/PM Peak Hour Trips

N

| MEADOWVIEW DEVELOPMENT<br>Chatham County, North Carolina | | |
|---|---|---|
| **TOTAL ADJACENT DEVELOPMENT PEAK HOUR SITE TRIPS** | | |
| | Scale: Not to Scale | Figure 1 |



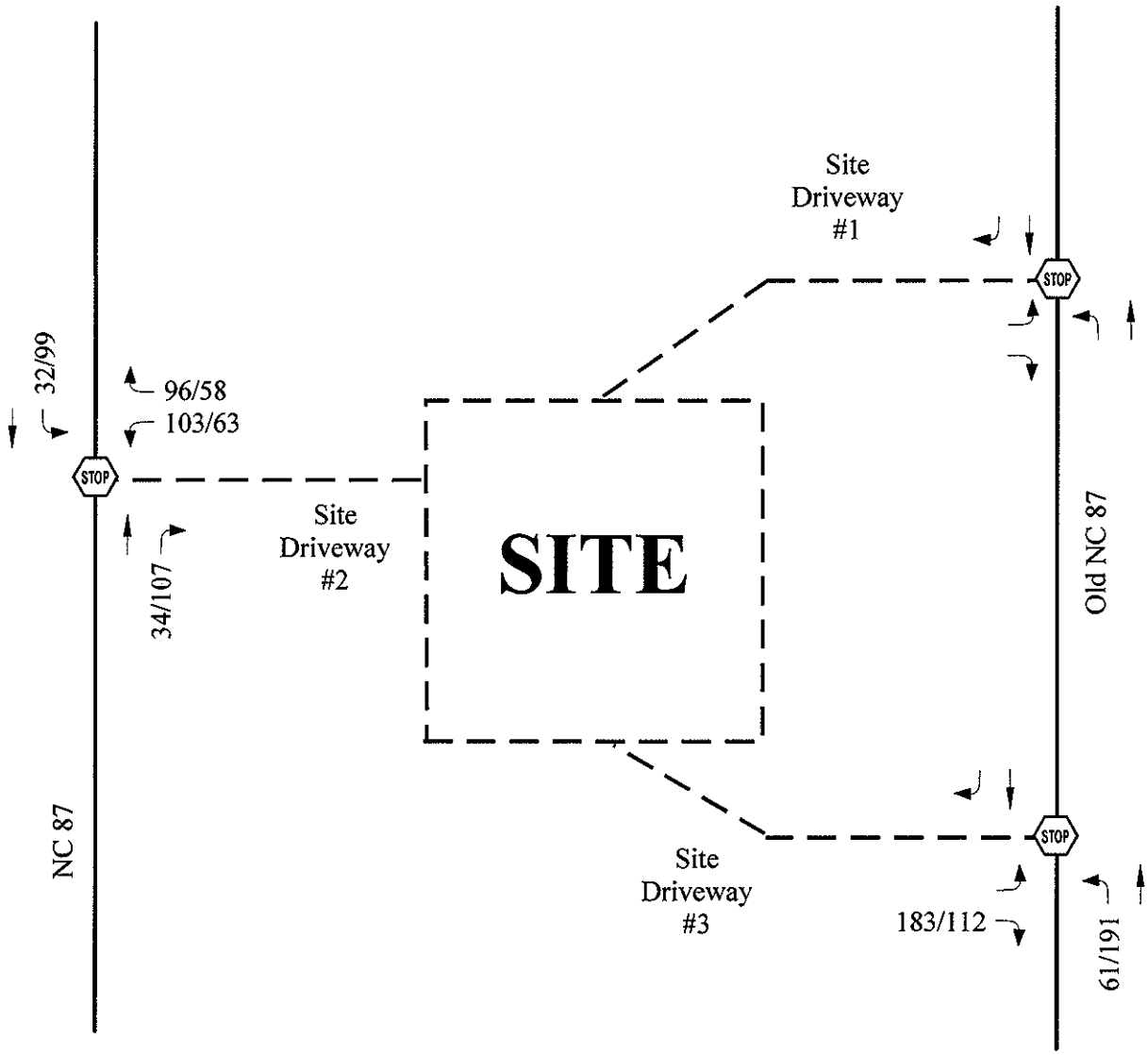

## LEGEND

X% → Percent of Entering Site Trips

(Y%) → Percent of Exiting Site Trips

N

| MEADOWVIEW DEVELOPMENT<br>Chatham County, North Carolina | | |
|---|---|---|
| **SITE TRIP DISTRIBUTION PERCENTAGES** | | |
| | Scale: Not to Scale | Figure 2 |

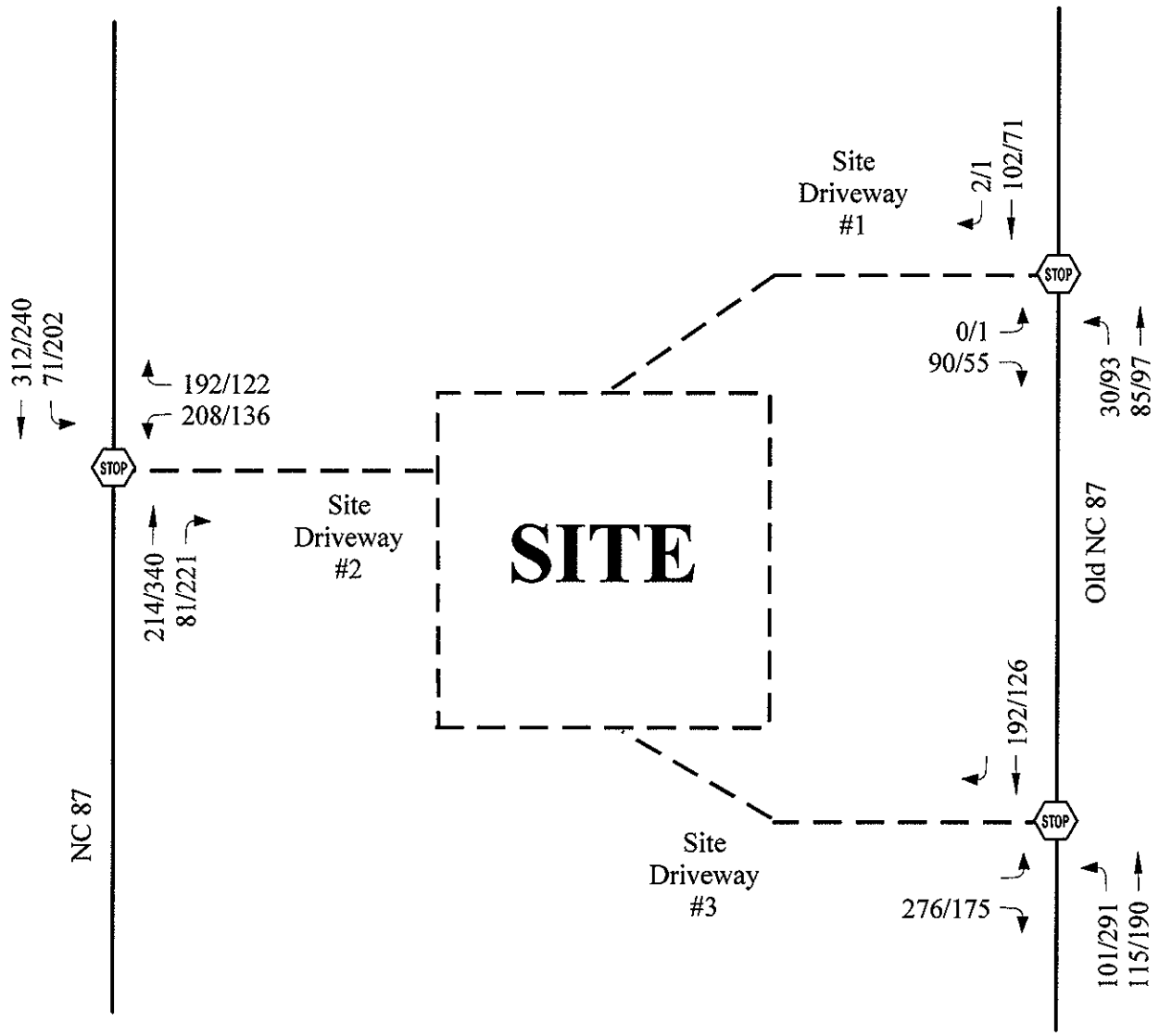



**LEGEND**

X/Y → AM/PM Peak Hour Site Trips

N

| MEADOWVIEW DEVELOPMENT<br>Chatham County, North Carolina | | |
|---|---|---|
| **TOTAL PEAK HOUR SITE TRIPS** | | |
| | Scale: Not to Scale | Figure 3 |

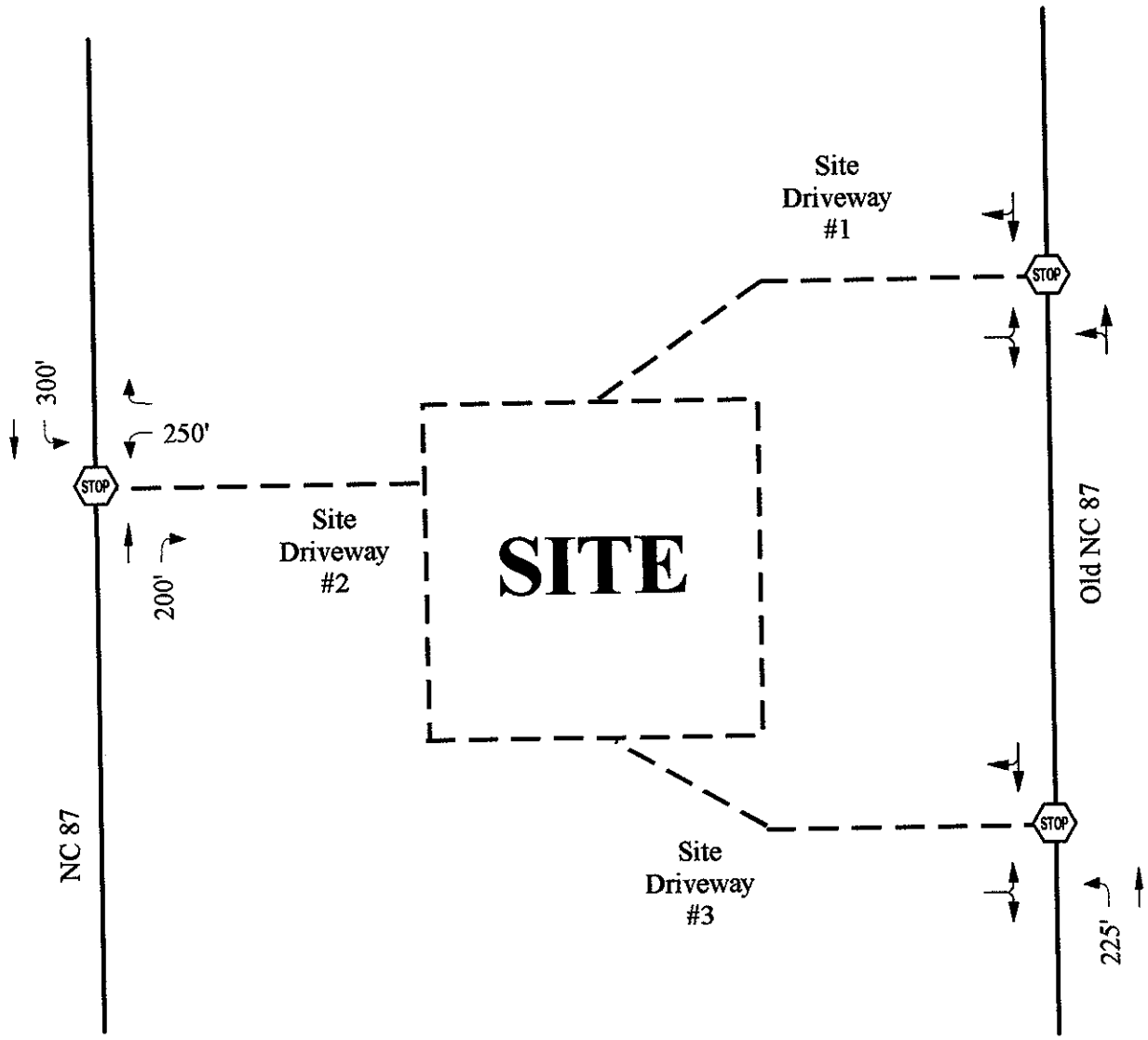



**LEGEND**

X/Y → AM/PM Peak Hour Traffic

N

| MEADOWVIEW DEVELOPMENT<br>Chatham County, North Carolina | | |
|---|---|---|
| **COMBINED (2021) PEAK HOUR TRAFFIC** | | |
| | Scale: Not to Scale | Figure 4 |




**LEGEND**

Existing Lane Configuration

Improvement by Developer

N

MEADOWVIEW DEVELOPMENT
Chatham County, North Carolina

**RECOMMENDED LANE CONFIGURATIONS**

Scale: Not to Scale

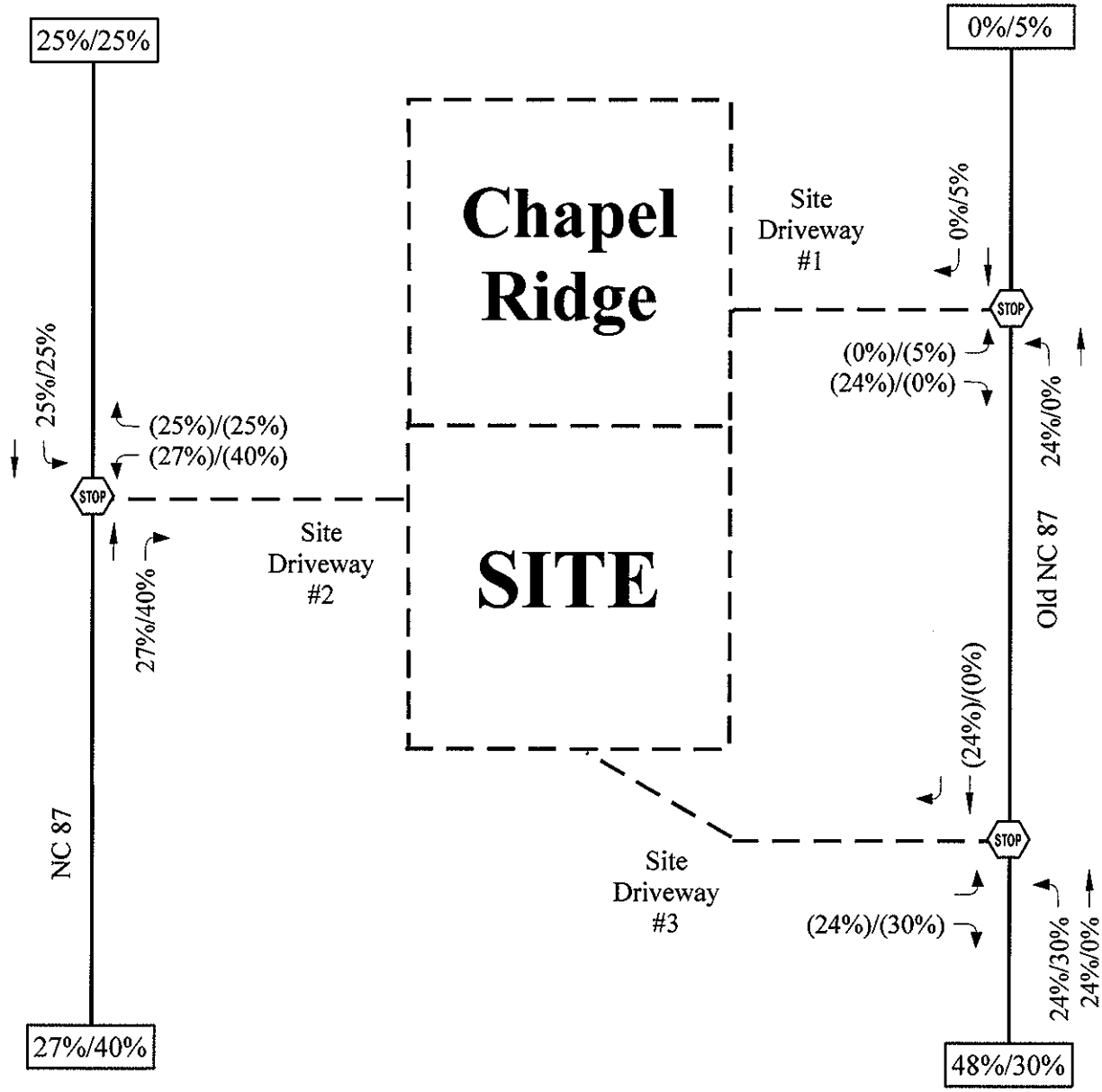
Figure 5

# APPENDIX A

## CHAPEL RIDGE

**TABLE A-1**
**CHAPEL RIDGE TRIP GENERATION TABLE**

| ITE Land Use (Code) | Density | 2-way Volume (vpd) | AM Peak Hour (vph) | | PM Peak Hour (vph) | |
|---|---|---|---|---|---|---|
| | | | Enter | Exit | Enter | Exit |
| Single Family Detached Housing (210) | 700 units | 6,230 | 125 | 375 | 389 | 229 |
| Golf Course (430) | 18 holes | 644 | 32 | 9 | 22 | 28 |
| **TOTAL NEW TRIPS** | | **6,874** | **157** | **384** | **411** | **257** |




## LEGEND

X%/Y% → Percent of Entering Residential/Golf Trips

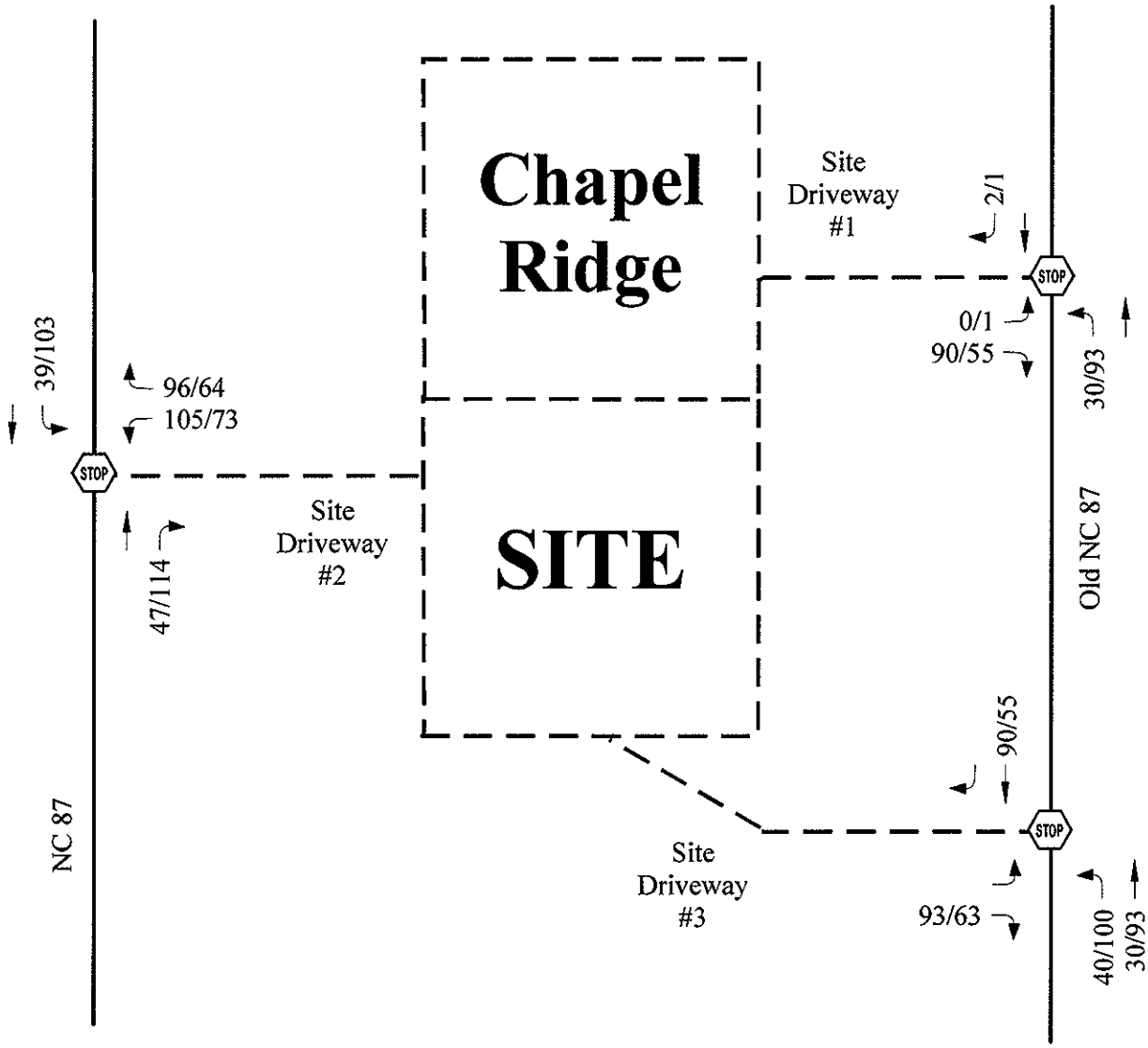
(X%)/(Y%) → Percent of Exiting Residential/Golf Trips

N

MEADOWVIEW DEVELOPMENT
Chatham County, North Carolina

**CHAPEL RIDGE SITE TRIP DISTRIBUTION PERCENTAGES**

Scale: Not to Scale | Figure A-1




**LEGEND**

X/Y → AM/PM Peak Hour Site Trips

N

| MEADOWVIEW DEVELOPMENT<br>Chatham County, North Carolina | | |
|---|---|---|
| **CHAPEL RIDGE TOTAL PEAK HOUR SITE TRIPS** | | |
| | Scale: Not to Scale | Figure A-2 |

# APPENDIX B

## CAPACITY ANALYSIS CALCULATIONS
## COMBINED (2021) PEAK HOUR CONDITIONS

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Volume (veh/h) | 0 | 90 | 30 | 85 | 102 | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (veh/h) | 0 | 100 | 33 | 94 | 113 | 2 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 276 | 114 | 116 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 276 | 114 | 116 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 89 | 98 | | | |
| cM capacity (veh/h) | 698 | 938 | 1473 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 100 | 128 | 116 |
| Volume Left | 0 | 33 | 0 |
| Volume Right | 100 | 0 | 2 |
| cSH | 938 | 1473 | 1700 |
| Volume to Capacity | 0.11 | 0.02 | 0.07 |
| Queue Length (ft) | 9 | 2 | 0 |
| Control Delay (s) | 9.3 | 2.1 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 9.3 | 2.1 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.5 | | |
| Intersection Capacity Utilization | 24.0% | ICU Level of Service | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Volume (veh/h) | 1 | 55 | 93 | 97 | 71 | 1 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (veh/h) | 1 | 61 | 103 | 108 | 79 | 1 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 394 | 79 | 80 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 394 | 79 | 80 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 94 | 93 | | | |
| cM capacity (veh/h) | 569 | 981 | 1518 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 62 | 211 | 80 |
| Volume Left | 1 | 103 | 0 |
| Volume Right | 61 | 0 | 1 |
| cSH | 968 | 1518 | 1700 |
| Volume to Capacity | 0.06 | 0.07 | 0.05 |
| Queue Length (ft) | 5 | 5 | 0 |
| Control Delay (s) | 9.0 | 4.0 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 9.0 | 4.0 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.0 | | |
| Intersection Capacity Utilization | 28.6% | ICU Level of Service | A |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 208 | 192 | 214 | 81 | 71 | 312 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (veh/h) | 231 | 213 | 238 | 90 | 79 | 347 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 742 | 238 | | | 328 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 742 | 238 | | | 328 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 36 | 73 | | | 94 | |
| cM capacity (veh/h) | 358 | 801 | | | 1232 | |

| Direction, Lane # | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 | SB 2 |
|---|---|---|---|---|---|---|
| Volume Total | 231 | 213 | 238 | 90 | 79 | 347 |
| Volume Left | 231 | 0 | 0 | 0 | 79 | 0 |
| Volume Right | 0 | 213 | 0 | 90 | 0 | 0 |
| cSH | 358 | 801 | 1700 | 1700 | 1232 | 1700 |
| Volume to Capacity | 0.64 | 0.27 | 0.14 | 0.05 | 0.06 | 0.20 |
| Queue Length (ft) | 107 | 27 | 0 | 0 | 5 | 0 |
| Control Delay (s) | 31.6 | 11.1 | 0.0 | 0.0 | 8.1 | 0.0 |
| Lane LOS | D | B | | | A | |
| Approach Delay (s) | 21.7 | | 0.0 | | 1.5 | |
| Approach LOS | C | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 8.6 | | |
| Intersection Capacity Utilization | 39.7% | ICU Level of Service | A |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 136 | 122 | 340 | 221 | 202 | 240 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (veh/h) | 151 | 136 | 378 | 246 | 224 | 267 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1093 | 378 | | | 623 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1093 | 378 | | | 623 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 17 | 80 | | | 77 | |
| cM capacity (veh/h) | 181 | 669 | | | 958 | |

| Direction, Lane # | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 | SB 2 |
|---|---|---|---|---|---|---|
| Volume Total | 151 | 136 | 378 | 246 | 224 | 267 |
| Volume Left | 151 | 0 | 0 | 0 | 224 | 0 |
| Volume Right | 0 | 136 | 0 | 246 | 0 | 0 |
| cSH | 181 | 669 | 1700 | 1700 | 958 | 1700 |
| Volume to Capacity | 0.83 | 0.20 | 0.22 | 0.14 | 0.23 | 0.16 |
| Queue Length (ft) | 147 | 19 | 0 | 0 | 23 | 0 |
| Control Delay (s) | 81.3 | 11.7 | 0.0 | 0.0 | 9.9 | 0.0 |
| Lane LOS | F | B | | | A | |
| Approach Delay (s) | 48.4 | | 0.0 | | 4.5 | |
| Approach LOS | E | | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 11.5 | | |
| Intersection Capacity Utilization | 50.7% | ICU Level of Service | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Volume (veh/h) | 0 | 276 | 101 | 115 | 192 | 0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (veh/h) | 0 | 307 | 112 | 128 | 213 | 0 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 566 | 213 | 213 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 566 | 213 | 213 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 63 | 92 | | | |
| cM capacity (veh/h) | 446 | 827 | 1357 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|
| Volume Total | 307 | 112 | 128 | 213 |
| Volume Left | 0 | 112 | 0 | 0 |
| Volume Right | 307 | 0 | 0 | 0 |
| cSH | 827 | 1357 | 1700 | 1700 |
| Volume to Capacity | 0.37 | 0.08 | 0.08 | 0.13 |
| Queue Length (ft) | 43 | 7 | 0 | 0 |
| Control Delay (s) | 11.9 | 7.9 | 0.0 | 0.0 |
| Lane LOS | B | A | | |
| Approach Delay (s) | 11.9 | 3.7 | | 0.0 |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.0 | | |
| Intersection Capacity Utilization | 46.4% | ICU Level of Service | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Volume (veh/h) | 0 | 175 | 291 | 190 | 126 | 0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (veh/h) | 0 | 194 | 323 | 211 | 140 | 0 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 998 | 140 | 140 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 998 | 140 | 140 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 79 | 78 | | | |
| cM capacity (veh/h) | 210 | 908 | 1443 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|
| Volume Total | 194 | 323 | 211 | 140 |
| Volume Left | 0 | 323 | 0 | 0 |
| Volume Right | 194 | 0 | 0 | 0 |
| cSH | 908 | 1443 | 1700 | 1700 |
| Volume to Capacity | 0.21 | 0.22 | 0.12 | 0.08 |
| Queue Length (ft) | 20 | 22 | 0 | 0 |
| Control Delay (s) | 10.0 | 8.2 | 0.0 | 0.0 |
| Lane LOS | B | A | | |
| Approach Delay (s) | 10.0 | 5.0 | | 0.0 |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.3 | | |
| Intersection Capacity Utilization | 47.3% | ICU Level of Service | A |