

NORTH CAROLINA

Turnpike Authority

Operations Statistics Report

Triangle Expressway

2015 First Quarter Report

January - March

1 S. Wilmington Street
Raleigh, NC 27601



**Last Updated:
May 15, 2015**

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INTRODUCTION

Purpose

The North Carolina Turnpike Authority (NCTA) presents the operations statistics for the Triangle Expressway during the first quarter (January – March) of 2015. The report includes data related to traffic volumes, toll system, and roadway operations and maintenance. The statistics will allow for future analysis to identify quarterly and annual trends over time, providing a quantifiable method to track performance.

Project

The Triangle Expressway

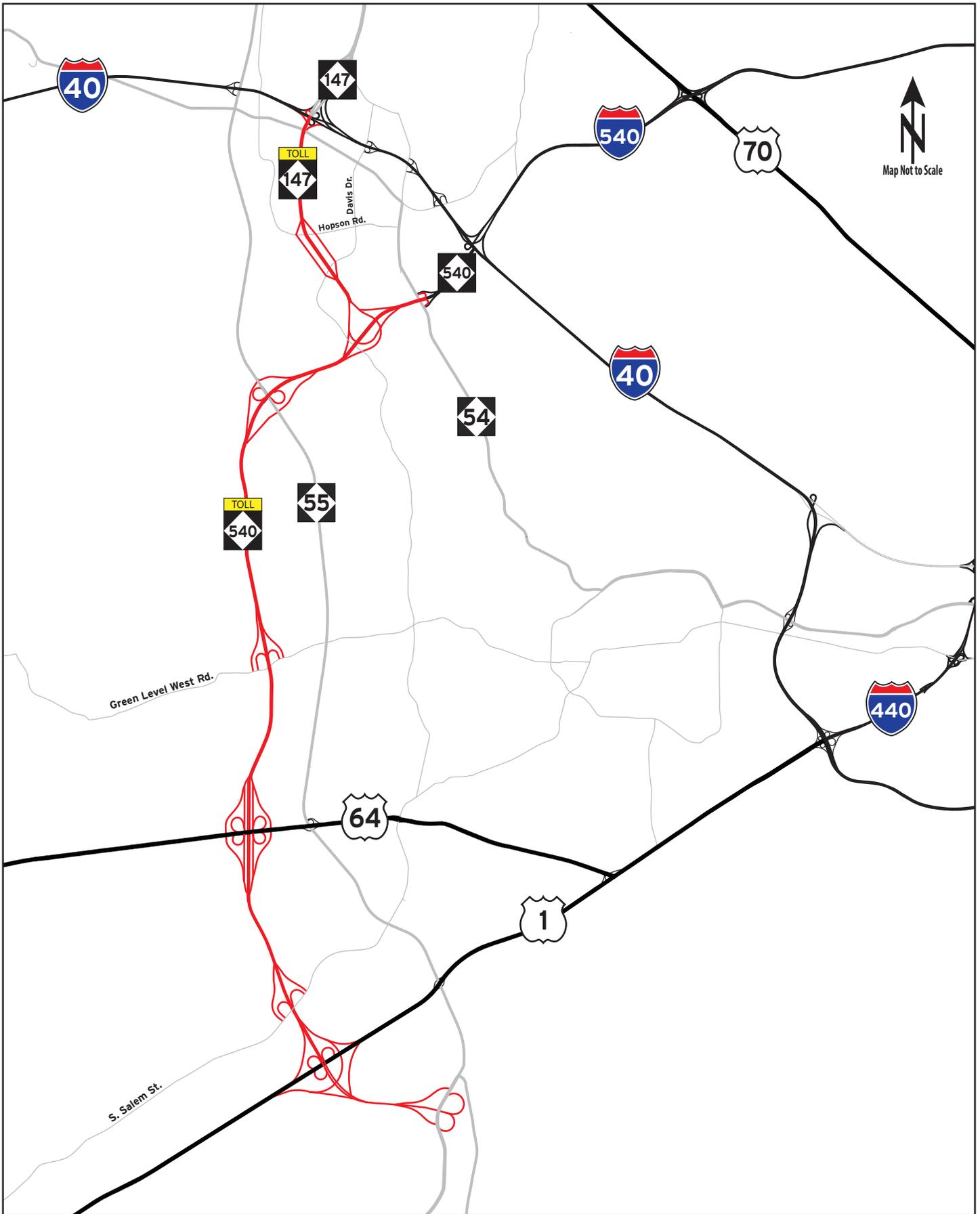
The Triangle Expressway is an 18.8-mile toll road that extends the partially complete “Outer Loop” around the greater Raleigh, North Carolina area from I-40 to NC-55 Bypass. The six-lane, controlled-access toll facility relieves congestion on NC-55, while improving access to the Research Triangle Park by reducing travel times for commuters residing to the south and east. The Triangle Expressway is currently comprised of two sections: Toll NC-147 and Toll NC-540.

Toll NC-147 includes 3.4 miles of toll road between I-40 and Toll NC-540. This section of the Triangle Expressway includes interchanges at Hopson Road, Davis Drive, and NC-540. It opened to toll-free traffic on December 8, 2011; tolling on this section began on January 3, 2012.

Toll NC-540 includes 12.6 miles of toll road between NC-55 in western Cary and the NC-55 Bypass near the Town of Holly Springs. The section from NC-55 to US-64 includes interchanges at NC-55, Green Level West Road and US-64 and opened to toll-free traffic on August 1, 2012. Tolling on this section began on August 2, 2012. The section from US-64 to NC-55 Bypass includes interchanges at S. Salem St., US-1 and NC-55 Bypass and opened to toll-free traffic on December 20, 2012. Tolling on this section began on January 2, 2013.

The Triangle Expressway utilizes an all-electronic non-stop tolling system where there are no toll plazas at which drivers stop and pay cash tolls. Instead, free-flow toll zones are employed where vehicles are detected while traveling at highway speeds. Payments are accepted through an Electronic Toll Collection (ETC) program called NC Quick Pass or a video billing program called Bill by Mail.

NCTA toll zones are located along the Triangle Expressway at mainline and interchange ramp locations. An illustration of the Triangle Expressway can be seen in *Figure 1*.



Triangle Expressway System Map

**Figure
1**

Traffic Statistics

TRAFFIC STATISTICS

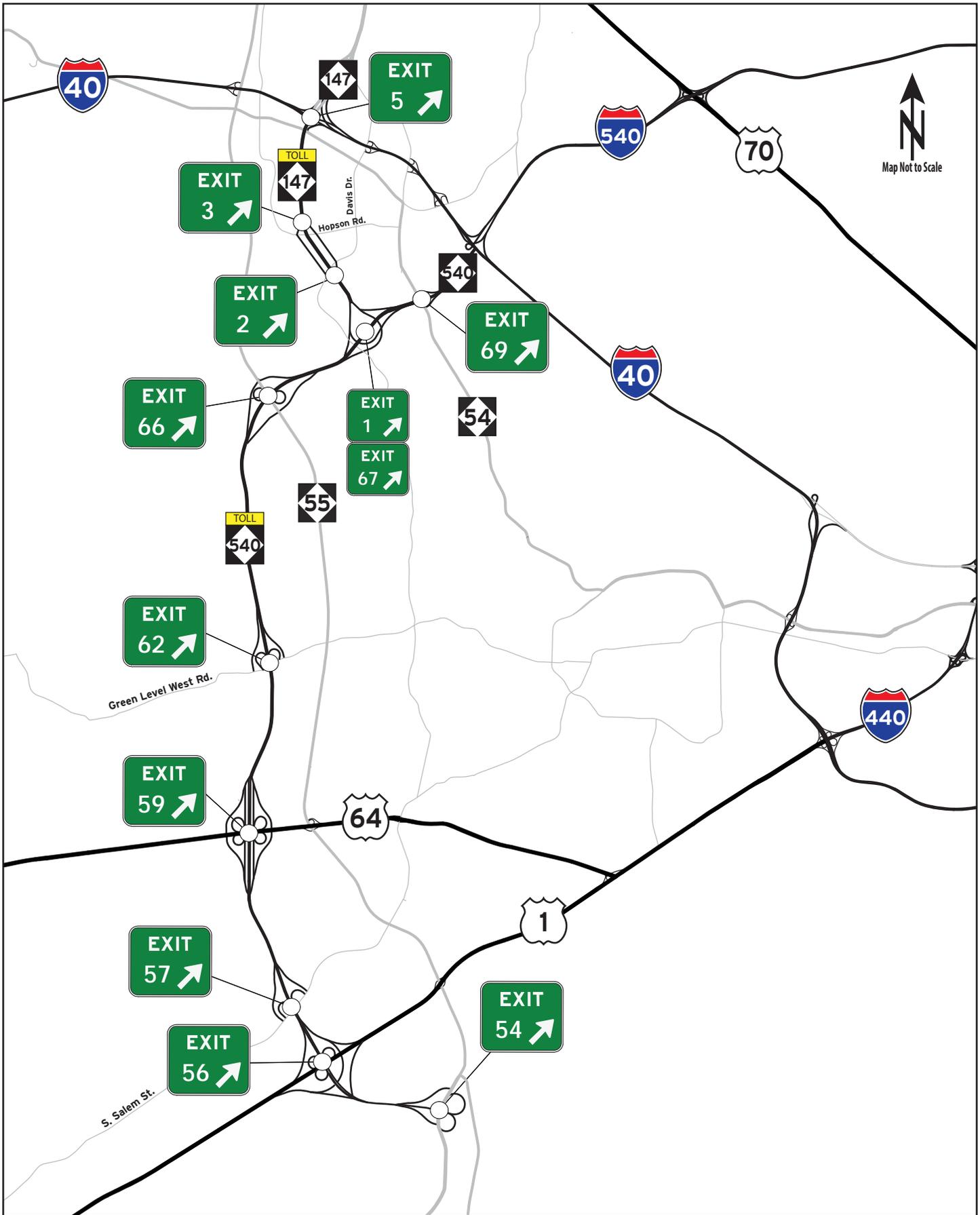
Current and historical traffic data is collected and stored through the use of roadside microwave vehicle detectors (MVD's) installed throughout the Triangle Expressway. The data provides an overview of the roadway's current utilization. The data can also be analyzed to identify trends that could more accurately predict future utilization.

It should be noted that the Triangle Expressway continues to experience a traffic pattern known as "ramp-up." During a ramp-up period, the traffic volumes on a new facility increase at a faster rate than typical growth on existing facilities. Traffic volumes increase significantly as the customers become more familiar with the facility. The ramp-up period for the Triangle Expressway is expected to continue through 2017.

Average Weekday Traffic (AWT)

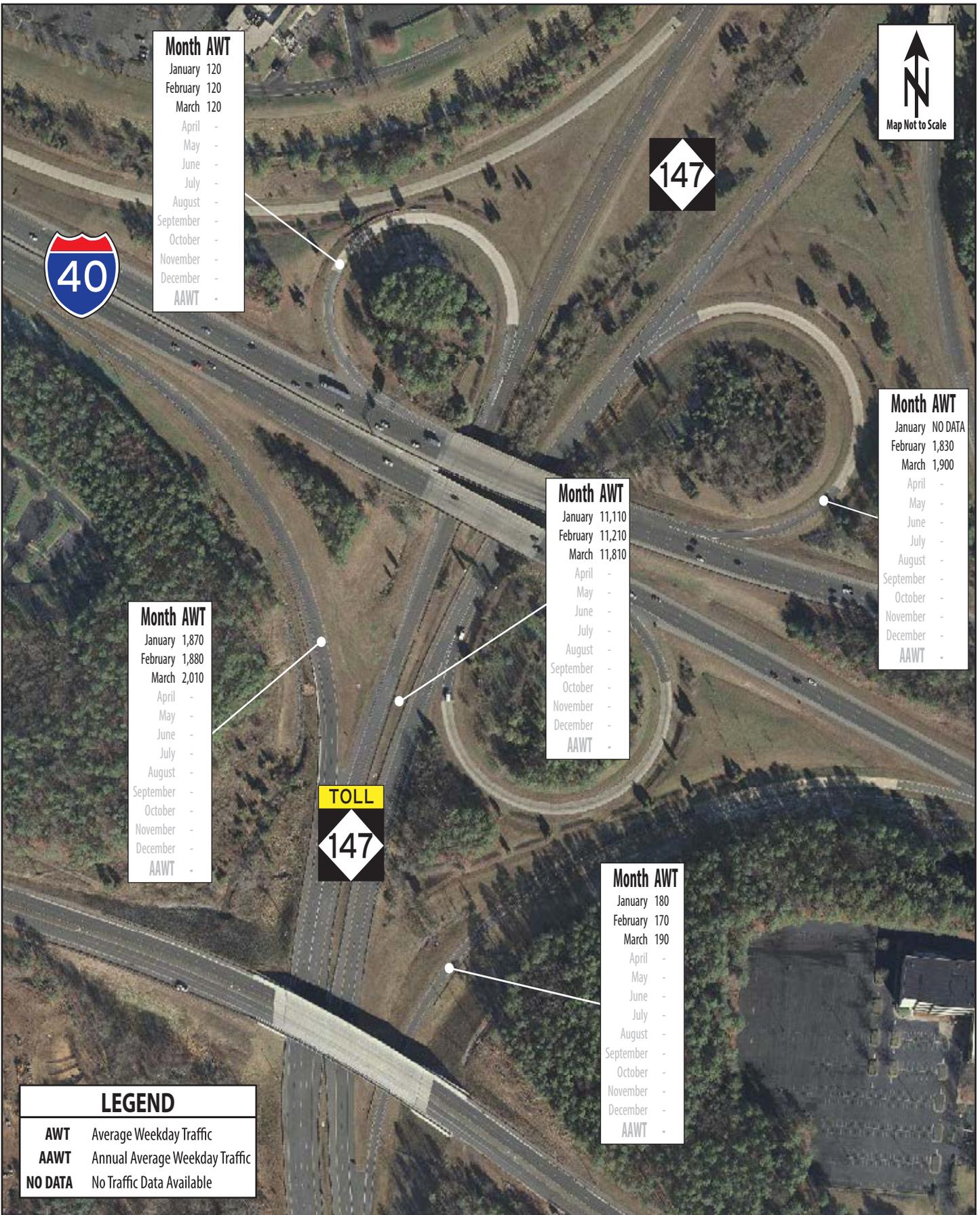
Traffic volume data is collected on all ramps and mainline segments between interchanges. The location of interchanges along the Triangle Expressway can be seen in *Figure 2*. Typically there is a large difference between peak and off-peak volumes, as well as between weekday and weekend volumes. This gap becomes significantly larger for a tolled facility because it tends to have a much higher percentage of traffic on weekdays during peak hours than non-toll facilities, as there is less of a benefit for toll users during off-peak hours. For this reason, Average Weekday Traffic (AWT) is reported instead of average daily traffic (ADT). AWT is a measure of the average daily traffic collected on a typical Monday through Friday over a designated time period.

Figures 3 to 13 contain visual representations of AWT along the facility which are representative of NCTA's MVD data. It should be noted that if there are less than five days in a month with reliable data (days during which the data recorded did not meet the established threshold) "NO DATA" is reported for that MVD. This quarter one detector reported "NO DATA" during the month of January; this MVD is currently collecting reliable data.



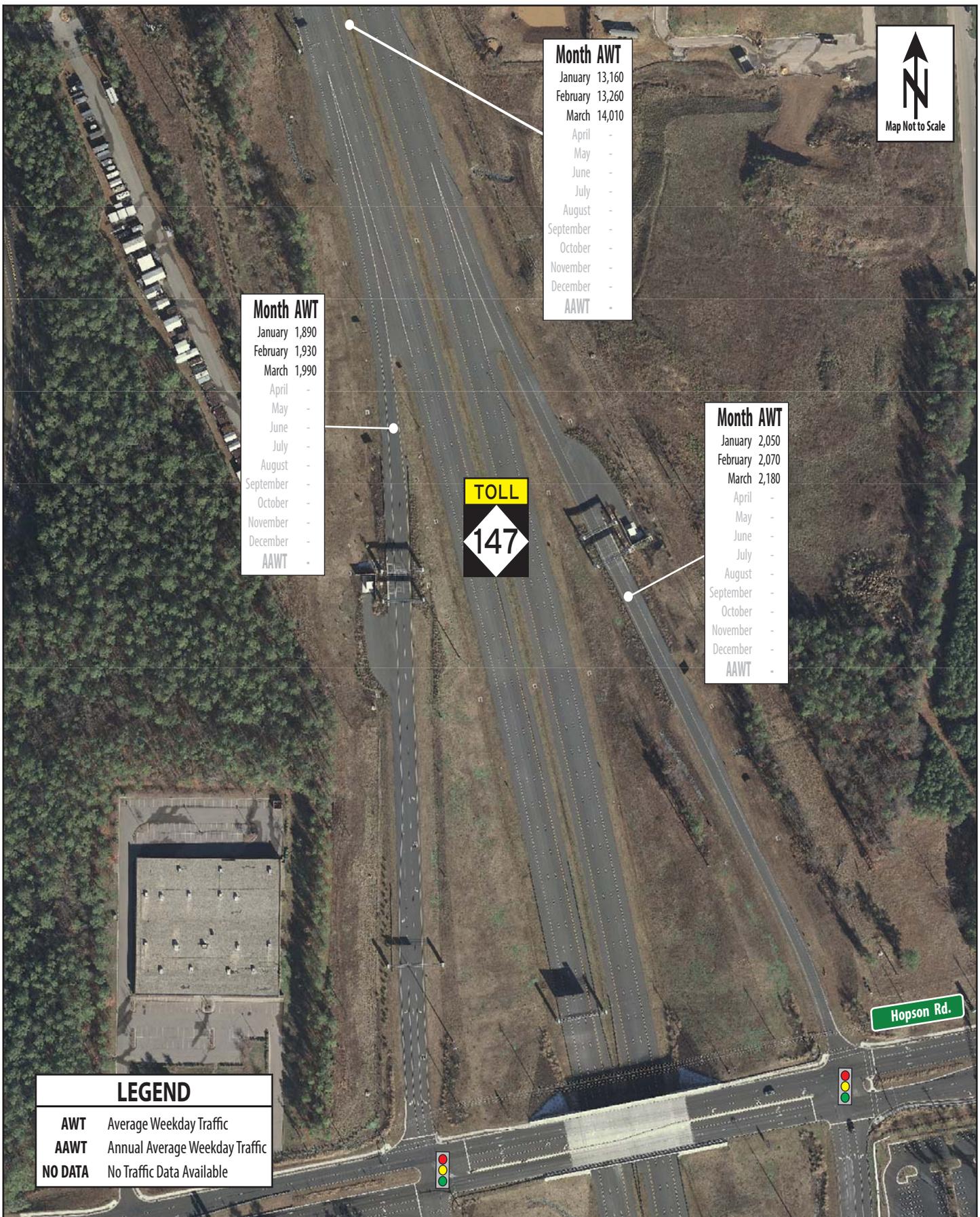
Triangle Expressway Interchange Map

Figure 2



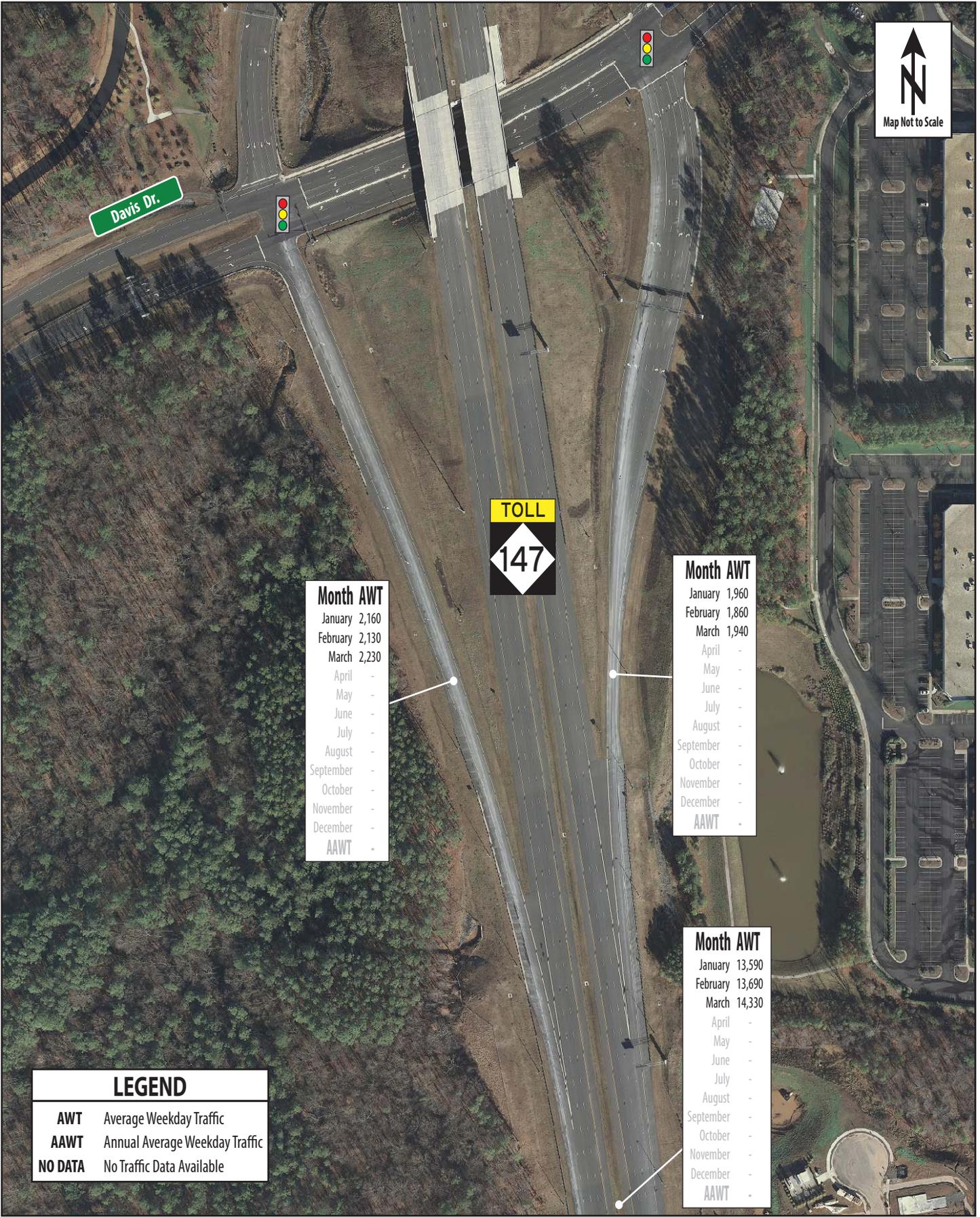
NC-147 at I-40 Interchange
2015 Average Weekday Traffic

Figure
3



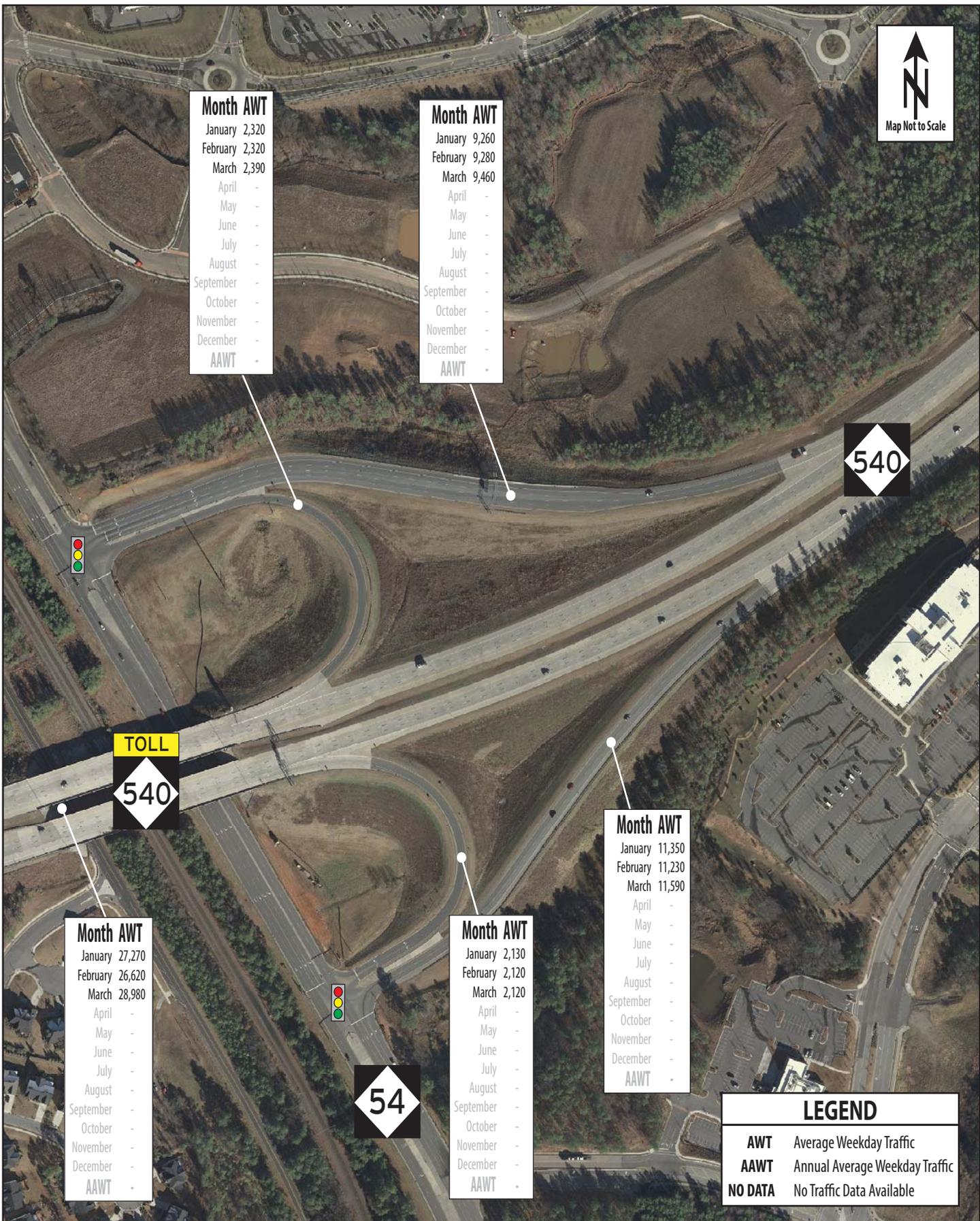
NC-147 at Hopson Rd. Interchange
2015 Average Weekday Traffic

Figure
4



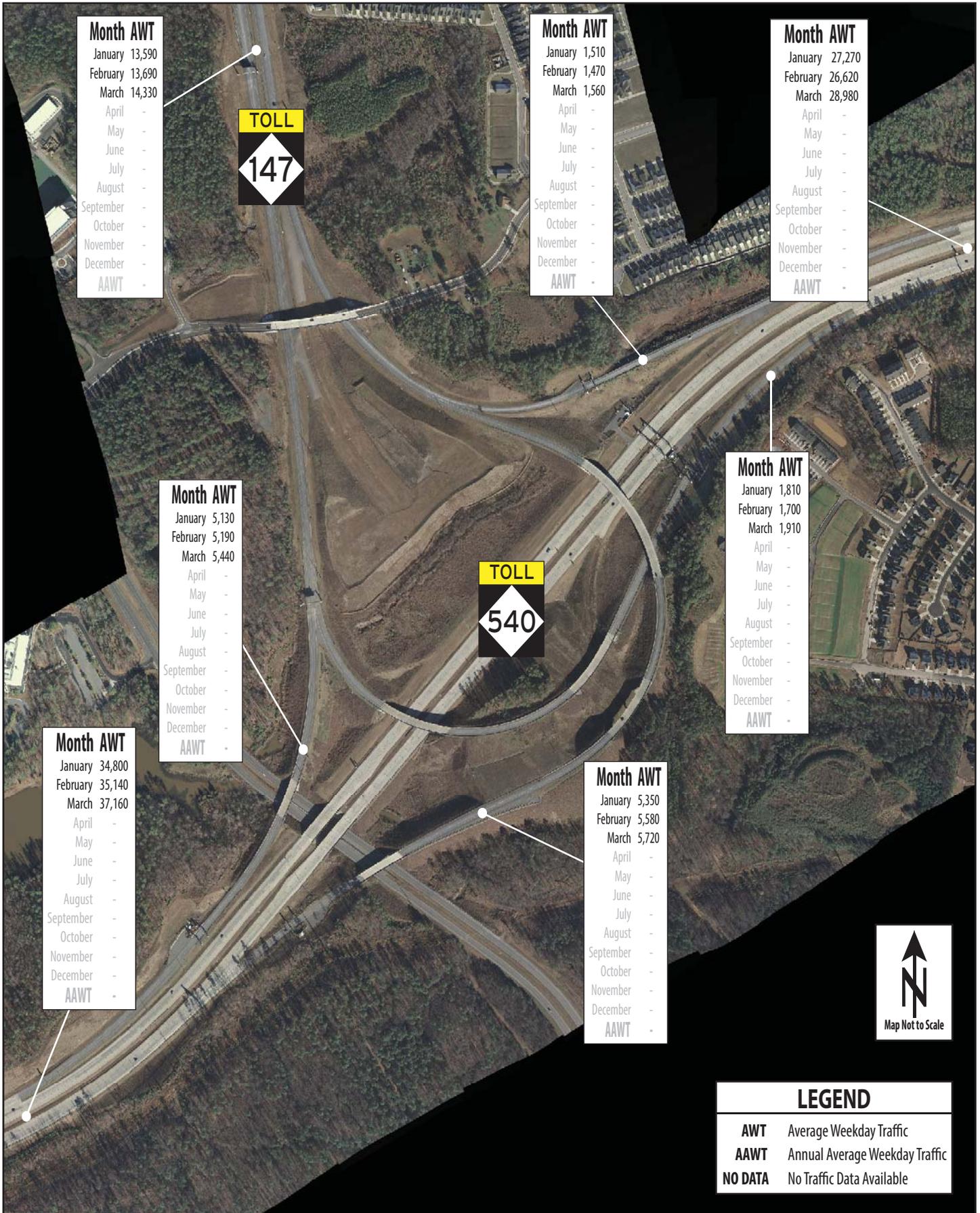
NC-147 at Davis Dr. Interchange
2015 Average Weekday Traffic

Figure
5



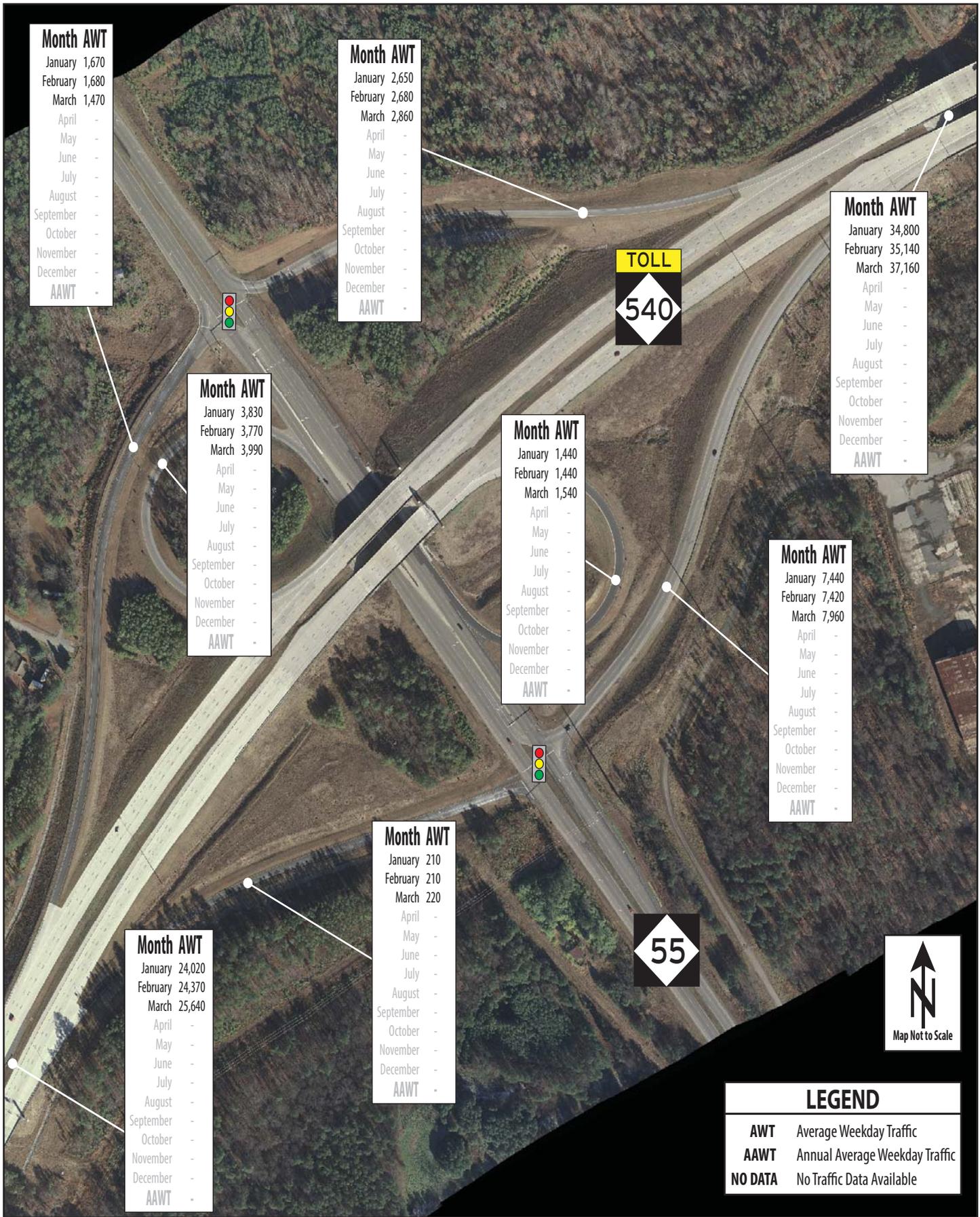
NC-540 at NC-54 Interchange
 2015 Average Weekday Traffic

Figure
6



NC-540 at NC-147 Interchange
2015 Average Weekday Traffic

Figure
7



NC-540 at NC-55 Interchange
2015 Average Weekday Traffic

Figure
8

| Month AWT | |
|-----------|--------|
| January | 24,020 |
| February | 24,370 |
| March | 25,640 |
| April | - |
| May | - |
| June | - |
| July | - |
| August | - |
| September | - |
| October | - |
| November | - |
| December | - |
| AAWT | - |



| Month AWT | |
|-----------|-------|
| January | 980 |
| February | 1,000 |
| March | 1,040 |
| April | - |
| May | - |
| June | - |
| July | - |
| August | - |
| September | - |
| October | - |
| November | - |
| December | - |
| AAWT | - |

| Month AWT | |
|-----------|-------|
| January | 1,270 |
| February | 1,260 |
| March | 1,340 |
| April | - |
| May | - |
| June | - |
| July | - |
| August | - |
| September | - |
| October | - |
| November | - |
| December | - |
| AAWT | - |

Green Level West Rd.

| Month AWT | |
|-----------|-------|
| January | 1,060 |
| February | 1,080 |
| March | 1,190 |
| April | - |
| May | - |
| June | - |
| July | - |
| August | - |
| September | - |
| October | - |
| November | - |
| December | - |
| AAWT | - |

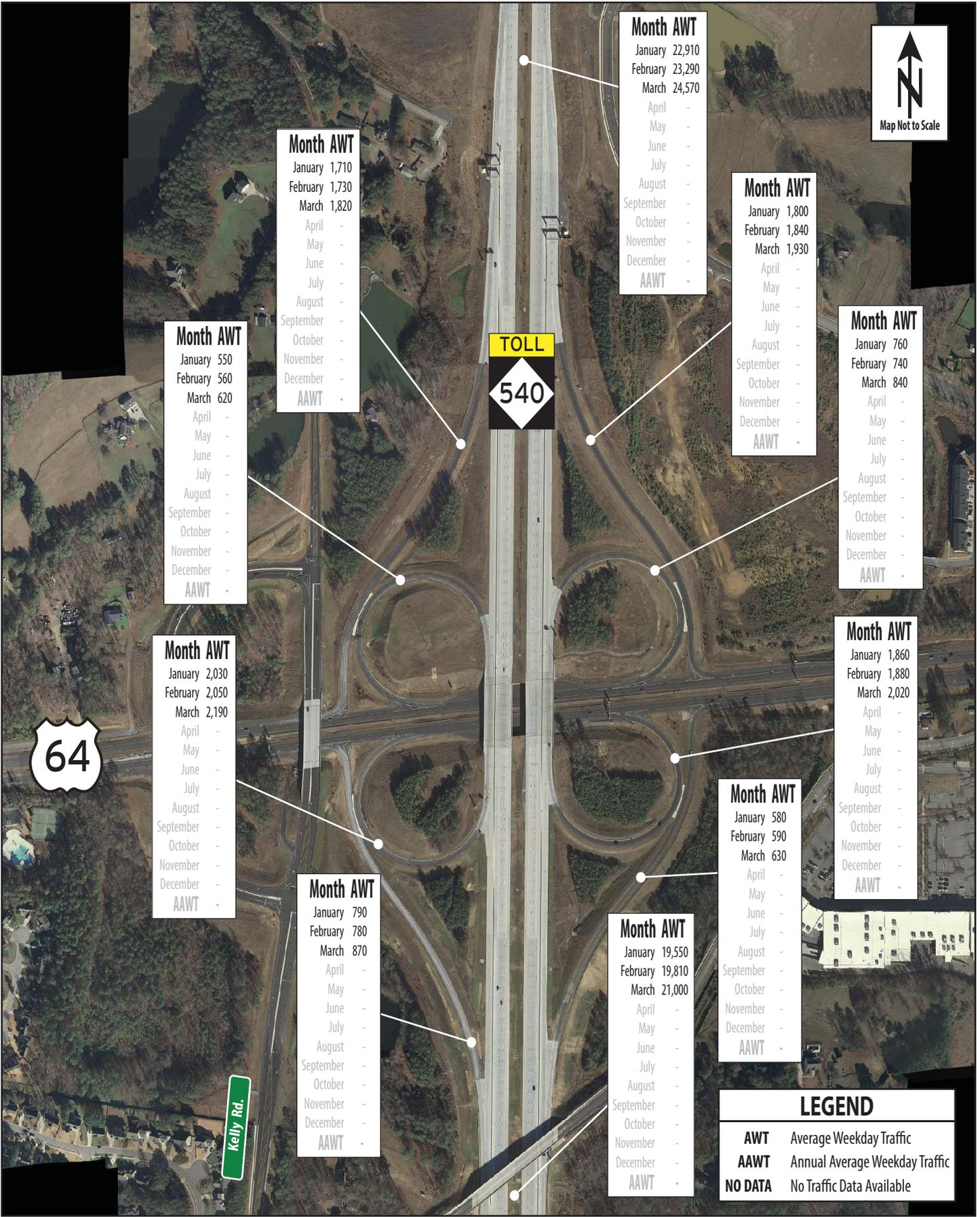
| Month AWT | |
|-----------|-------|
| January | 1,050 |
| February | 1,090 |
| March | 1,180 |
| April | - |
| May | - |
| June | - |
| July | - |
| August | - |
| September | - |
| October | - |
| November | - |
| December | - |
| AAWT | - |

| Month AWT | |
|-----------|--------|
| January | 22,910 |
| February | 23,290 |
| March | 24,570 |
| April | - |
| May | - |
| June | - |
| July | - |
| August | - |
| September | - |
| October | - |
| November | - |
| December | - |
| AAWT | - |

| LEGEND | |
|---------|--------------------------------|
| AWT | Average Weekday Traffic |
| AAWT | Annual Average Weekday Traffic |
| NO DATA | No Traffic Data Available |

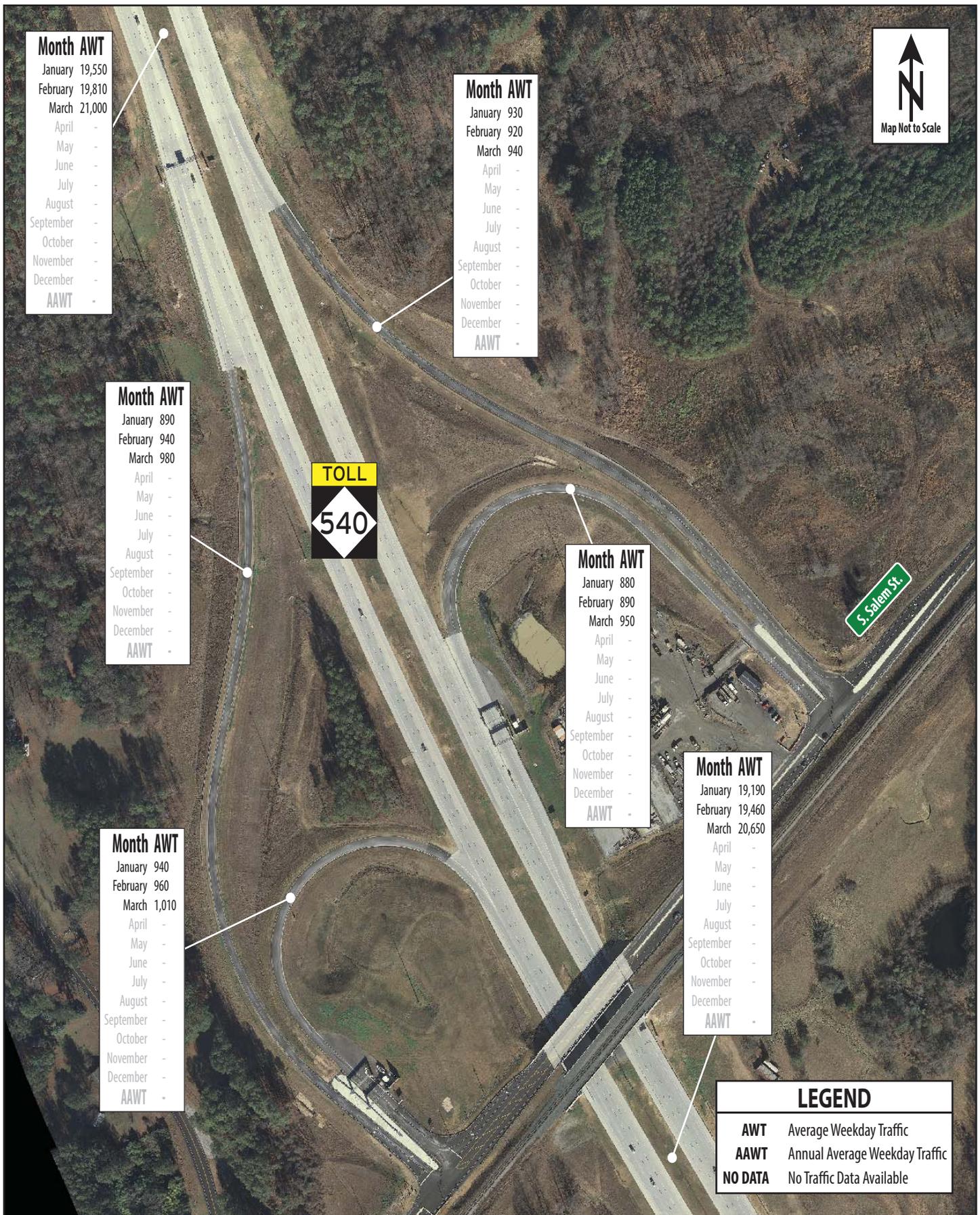
NC-540 at Green Level West Rd. Interchange
2015 Average Weekday Traffic

Figure 9



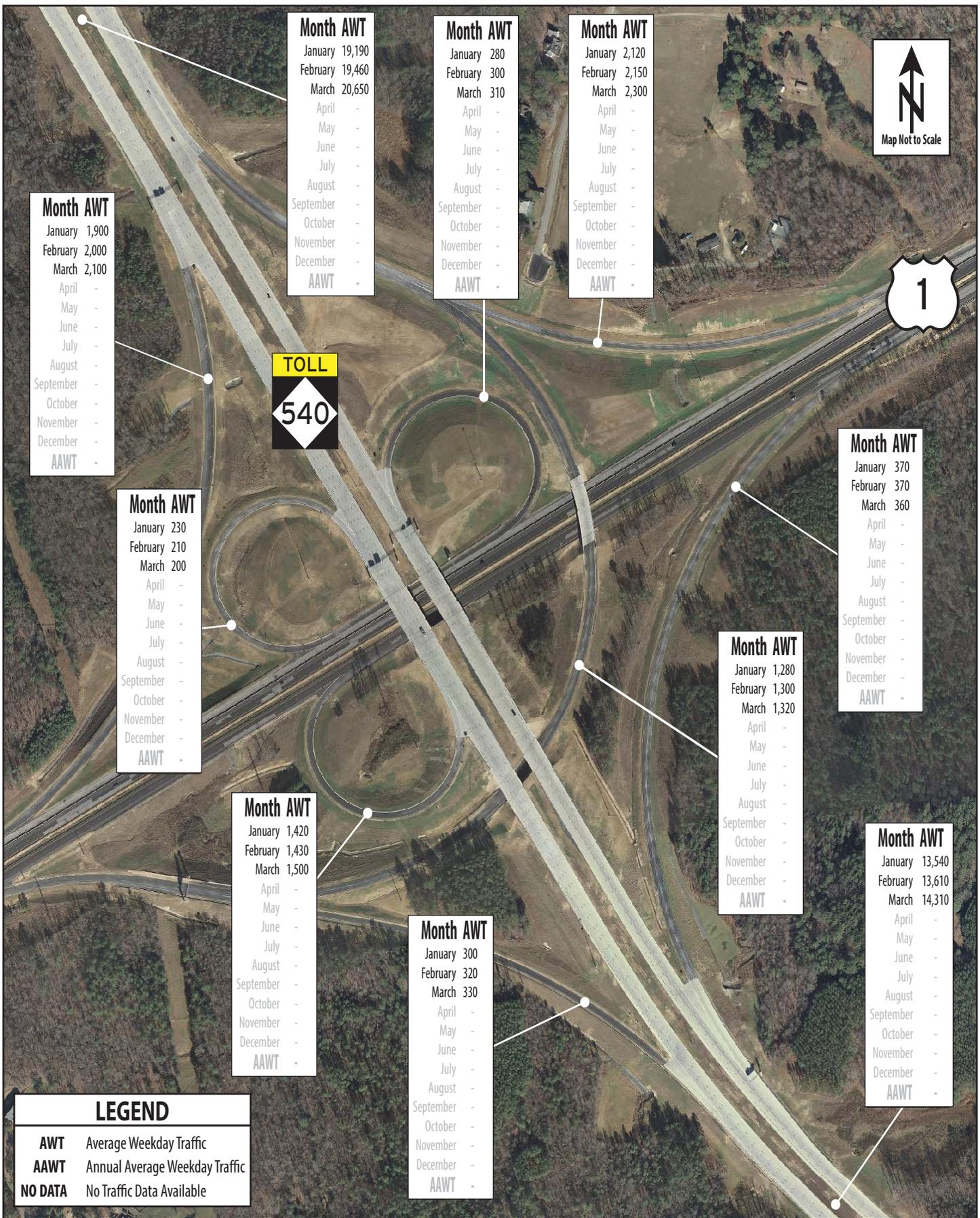
NC-540 at US-64 Interchange
2015 Average Weekday Traffic

Figure
10



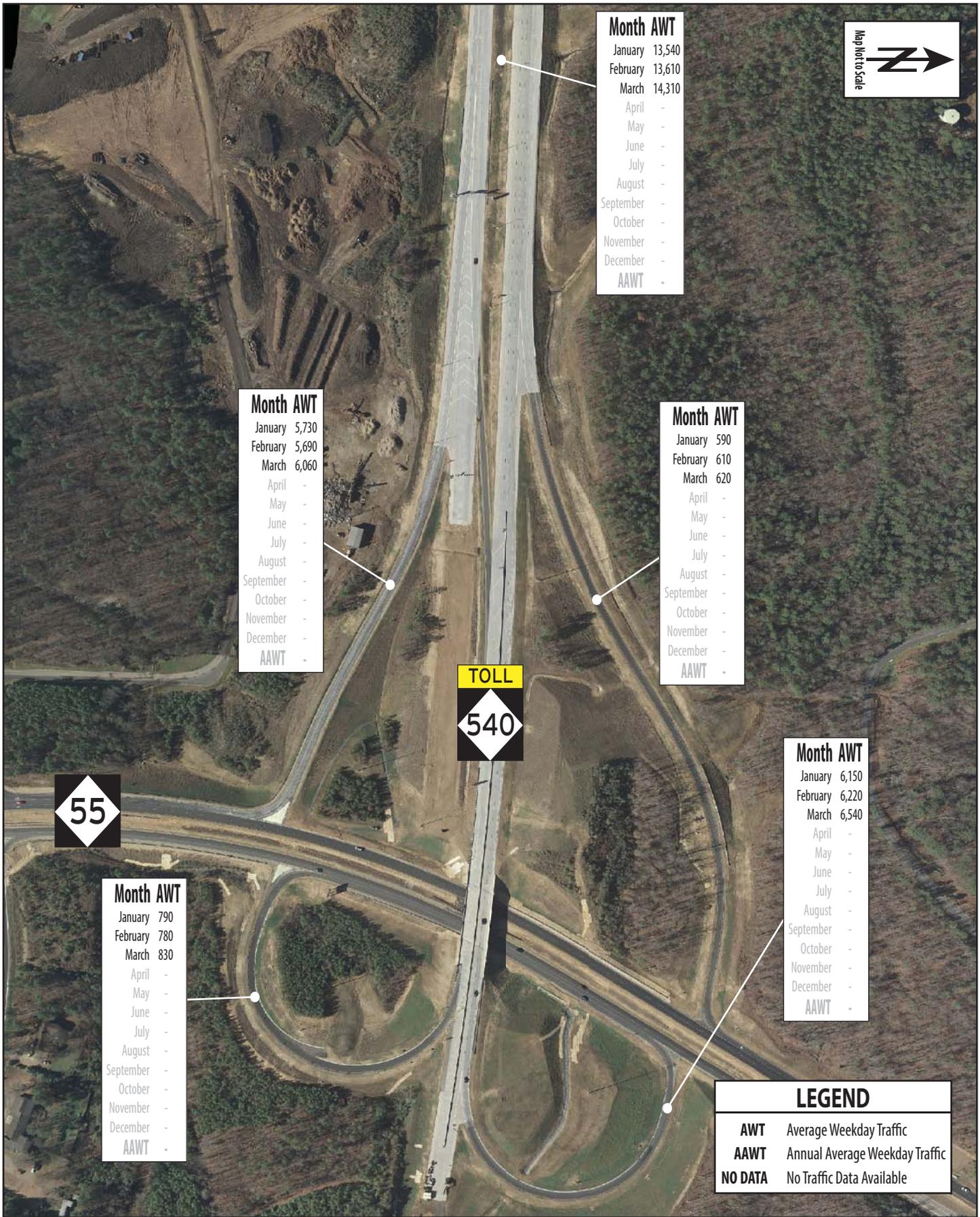
NC-540 at S. Salem St. Interchange
2015 Average Weekday Traffic

Figure
11



NC-540 at US-1 Interchange
2015 Average Weekday Traffic

Figure
12



NC-540 at NC-55 Bypass Interchange
2015 Average Weekday Traffic

Figure 13

Toll System Statistics

TOLL SYSTEM STATISTICS

Current and historical toll system data is collected and reported through the NC Quick Pass Customer Service Center (CSC). The data provides an overview of the current toll operations on the facility and identifies any utilization trends. It also allows for comparison of historical and projected data. Transaction data is collected from the toll zones throughout the facility using an all-electronic tolling (AET) method. Toll gantries and the roadside toll vaults house the AET equipment.

Weekly, Monthly and Year-to-Date (YTD) Statistics

The statistics provided in the following sections are representative of the entire Triangle Expressway facility. Weekly, monthly and year-to-date (YTD) statistics are presented in the following datasets:

- Transactions
- Classification
- Accounts
- Transponders

It should be noted that the percentages of total provided in this section might not sum to 100% due to rounding. In addition, weekly statistics are based on weeks starting Monday and ending Sunday.

Operations Statistics Report for the Triangle Expressway

First Quarter, January – March 2015

Transactions

The statistics provided in this section outline the volume and percentage of North Carolina Quick Pass (NCQP) users compared to Bill by Mail users. NCQP users have an established account that is identified using the vehicle’s onboard transponder, whereas Bill by Mail users do not have an established account and are identified using vehicle recognition software.

Table 1 presents a summary of the total weekly transactions for NC Quick Pass and Bill by Mail users.

Table 1: Transactions, First Quarter by Week

| Week Ending | Transponder (NC Quick Pass) | | Video (Bill by Mail) | | Total |
|---------------|--------------------------------|------------|-------------------------|------------|----------------|
| | Transactions | % of Total | Transactions | % of Total | |
| 1/4/2015* | 101,359 | 50% | 99,996 | 50% | 201,355 |
| 1/11/2015 | 387,412 | 60% | 252,941 | 40% | 640,353 |
| 1/18/2015 | 371,504 | 61% | 241,111 | 39% | 612,615 |
| 1/25/2015** | 379,965 | 60% | 257,526 | 40% | 637,491 |
| 2/1/2015 | 398,993 | 60% | 260,771 | 40% | 659,764 |
| 2/8/2015 | 401,992 | 60% | 266,315 | 40% | 668,307 |
| 2/15/2015 | 400,299 | 60% | 264,326 | 40% | 664,625 |
| 2/22/2015*** | 285,669 | 59% | 195,509 | 41% | 481,178 |
| 3/1/2015 | 281,156 | 59% | 198,800 | 41% | 479,956 |
| 3/8/2015 | 414,399 | 60% | 280,620 | 40% | 695,019 |
| 3/15/2015 | 418,146 | 59% | 287,346 | 41% | 705,492 |
| 3/22/2015 | 420,829 | 60% | 286,317 | 40% | 707,146 |
| 3/29/2015 | 399,070 | 59% | 279,888 | 41% | 678,958 |
| 3/31/2015**** | 143,519 | 62% | 87,694 | 38% | 231,213 |

*Week ending consists of four days worth of data and includes New Year’s Day

**Week ending includes Martin Luther King Birthday

*** Week ending includes President’s Day

**** Week ending consists of two days worth of data

Table 2 presents a summary of the total monthly transactions for NC Quick Pass and Bill by Mail transactions.

Table 2: Transactions, First Quarter by Month

| Month | Transponder (NC Quick Pass) | | Video (Bill by Mail) | | Total |
|----------|--------------------------------|------------|-------------------------|------------|------------------|
| | Transactions | % of Total | Transactions | % of Total | |
| January | 1,615,709 | 60% | 1,089,756 | 40% | 2,705,465 |
| February | 1,373,736 | 60% | 929,521 | 40% | 2,303,257 |
| March | 1,814,867 | 59% | 1,239,883 | 41% | 3,054,750 |

Operations Statistics Report for the Triangle Expressway

First Quarter, January – March 2015

Figure 14 presents the total monthly transactions and NC Quick Pass utilization during 2015.

Figure 14: Transactions, YTD

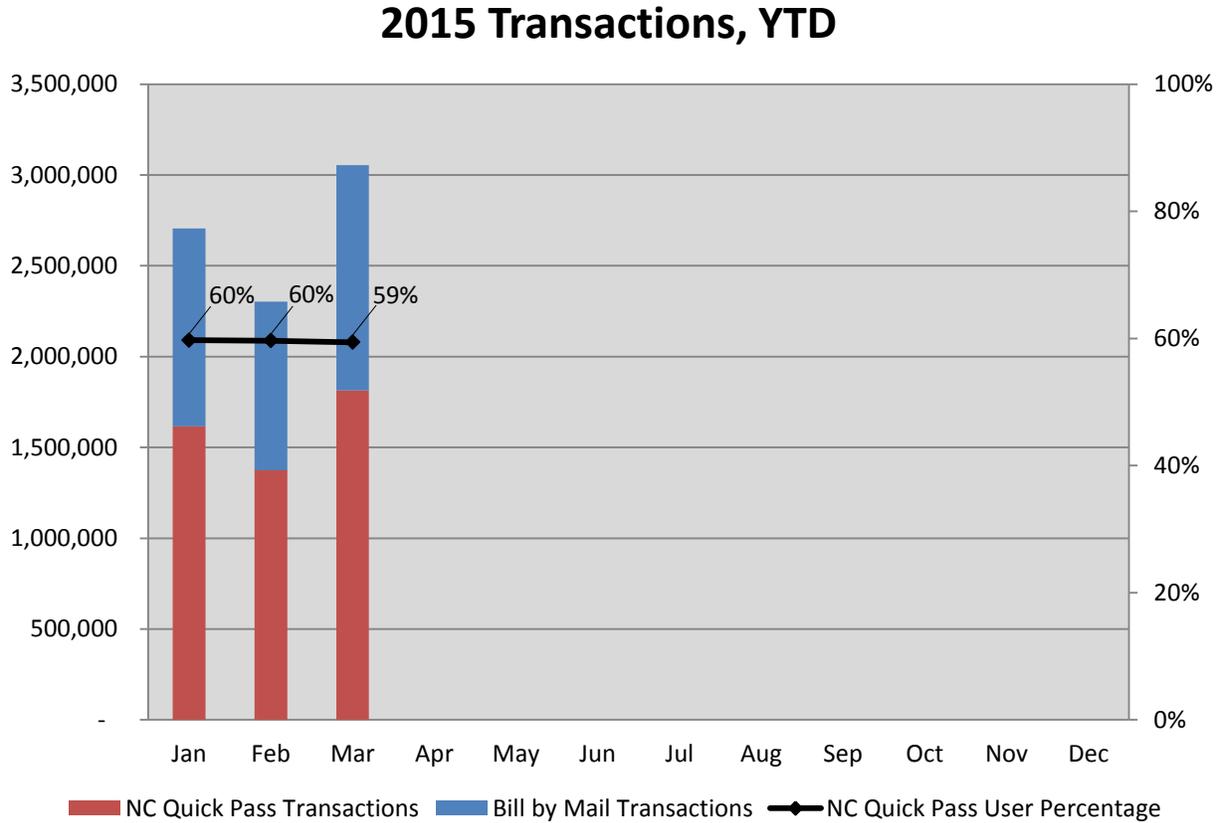


Table 3 presents a summary of the total NC Quick Pass and Bill by Mail transactions, by year. Project to date is the total number of transactions since opening the facility to toll traffic.

Table 3: Transactions, by Year

| Year | Transponder (NC Quick Pass) | | Video (Bill by Mail) | | Total |
|------------------------|--------------------------------|------------|-------------------------|------------|-------------------|
| | Transactions | % of Total | Transactions | % of Total | |
| 2012 | 2,803,043 | 49% | 2,892,496 | 51% | 5,695,539 |
| 2013 | 13,249,972 | 58% | 9,792,975 | 42% | 23,042,947 |
| 2014 | 17,733,089 | 58% | 12,802,237 | 42% | 30,535,326 |
| 2015* | 4,804,312 | 60% | 3,259,160 | 40% | 8,063,472 |
| Project to Date | 38,590,416 | 57% | 28,746,868 | 43% | 67,337,284 |

*2015 transactions reported include three months of data (January - March).

Operations Statistics Report for the Triangle Expressway

First Quarter, January – March 2015

Classification

The statistics provided in this section outline the volume and percentage of users based on classification. The classification system used by NCTA contains three classifications, determined by the vehicle's number of axles.

Table 4 presents a summary of the total weekly transactions for Class 1 (2-axle), Class 2 (3-axle) and Class 3 (4+axle) vehicles.

Table 4: Classification, First Quarter by Week

| Week Ending | Class 1 (2-axle) | | Class 2 (3-axle) | | Class 3 (4+axle) | |
|---------------|---------------------|------------|---------------------|------------|---------------------|------------|
| | Transactions | % of Total | Transactions | % of Total | Transactions | % of Total |
| 1/4/2015* | 197,671 | 98% | 1,517 | 1% | 2,167 | 1% |
| 1/11/2015 | 622,779 | 97% | 6,431 | 1% | 11,143 | 2% |
| 1/18/2015 | 598,957 | 98% | 5,351 | 1% | 8,307 | 1% |
| 1/25/2015** | 617,409 | 97% | 6,716 | 1% | 13,366 | 2% |
| 2/1/2015 | 640,454 | 97% | 6,377 | 1% | 12,933 | 2% |
| 2/8/2015 | 648,454 | 97% | 6,732 | 1% | 13,121 | 2% |
| 2/15/2015 | 646,215 | 97% | 6,193 | 1% | 12,217 | 2% |
| 2/22/2015*** | 471,173 | 98% | 3,346 | 1% | 6,659 | 1% |
| 3/1/2015 | 469,005 | 98% | 3,741 | 1% | 7,210 | 2% |
| 3/8/2015 | 676,309 | 97% | 6,624 | 1% | 12,086 | 2% |
| 3/15/2015 | 683,716 | 97% | 7,287 | 1% | 14,489 | 2% |
| 3/22/2015 | 683,812 | 97% | 7,823 | 1% | 15,511 | 2% |
| 3/29/2015 | 655,467 | 97% | 7,941 | 1% | 15,550 | 2% |
| 3/31/2015**** | 222,719 | 96% | 2,750 | 1% | 5,744 | 2% |

*Week ending consists of four days worth of data and includes New Year's Day

**Week ending includes Martin Luther King's Day

*** Week ending includes President's Day

**** Week ending consists of two days worth of data

Table 5 presents a summary of the total monthly transactions by classification.

Table 5: Classification, First Quarter by Month

| Month | Class 1 (2-axle) | | Class 2 (3-axle) | | Class 3 (4+axle) | |
|----------|---------------------|------------|---------------------|------------|---------------------|------------|
| | Transactions | % of Total | Transactions | % of Total | Transactions | % of Total |
| January | 2,631,566 | 97% | 26,212 | 1% | 47,687 | 2% |
| February | 2,243,924 | 97% | 20,120 | 1% | 39,213 | 2% |
| March | 2,958,650 | 97% | 32,497 | 1% | 63,603 | 2% |

Operations Statistics Report for the Triangle Expressway

First Quarter, January – March 2015

Figure 15 presents the total monthly percentage of transactions during 2015 for Class 1 (2-axle), Class 2 (3-axle) and Class 3 (4+axle) vehicles.

Figure 15: Classification, Percentage YTD

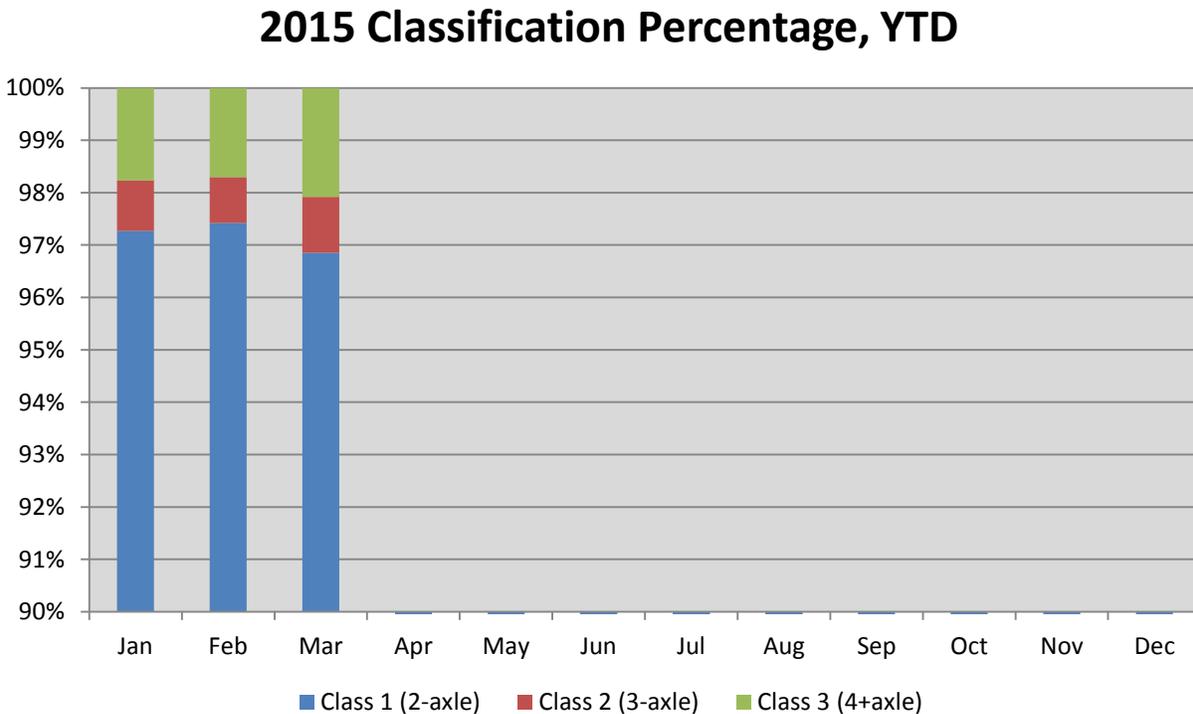


Table 6 presents a summary of the total transactions for Class 1 (2-axle), Class 2 (3-axle) and Class 3 (4+axle) vehicles, by year. Project to date is the total number of transactions since opening the facility to toll traffic.

Table 6: Classification, by Year

| Year | Class 1 (2-axle) | | Class 2 (3-axle) | | Class 3 (4+axle) | |
|------------------------|-------------------|------------|------------------|------------|------------------|------------|
| | Transactions | % of Total | Transactions | % of Total | Transactions | % of Total |
| 2012 | 5,562,061 | 97% | 46,935 | 1% | 86,543 | 2% |
| 2013 | 22,282,351 | 97% | 267,558 | 1% | 493,038 | 2% |
| 2014 | 29,530,077 | 97% | 355,721 | 1% | 649,528 | 2% |
| 2015* | 7,834,140 | 97% | 78,829 | 1% | 150,503 | 2% |
| Project to Date | 65,208,629 | 97% | 749,043 | 1% | 1,379,612 | 2% |

*2015 classification reported includes three months of data (January - March).

Operations Statistics Report for the Triangle Expressway

First Quarter, January – March 2015

Accounts

The statistics provided in this section outline the volume of accounts established and managed by the NCTA CSC.

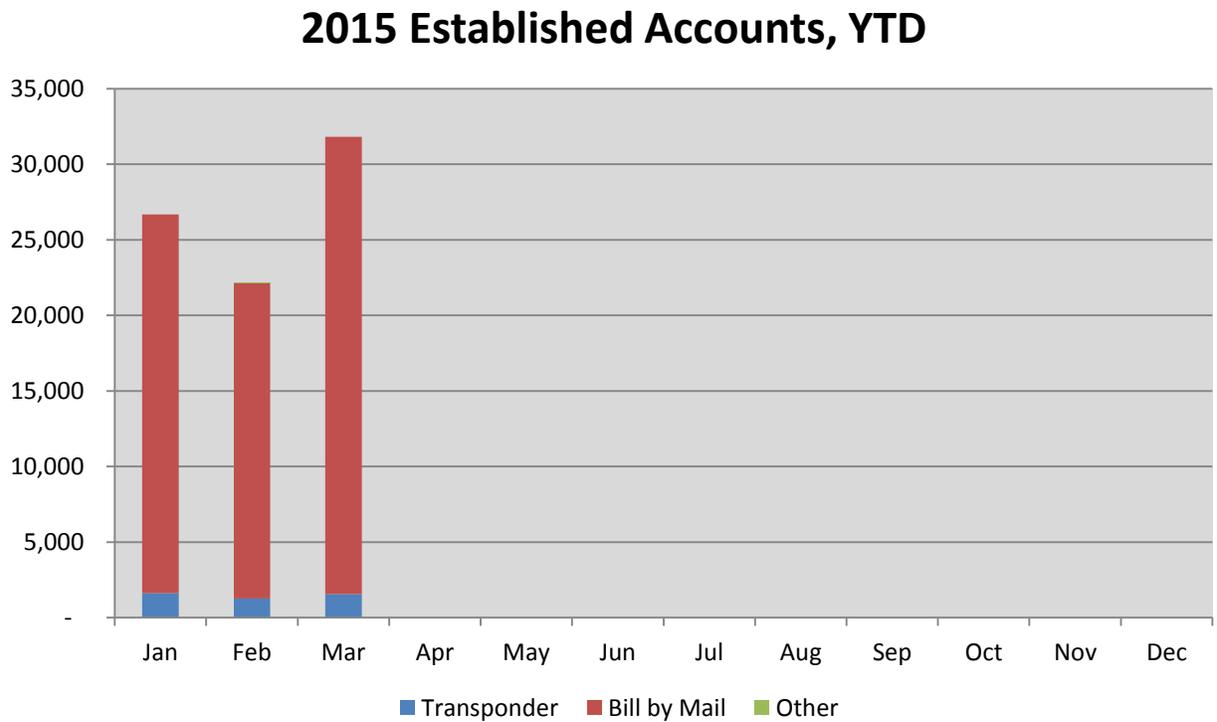
Table 7 presents a summary of the monthly established accounts being managed by the NCTA CSC. Numbers presented in parentheses represent a reduction in accounts.

Table 7: Established Accounts, First Quarter by Month

| Month | Transponder (NC Quick Pass) | Bill by Mail | Registered Video | Non-Revenue | Government | Total |
|----------|-----------------------------|--------------|------------------|-------------|------------|---------------|
| January | 1,615 | 25,070 | 0 | 0 | 0 | 26,685 |
| February | 1,265 | 20,863 | 0 | 2 | 0 | 22,128 |
| March | 1,568 | 30,237 | 0 | 0 | 0 | 31,805 |

Figure 16 presents the monthly established accounts managed by the NCTA CSC during 2015. The “Other” category includes registered video, non-revenue and government accounts.

Figure 16: Established Accounts, YTD



Operations Statistics Report for the Triangle Expressway

First Quarter, January – March 2015

Table 8 presents a summary of the total established accounts managed by the NCTA CSC, by year. Project to date is the total number of accounts established since project opening. Numbers presented in parentheses represent a reduction in accounts.

Table 8: Established Accounts, by Year

| Year | Transponder (NC Quick Pass) | Bill by Mail | Registered Video | Non- Revenue | Government | Total |
|------------------------|--|---------------------|-----------------------------|-------------------------|-------------------|------------------|
| 2012 | 27,179 | 359,431 | 5 | 38 | 18 | 386,610 |
| 2013 | 24,268 | 306,581 | (1) | 19 | 9 | 330,849 |
| 2014 | 18,652 | 342,476 | 2 | 13 | 3 | 361,128 |
| 2015* | 4,448 | 76,170 | 0 | 2 | 0 | 80,618 |
| Project to Date | 74,547 | 1,084,658 | 6 | 72 | 30 | 1,159,205 |

*2015 established accounts reported include three months of data (January - March).

Transponders

The statistics provided in this section outline the volume of transponders sold by the NC Quick Pass CSC.

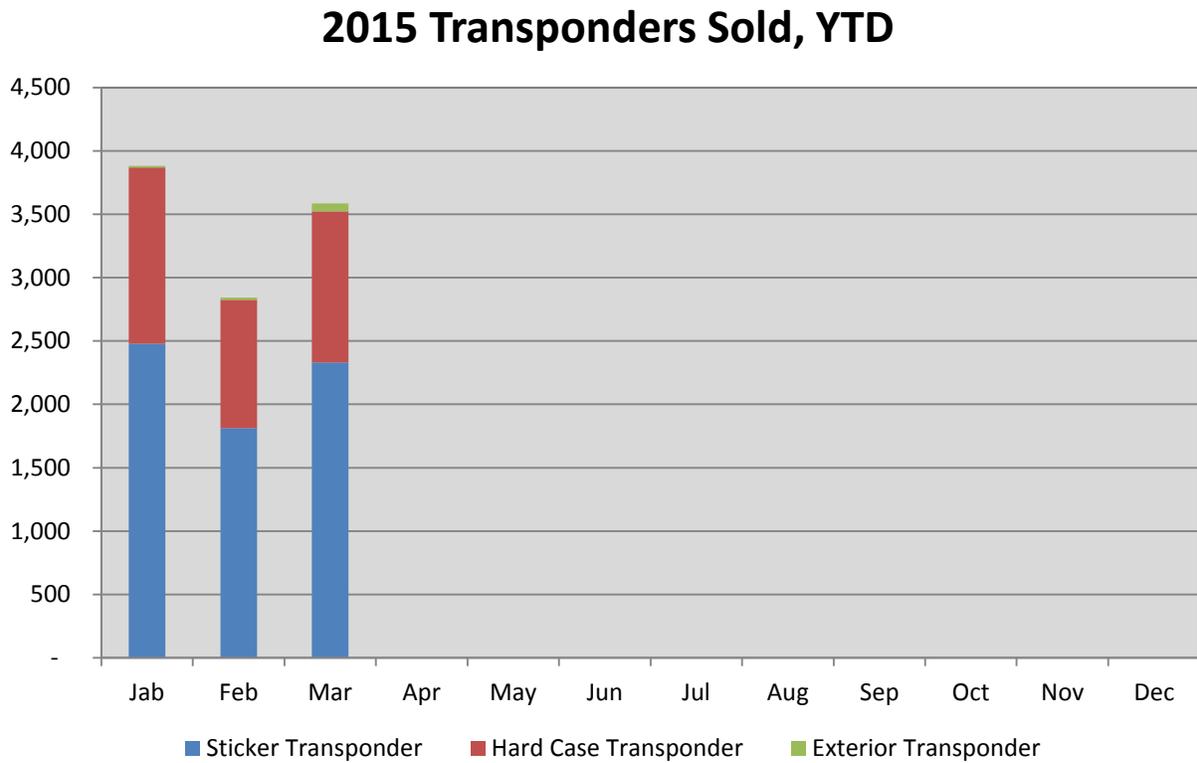
Table 9 presents a summary of the total transponders sold, by month.

Table 9: Transponders Sold, First Quarter by Month

| Month | Sticker Tag | Hard Case Tag | Exterior Tag | Total |
|----------|-------------|---------------|--------------|--------------|
| January | 2,479 | 1,390 | 13 | 3,882 |
| February | 1,814 | 1,010 | 18 | 2,842 |
| March | 2,331 | 1,191 | 62 | 3,584 |

Figure 17 presents monthly transponders sold during 2015.

Figure 17: Transponders Sold, YTD



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Table 10 presents a summary of the total yearly transponders sold, by year. Transponders went on sale prior to the opening of the roadway to provide potential motorists sufficient time to establish their accounts. Project to date is the total number of transponders sold to date.

Table 10: Transponders Sold, by Year

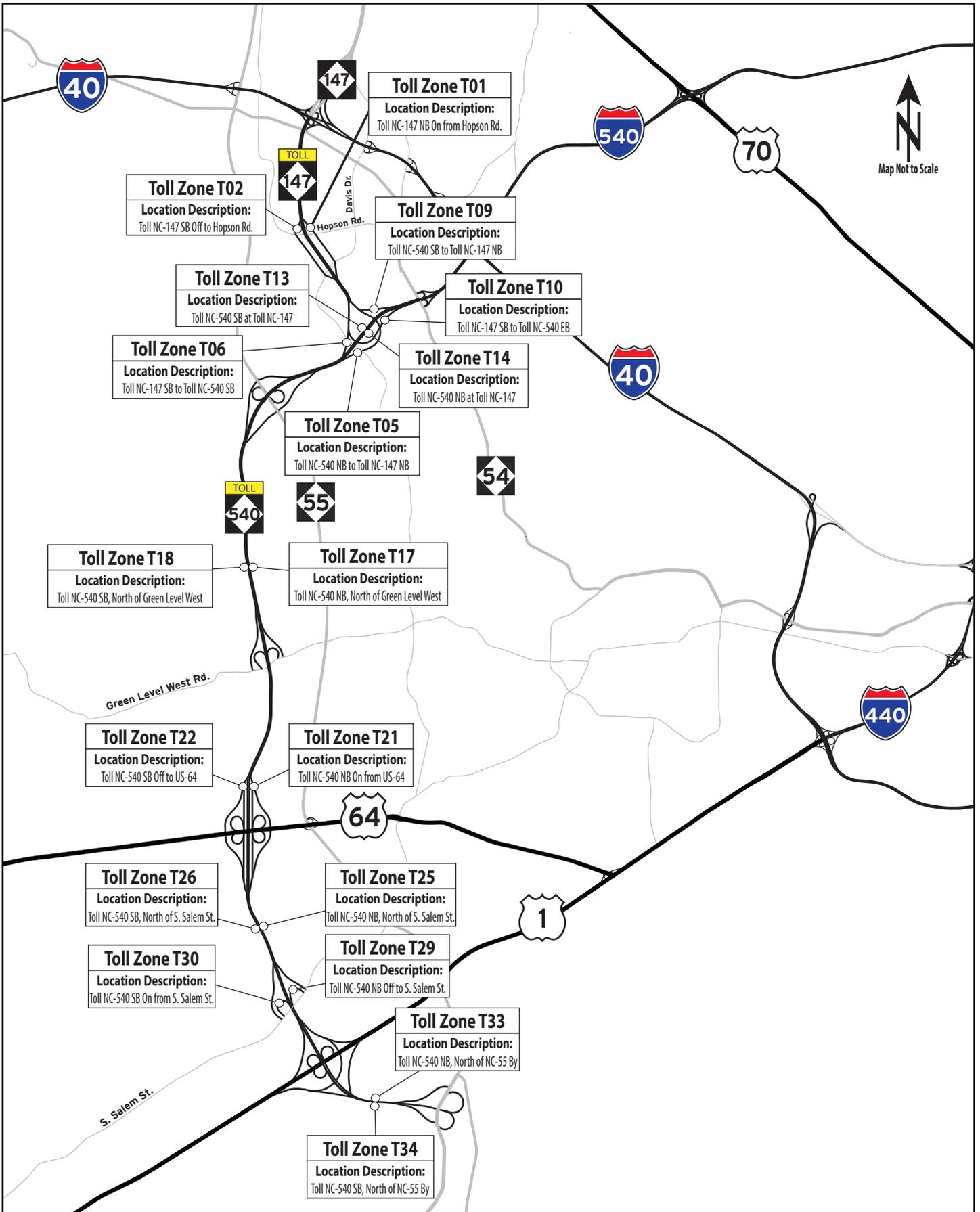
| Year | Sticker Tag | Hard Case Tag | Exterior Tag | Total |
|------------------------|--------------------|----------------------|---------------------|----------------|
| 2011 | 7,315 | 2,806 | 200 | 10,321 |
| 2012 | 35,338 | 6,861 | 250 | 42,449 |
| 2013 | 34,784 | 13,980 | 257 | 49,021 |
| 2014 | 26,066 | 14,778 | 221 | 41,065 |
| 2015* | 6,624 | 3,591 | 93 | 10,308 |
| Project to Date | 110,127 | 42,016 | 1,021 | 153,164 |

*2015 transponders sale reported include three months of data (January - March).

Toll Zone Statistics

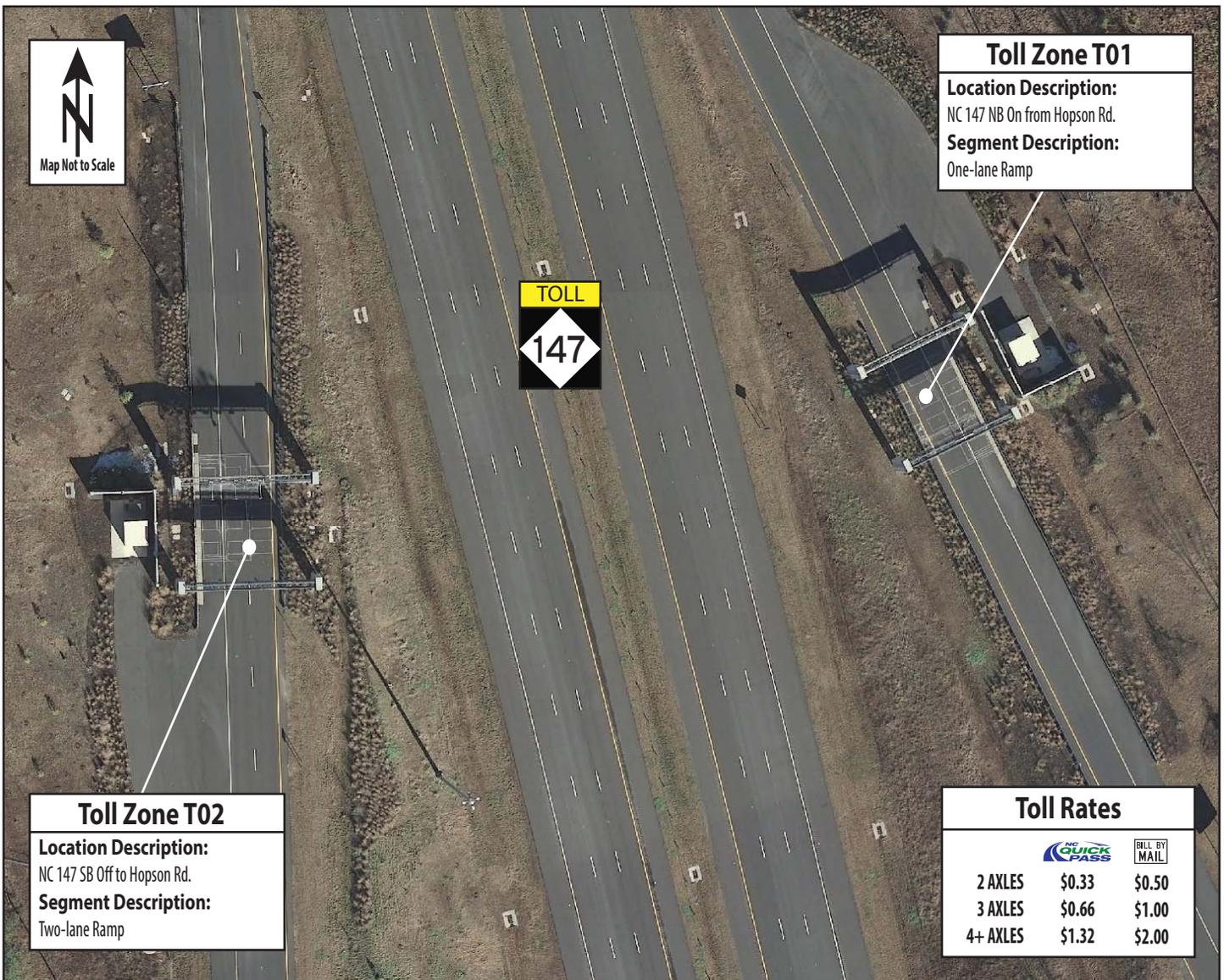
TOLL ZONE STATISTICS

The location of the toll zones along the Triangle Expressway can be seen in *Figure 18*. *Figures 19 - 27* contain visual representations of transactions recorded at toll zones along the facility.



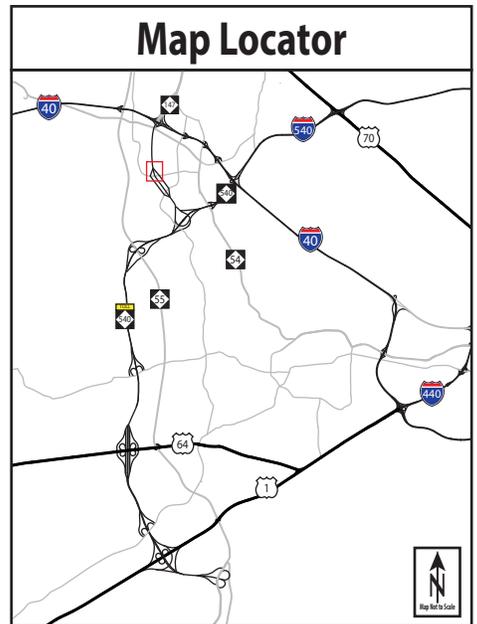
Triangle Expressway Toll Zone Map

Figure 18



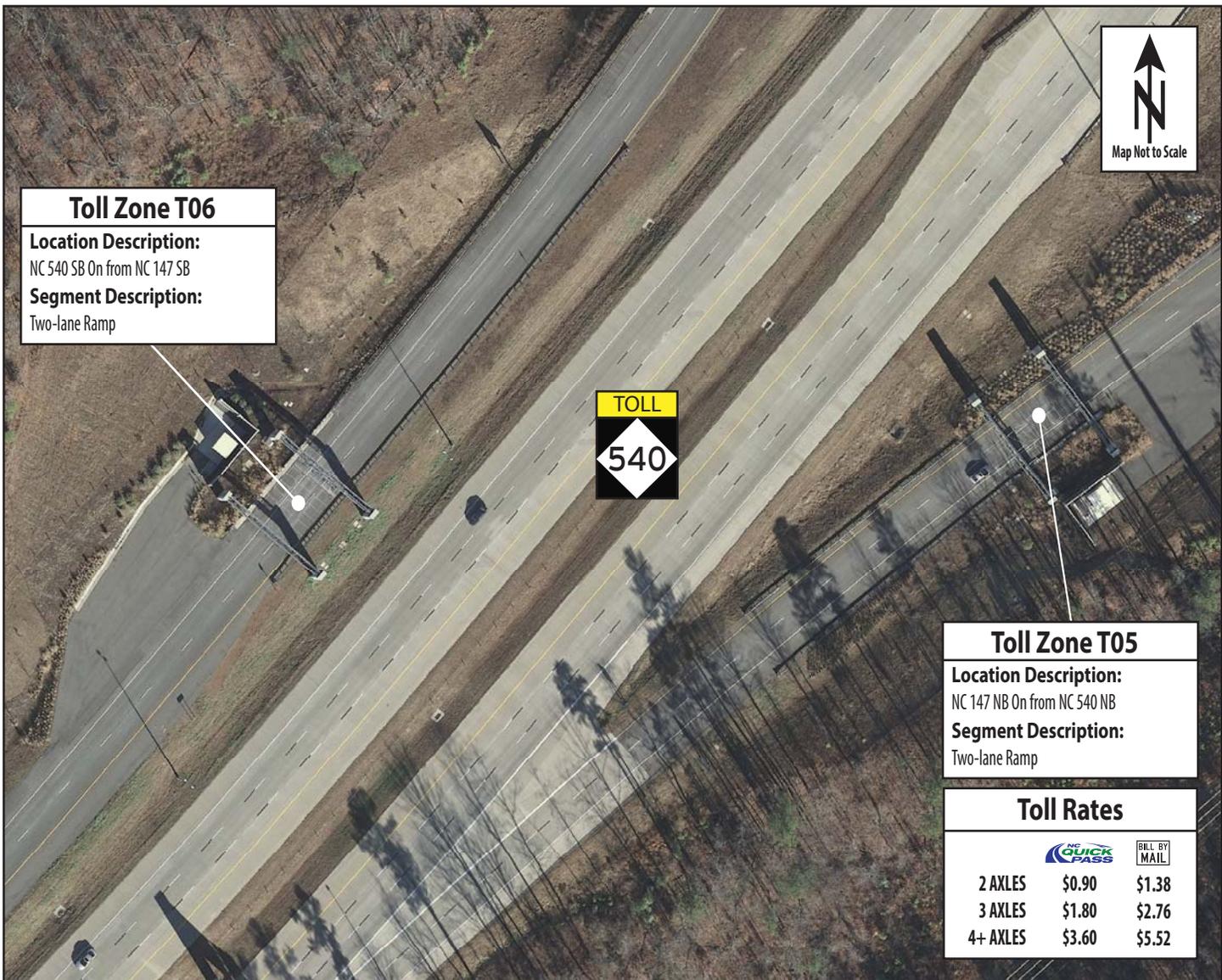
| Transactions by Direction | | |
|----------------------------------|-------|-------|
| Month | T01 | T02 |
| January | 2,010 | 1,850 |
| February | 2,060 | 1,920 |
| March | 2,190 | 2,000 |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |

| NC Quick Pass Percentage | | |
|---------------------------------|-----|-----|
| Month | T01 | T02 |
| January | 61% | 62% |
| February | 61% | 61% |
| March | 60% | 60% |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |



Hopson Road Ramp Toll Zones
2015 Average Weekday Toll Transactions

Figure 19



Toll Zone T06
Location Description:
 NC 540 SB On from NC 147 SB
Segment Description:
 Two-lane Ramp

Toll Zone T05
Location Description:
 NC 147 NB On from NC 540 NB
Segment Description:
 Two-lane Ramp

Toll Rates

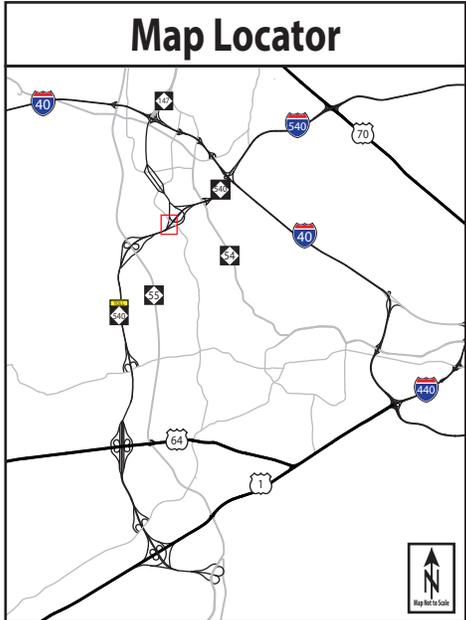
| | QUICK PASS | BILL BY MAIL |
|----------|------------|--------------|
| 2 AXLES | \$0.90 | \$1.38 |
| 3 AXLES | \$1.80 | \$2.76 |
| 4+ AXLES | \$3.60 | \$5.52 |

Transactions by Direction

| Month | T05 | T06 |
|-----------|-------|-------|
| January | 5,250 | 5,140 |
| February | 5,480 | 5,220 |
| March | 5,720 | 5,470 |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |

NC Quick Pass Percentage

| Month | T05 | T06 |
|-----------|-----|-----|
| January | 64% | 65% |
| February | 64% | 65% |
| March | 63% | 64% |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |



NC-147 South Ramp Toll Zones
 2015 Average Weekday Toll Transactions

Figure 20



Toll Zone T14
Location Description:
 NC 540 SB Mainline at NC 147
Segment Description:
 Three-lane Mainline

Toll Zone T13
Location Description:
 NC 540 NB Mainline at NC 147
Segment Description:
 Three-lane Mainline

Toll Rates

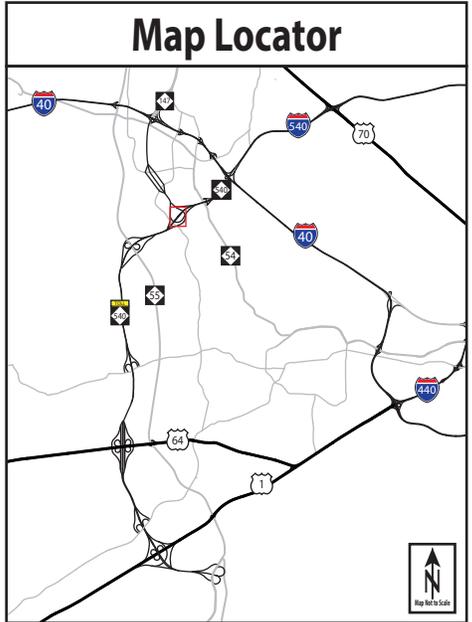
| 2 AXLES | \$0.58 | \$0.88 |
|----------|--------|--------|
| 3 AXLES | \$1.16 | \$1.76 |
| 4+ AXLES | \$2.32 | \$3.52 |

Transactions by Direction

| Month | T13 | T14 |
|-----------|--------|--------|
| January | 11,740 | 11,780 |
| February | 11,860 | 12,070 |
| March | 12,740 | 12,920 |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |

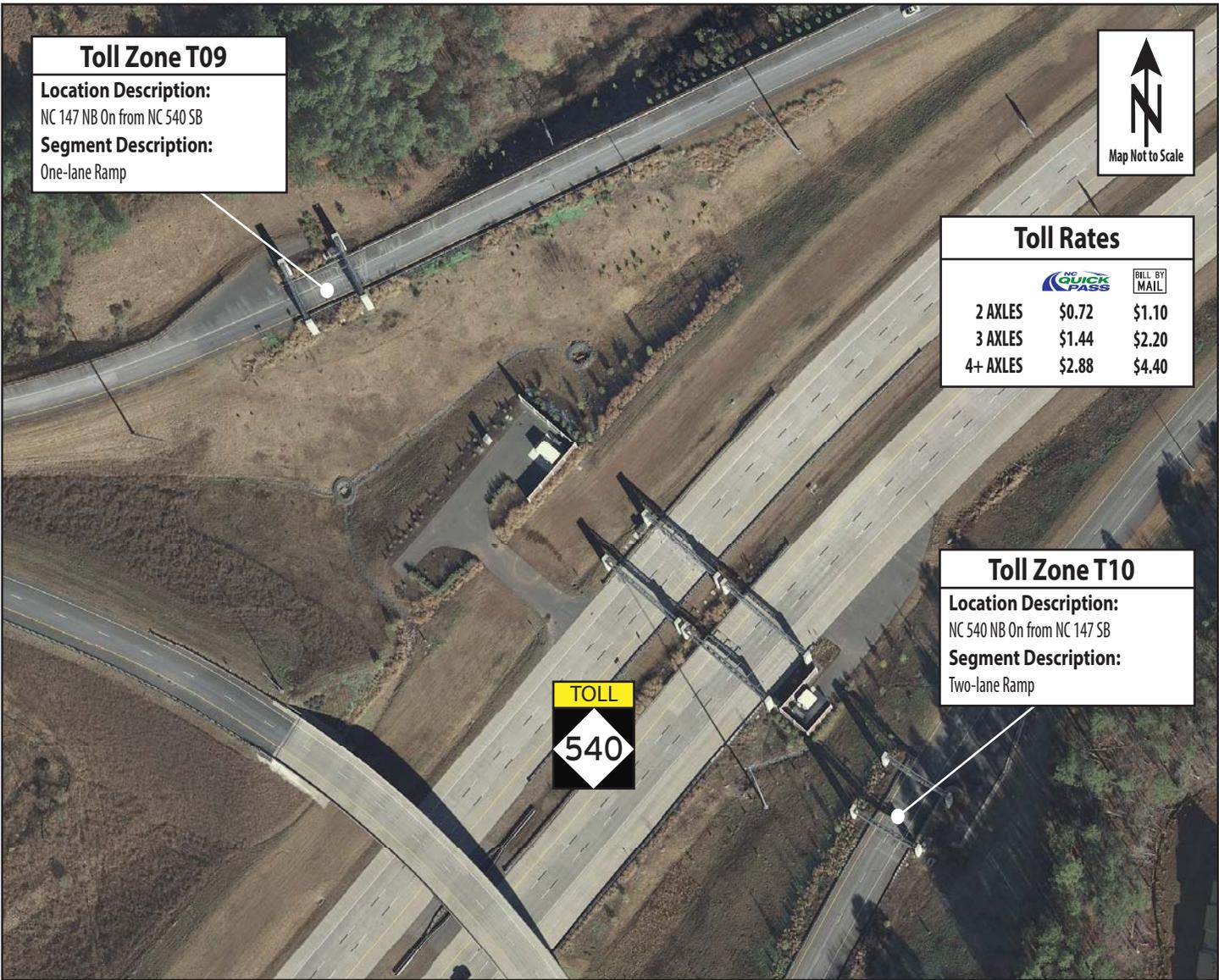
NC Quick Pass Percentage

| Month | T13 | T14 |
|-----------|-----|-----|
| January | 61% | 61% |
| February | 61% | 62% |
| March | 60% | 61% |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |



NC-540 Morrisville Mainline Toll Zones
 2015 Average Weekday Toll Transactions

Figure 21



Toll Zone T09
Location Description:
 NC 147 NB On from NC 540 SB
Segment Description:
 One-lane Ramp

Toll Rates

| 2 AXLES | \$0.72 | \$1.10 |
|----------|--------|--------|
| 3 AXLES | \$1.44 | \$2.20 |
| 4+ AXLES | \$2.88 | \$4.40 |

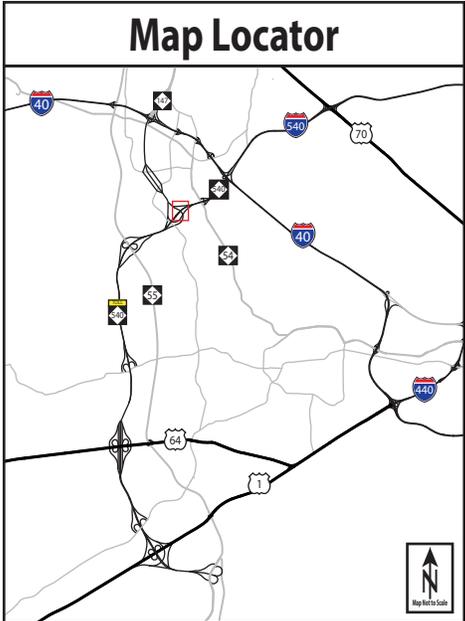
Toll Zone T10
Location Description:
 NC 540 NB On from NC 147 SB
Segment Description:
 Two-lane Ramp

Transactions by Direction

| Month | T09 | T10 |
|-----------|-------|-------|
| January | 1,460 | 1,750 |
| February | 1,490 | 1,700 |
| March | 1,570 | 1,890 |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |

NC Quick Pass Percentage

| Month | T09 | T10 |
|-----------|-----|-----|
| January | 60% | 61% |
| February | 59% | 61% |
| March | 59% | 59% |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |



NC-147 North Ramp Toll Zones
 2015 Average Weekday Toll Transactions

Figure 22



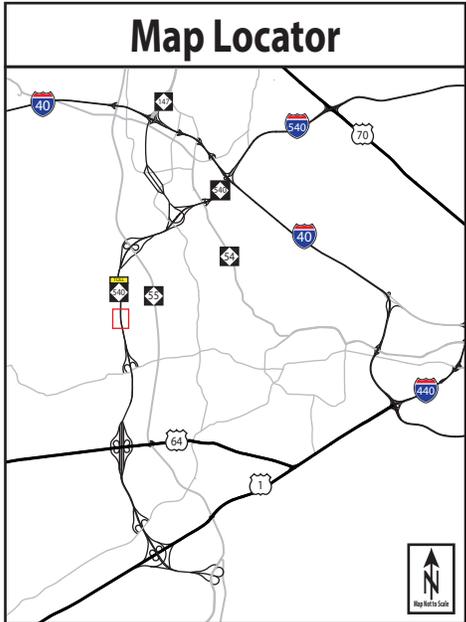
Toll Zone T18
Location Description:
 NC 540 SB, North of Green Level West
Segment Description:
 Three-lane Mainline

Toll Zone T17
Location Description:
 NC 540 NB, North of Green Level West
Segment Description:
 Three-lane Mainline

| Toll Rates | | |
|------------|--------|--------|
| | | |
| 2 AXLES | \$0.72 | \$1.10 |
| 3 AXLES | \$1.44 | \$2.20 |
| 4+ AXLES | \$2.88 | \$4.40 |

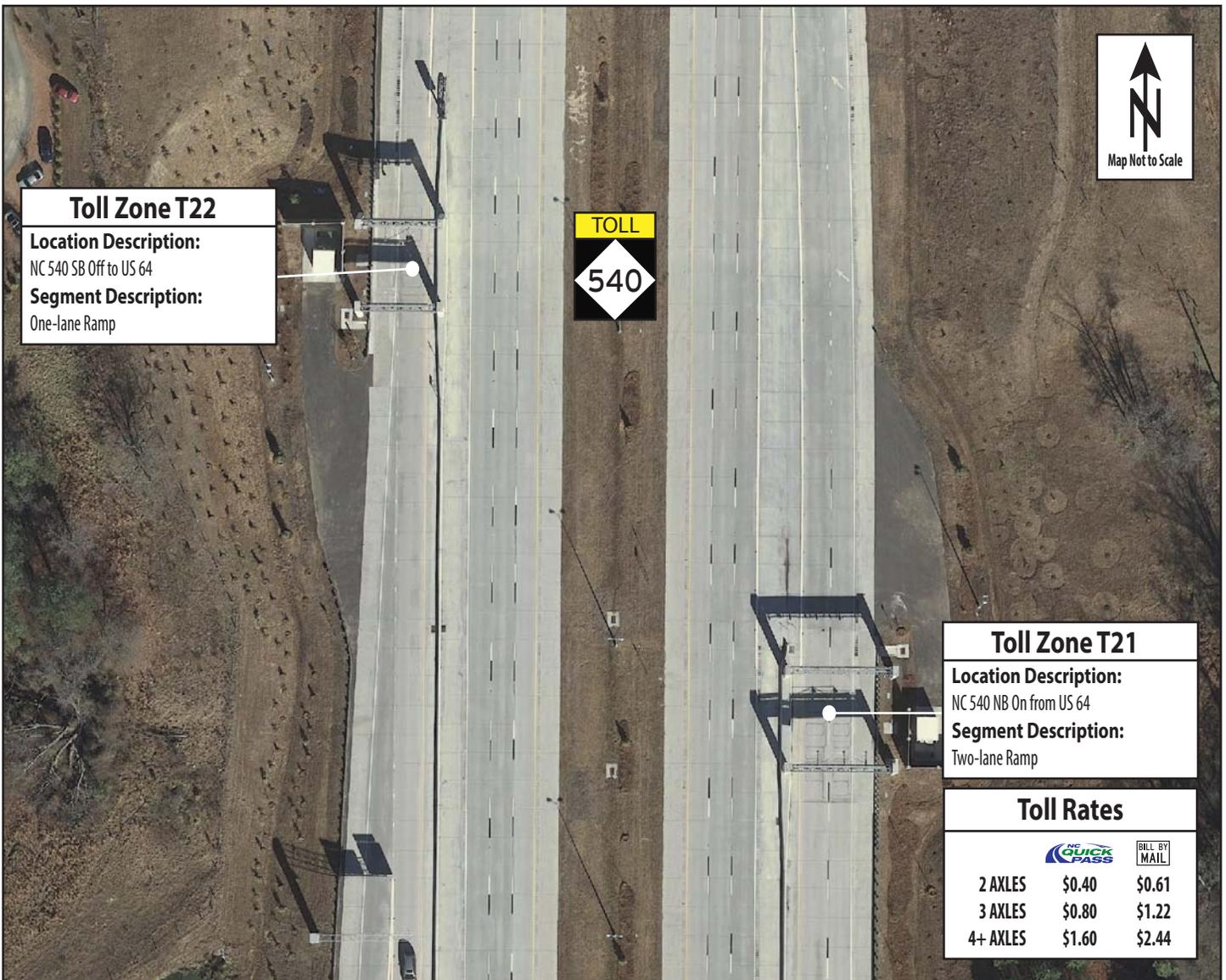
| Transactions by Direction | | |
|---------------------------|--------|--------|
| Month | T17 | T18 |
| January | 11,630 | 12,040 |
| February | 11,990 | 12,210 |
| March | 12,700 | 13,040 |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |

| NC Quick Pass Percentage | | |
|--------------------------|-----|-----|
| Month | T17 | T18 |
| January | 62% | 62% |
| February | 62% | 62% |
| March | 61% | 62% |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |



NC-540 Cary Mainline Toll Zones
 2015 Average Weekday Toll Transactions

Figure 23



Toll Zone T22
Location Description:
 NC 540 SB Off to US 64
Segment Description:
 One-lane Ramp



Toll Zone T21
Location Description:
 NC 540 NB On from US 64
Segment Description:
 Two-lane Ramp

Toll Rates

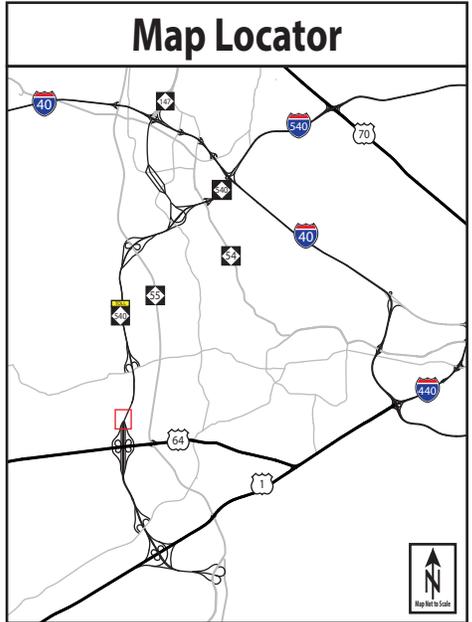
| | | BILL BY MAIL |
|----------|--------|--------------|
| 2 AXLES | \$0.40 | \$0.61 |
| 3 AXLES | \$0.80 | \$1.22 |
| 4+ AXLES | \$1.60 | \$2.44 |

Transactions by Direction

| Month | T21 | T22 |
|-----------|-------|-------|
| January | 3,590 | 3,790 |
| February | 3,720 | 3,850 |
| March | 4,010 | 4,140 |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |

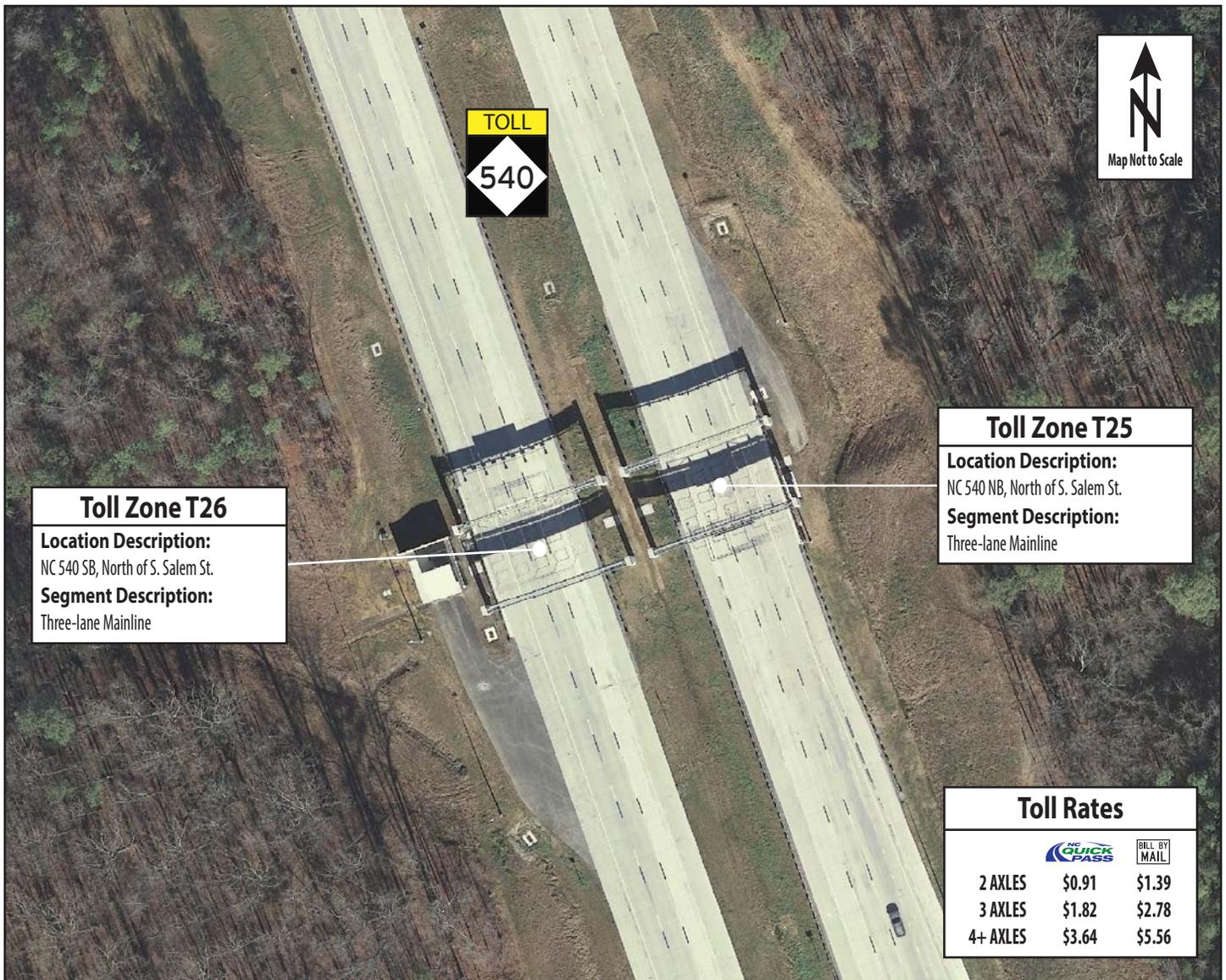
NC Quick Pass Percentage

| Month | T21 | T22 |
|-----------|-----|-----|
| January | 62% | 63% |
| February | 62% | 62% |
| March | 61% | 61% |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |



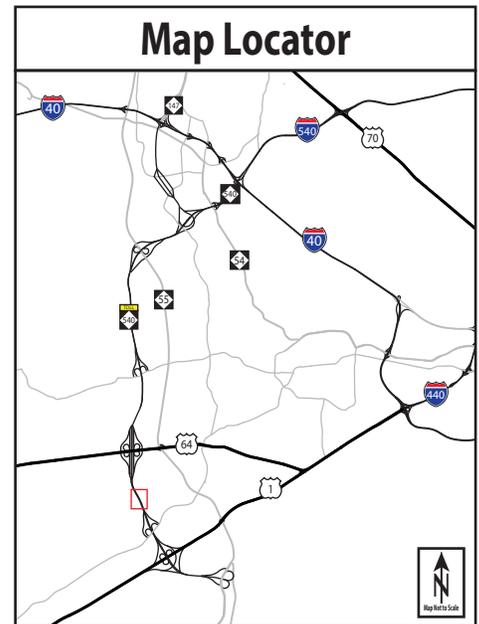
US-64 Ramp Toll Zones
 2015 Average Weekday Toll Transactions

Figure 24



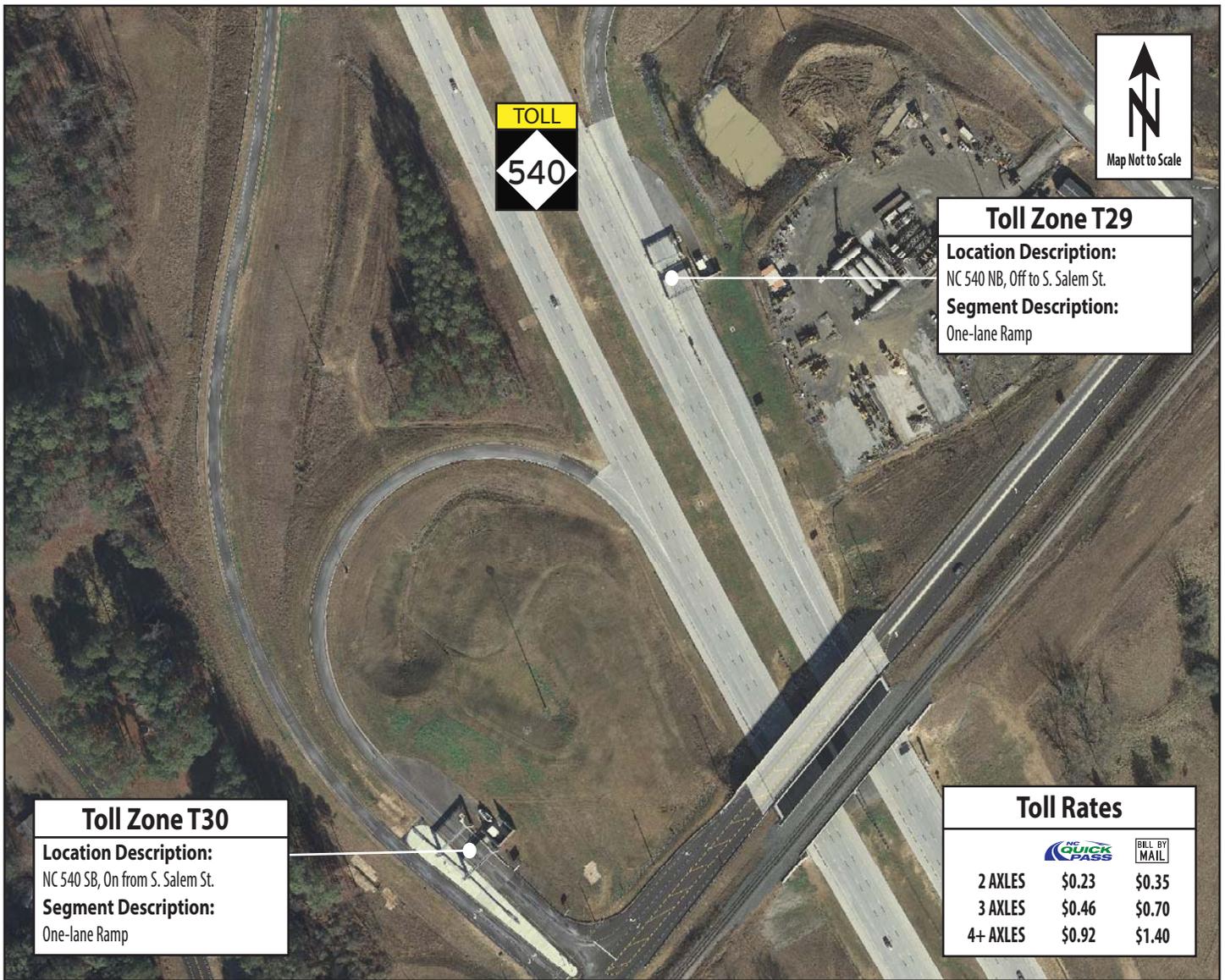
| Transactions by Direction | | |
|----------------------------------|--------|--------|
| Month | T25 | T26 |
| January | 9,500 | 9,340 |
| February | 9,760 | 9,460 |
| March | 10,370 | 10,160 |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |

| NC Quick Pass Percentage | | |
|---------------------------------|-----|-----|
| Month | T25 | T26 |
| January | 60% | 61% |
| February | 60% | 60% |
| March | 60% | 60% |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |



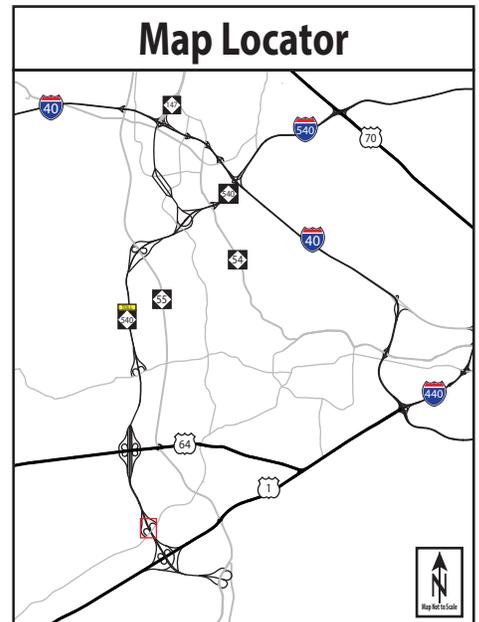
NC-540 Apex Mainline Toll Zones
2015 Average Weekday Toll Transactions

Figure 25



| Transactions by Direction | | |
|---------------------------|-----|-------|
| Month | T29 | T30 |
| January | 880 | 930 |
| February | 900 | 950 |
| March | 950 | 1,010 |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |

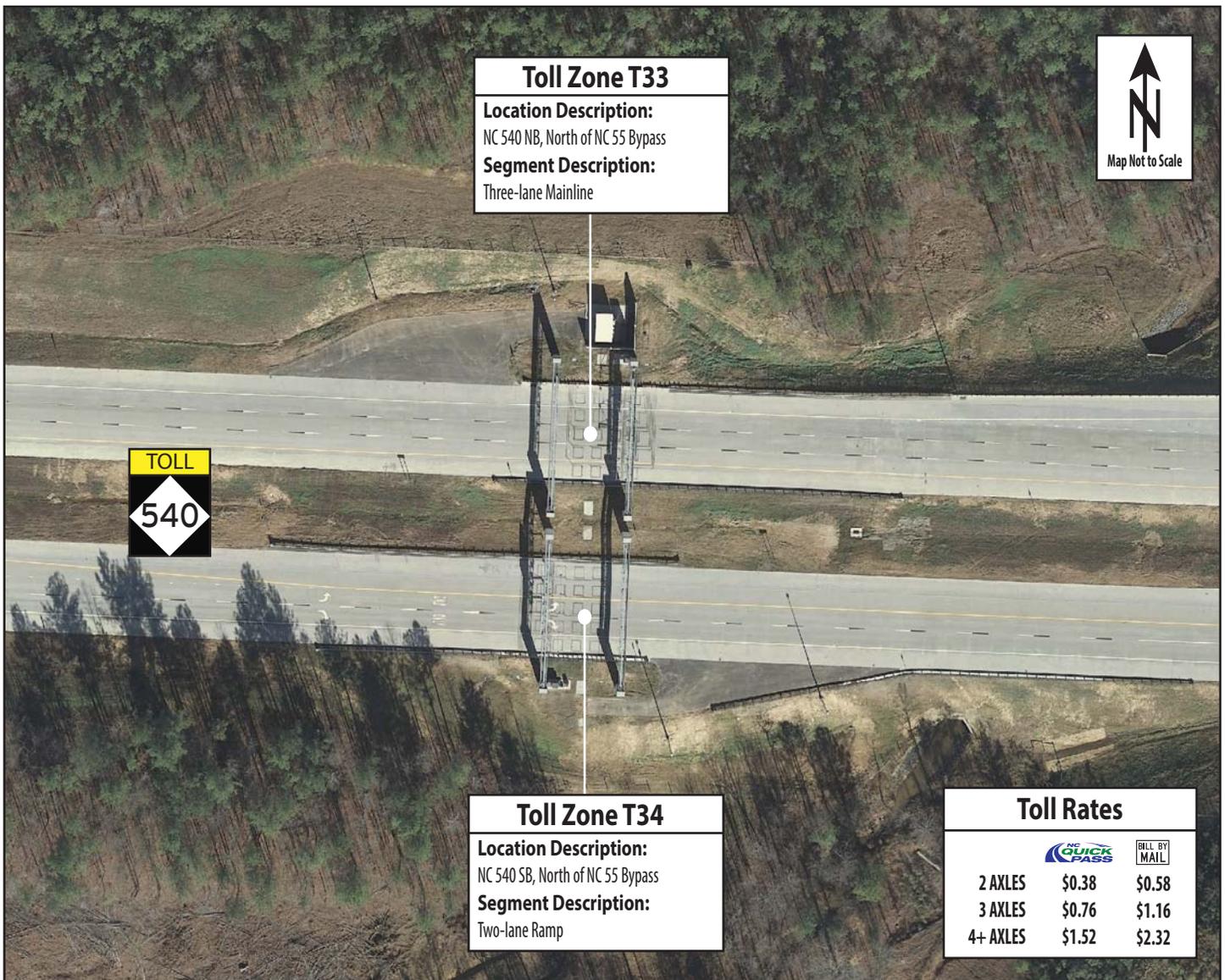
| NC Quick Pass Percentage | | |
|--------------------------|-----|-----|
| Month | T29 | T30 |
| January | 70% | 72% |
| February | 70% | 72% |
| March | 65% | 71% |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |



South Salem Street Ramp Toll Zones

2015 Average Weekday Toll Transactions

Figure 26



Toll Zone T33
Location Description:
 NC 540 NB, North of NC 55 Bypass
Segment Description:
 Three-lane Mainline

Toll Zone T34
Location Description:
 NC 540 SB, North of NC 55 Bypass
Segment Description:
 Two-lane Ramp

Toll Rates

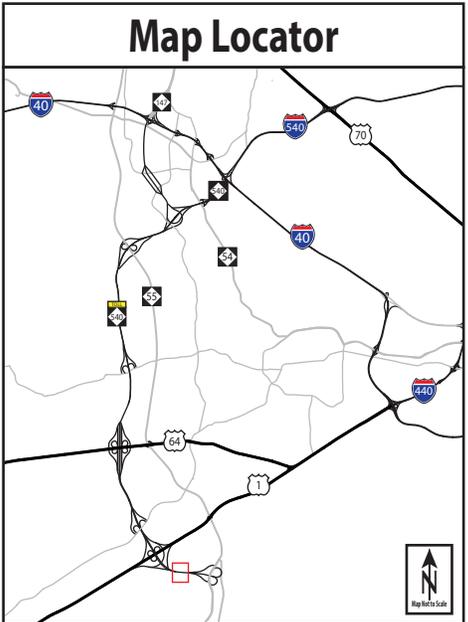
| 2 AXLES | \$0.38 | \$0.58 |
|----------|--------|--------|
| 3 AXLES | \$0.76 | \$1.16 |
| 4+ AXLES | \$1.52 | \$2.32 |

Transactions by Direction

| Month | T33 | T34 |
|-----------|-------|-------|
| January | 6,710 | 6,490 |
| February | 6,910 | 6,500 |
| March | 7,280 | 6,940 |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |

NC Quick Pass Percentage

| Month | T33 | T34 |
|-----------|-----|-----|
| January | 64% | 63% |
| February | 64% | 63% |
| March | 64% | 63% |
| April | - | - |
| May | - | - |
| June | - | - |
| July | - | - |
| August | - | - |
| September | - | - |
| October | - | - |
| November | - | - |
| December | - | - |



NC-540 Holly Springs Mainline Toll Zones
 2015 Average Weekday Toll Transactions

Figure 27

Roadway Operations Statistics

ROADWAY OPERATIONS STATISTICS

Operations statistics are collected by State Highway Patrol (SHP) and Incident Management Assistance Patrol (IMAP) for the NCTA Toll Safety Patrol program. This program provides one Highway Patrol officer and one IMAP responder to the facility during working hours, Monday through Friday. This section also presents response times and traffic information for incidents that occurred during the first quarter of 2015.

The NCTA manages traffic and activities along the Triangle Expressway at the state-of-the-art Traffic Management Center located in the North Carolina National Guard's Joint Force Headquarters in Raleigh.

Highly trained operators monitor the entire length of the Triangle Expressway via closed-circuit TV, microwave speed detectors and interoperable 800MHz radio dispatch from local 911 and statewide Highway Patrol communications, as well as the Turnpike Authority's security cameras and Roadway Weather Information System.

More than 200 cameras are located along the Expressway to monitor traffic operations, ensure security of the toll gantries and capture license plate images used for toll collection operations. Operators monitor the roadside technology and toll facilities, and are able to quickly dispatch maintenance personnel to address any equipment issues or roadway traffic incidents.

Roadway updates are provided to motorists via 10 full-color Dynamic Message Boards (the first full-color message boards in the state), as well as through NCDOT's 511 system and Traveler Information Management System (TIMS) website.

SHP and IMAP personal can be dispatched to respond to any incidents that occur, ranging from disabled motorists and debris to major traffic wrecks that could be detrimental to both motorist safety and toll collection.

Operations Statistics Report for the Triangle Expressway

First Quarter, January – March 2015

Table 11 and *Table 12* present operating statistics for the State Highway Patrol. “Chargeable Activities” are those SHP activities involving fines.

Table 11: SHP Chargeable Activities

| Chargeable Activities | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|
| Speed Violations | 51 | 22 | 56 | | | | | | | | | | 129 |
| Alcohol Violations | 0 | 0 | 0 | | | | | | | | | | 0 |
| Seat Belt Violations | 8 | 1 | 9 | | | | | | | | | | 18 |
| Child Restraint Violations | 0 | 0 | 0 | | | | | | | | | | 0 |
| Other Violations | 35 | 27 | 41 | | | | | | | | | | 103 |
| Total Charges | 94 | 50 | 106 | | | | | | | | | | 250 |

Table 12: SHP Non-Chargeable Activities

| Non-Chargeable Activities | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|----------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|
| Warnings | 72 | 81 | 61 | | | | | | | | | | 214 |
| Vehicles Towed | 0 | 0 | 0 | | | | | | | | | | 0 |
| Crashes Investigated | 3 | 0 | 4 | | | | | | | | | | 7 |
| Total | 75 | 81 | 65 | | | | | | | | | | 221 |

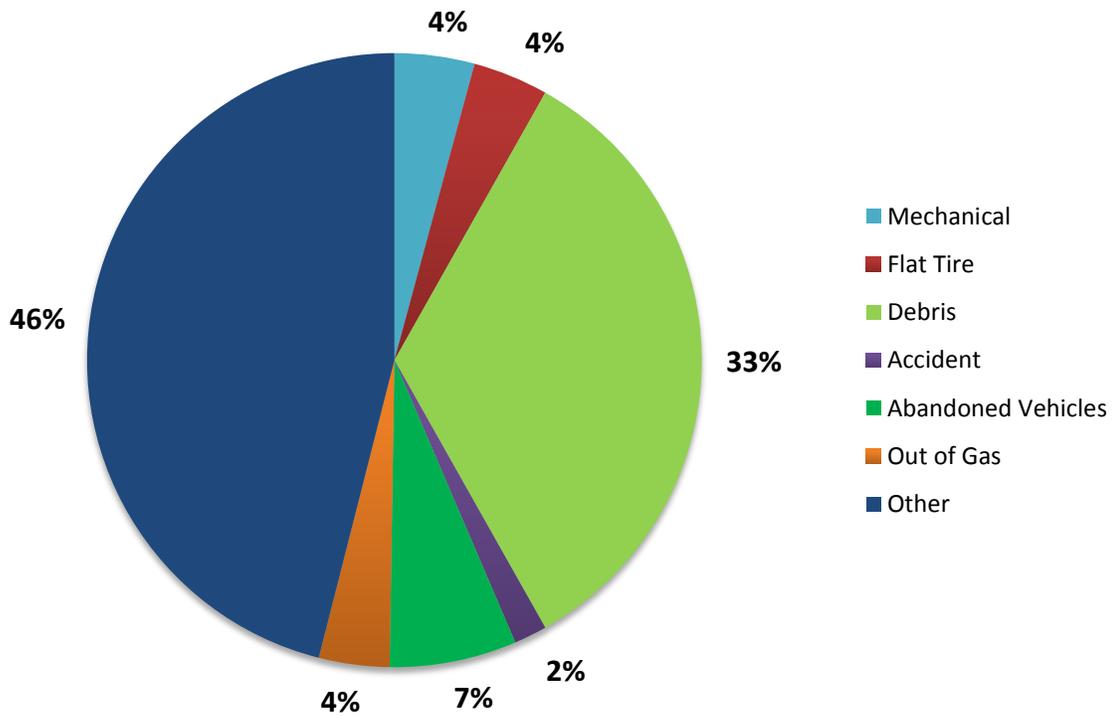
The IMAP assists with stranded motorists and incident clearance, thereby maintaining the flow of traffic along the roadway. *Table 13* and *Figure 28* present the monthly breakdown of IMAP assists, by type, for the Triangle Expressway. The “other” category includes the reporting categories of traffic control, assist other unit, secured load, called for assistance, directions, transported, unable to locate and no assistance.

Table 13: IMAP Assistance

| Assist Type | Jan | Feb | Mar | Apr | May | June | July | Aug | Sep | Oct | Nov | Dec | Total |
|---------------------|------------|------------|------------|-----|-----|------|------|-----|-----|-----|-----|-----|------------|
| Mechanical | 3 | 5 | 9 | | | | | | | | | | 17 |
| Flat Tire | 5 | 4 | 7 | | | | | | | | | | 16 |
| Debris | 32 | 39 | 65 | | | | | | | | | | 136 |
| Accident | 0 | 3 | 4 | | | | | | | | | | 7 |
| Abandoned Vehicles | 4 | 8 | 15 | | | | | | | | | | 27 |
| Out of Gas | 7 | 4 | 4 | | | | | | | | | | 15 |
| Other | 82 | 67 | 37 | | | | | | | | | | 186 |
| Total Assist | 133 | 130 | 141 | | | | | | | | | | 404 |

Figure 28: 2015 YTD IMAP Assistance

2015 YTD IMAP Assistance



Operations Statistics Report for the Triangle Expressway

First Quarter, January – March 2015

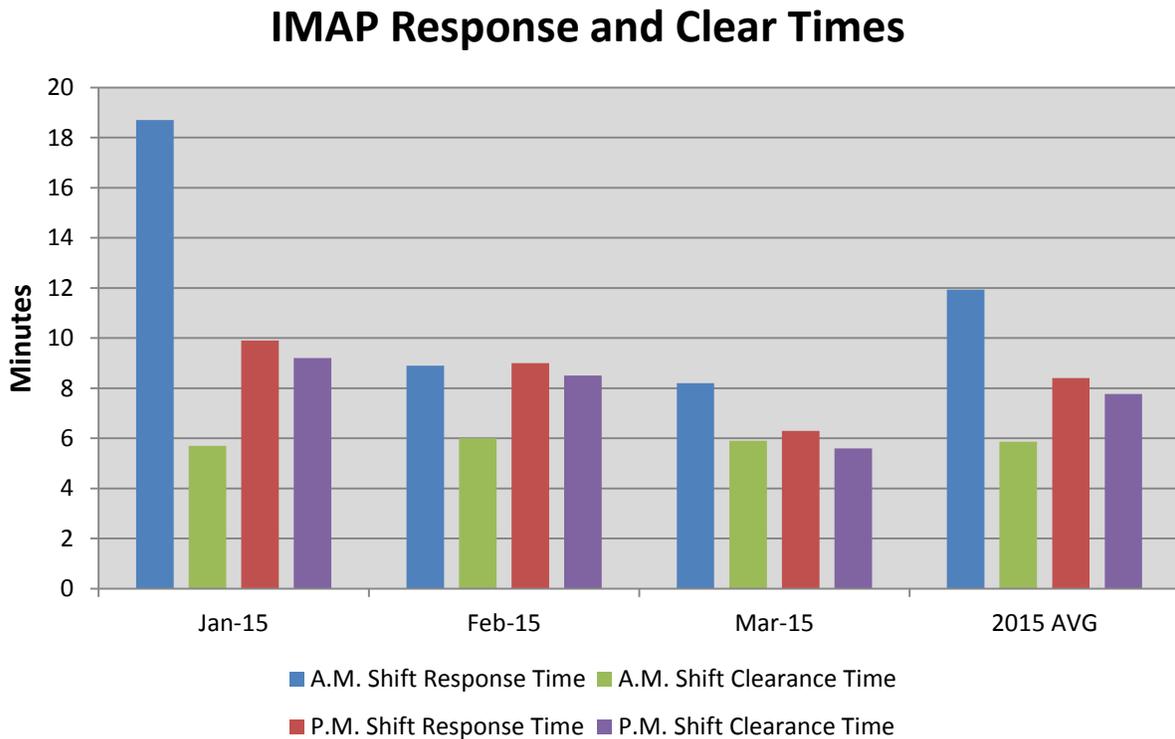
The response and clear times for all IMAP assists are logged by IMAP and provided to the NCTA. Response time is the time from which a responder receives a call to the time they arrive on the scene. Clear time is the time from which it takes the responder to clear the incident and return the roadway to normal operation. The IMAP staff’s AM shift occurs from 6AM to 2PM and the PM shift occurs from 2PM to 10PM. Shift response times may differ due to the number of drivers on duty and their coverage areas.

Table 14 and Figure 29 present the average IMAP assistance response and clear times, in minutes, for the Triangle Expressway.

Table 14: Average IMAP Assistance Response and Clear Times (in Minutes)

| Response Type | Jan | Feb | Mar | Apr | May | June | July | Aug | Sep | Oct | Nov | Dec | 2015 Average |
|----------------------|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|--------------|
| A.M. Shift Response | 19 | 9 | 8 | | | | | | | | | | 12 |
| A.M. Shift Clearance | 6 | 6 | 6 | | | | | | | | | | 6 |
| P.M. Shift Response | 10 | 9 | 6 | | | | | | | | | | 8 |
| P.M. Shift Clearance | 9 | 9 | 6 | | | | | | | | | | 8 |

Figure 29: Average IMAP Assistance Response and Clear Times (in Minutes)



Roadway Maintenance Statistics

ROADWAY MAINTENANCE STATISTICS

This section outlines the NCTA Maintenance Rating Program (MRP), which is a maintenance evaluation program for roadway features and toll facilities. MRP is a comprehensive planning, measuring, and managing process that provides a means for communicating to managers, stakeholders and key customers the impacts of policy and budget decisions on program service delivery.

Using outcome-based performance measures and the service level scale (0 through 100), the inspection results are rated against established threshold criteria. The program analysis is accomplished through the use of sampling procedures that capture the level of service being provided for individual asset features. Over time, these ratings will then be charted to identify work needs and subsequent necessary actions. The evaluations are based on the establishment of threshold conditions that quantify the maximum defect allowed to exist for a characteristic before it is considered unacceptable. The NCTA performance standards, threshold criteria and maintenance rating program were developed through a collaborative effort by NCTA managers, NCDOT maintenance staff, and consultants.

Using field survey information, a maintenance matrix can be developed to show the ties between maintenance activities and the characteristics of various roadway features. The purpose of this evaluation is to provide information that will be used to schedule and prioritize routine maintenance activities and provide uniform maintenance conditions that meet established objectives.

Assessment Schedule

As part of the NCTA MRP, a “baseline” assessment was scheduled to be completed for each newly opened roadway section, soon after opening to toll collection. The baseline assessments included complete inventory data collection and assessment on 100% of the roadway assets.

After the initial baseline assessment was completed, future assessments for that segment switched over to a statistical sampling assessment. Inspections are performed during the months of February, May, August, and November to account for dynamic seasonal changes to assets. These inspections are accomplished through the use of statistically valid, random sampling procedures that capture the level of service for individual assets with a 95% confidence level in sampling.

Assessment Results

Table 15 presents the quarterly and 2015 Annual MRP Assessment rating. It is important to note that the Quarterly Ratings are only representative of the samples inspected during each quarter. Therefore, they are not a statistically valid representation of the assets' conditions; only the 2015 Annual Rating will provide a 95% confidence level in statistical sampling.

Table 15: MRP Assessment Results

| Element | Q1 2015 RATING | Q2 2015 RATING | Q3 2015 RATING | Q4 2015 RATING | 2015 ANNUAL RATING |
|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|
| Road Surface | 98.8 | N/A | N/A | N/A | N/A |
| Unpaved Shoulders | 100.0 | N/A | N/A | N/A | N/A |
| Drainage | 93.0 | N/A | N/A | N/A | N/A |
| Roadside | 88.1 | N/A | N/A | N/A | N/A |
| Traffic Control Devices | 84.4 | N/A | N/A | N/A | N/A |
| Overall MRP Performance Rating | 92.0 | N/A | N/A | N/A | N/A |

N/A (Not Applicable) – MRP Assessment has not been conducted yet.