# LOCAL AREA TRANSPORTATION REVIEW
# ROCK TERRACE SCHOOL/TILDEN MIDDLE SCHOOL
# MONTGOMERY COUNTY, MARYLAND

**Prepared For:**
**Montgomery County Public Schools**

**January 7, 2016**

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**STS Job No.: 6410**

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## INTRODUCTION

Montgomery County Public Schools (MCPS) is proposing to construct a special needs school and middle school on the site which previously supported a holding school and currently operates as a training facility and a private school. The proposed school (Rock Terrace School/Tilden Middle School) will have a core capacity of 1500 middle school students and will support an additional 100 special needs students for a total capacity of 1600 students. The site is located in the southwest corner of the Tilden Lane/Marcliff Road intersection in the North Bethesda Policy Area as shown on Exhibit 1. The school is intended to replace the existing Tilden Middle School currently located in the former Woodward High School facility on Old Georgetown Road which has a current enrollment of 797 students therefore the additional 803 students were analyzed as part of this study.

Street Traffic Studies, Ltd. has been retained to undertake the required traffic study under the provisions of the *Local Area Transportation Review and Transportation Policy Area Review Guidelines* for a site that is already generating more than 30 peak hour trips.

The purpose of the traffic study is to evaluate the adequacy of the transportation facilities that are available to serve the site in accordance with the procedures outlined in the *Local Area Transportation Review and Transportation Policy Area Review Guidelines* as adopted by the Planning Board and published in January 2013. Current traffic data were acquired for eight intersections of public streets in the vicinity of the site. For purposes of this analysis, data collected at the existing Tilden Middle School was used to determine the trip generation characteristics for this school. The analysis described in the following pages demonstrates that the proposed construction of the special needs school/middle school will not cause any study location to exceed the Congestion Standard for the North Bethesda Policy Area of 1550 critical movements. Since this project is being built solely as a public facility by the Montgomery County government it is not required to pay a transportation impact tax.

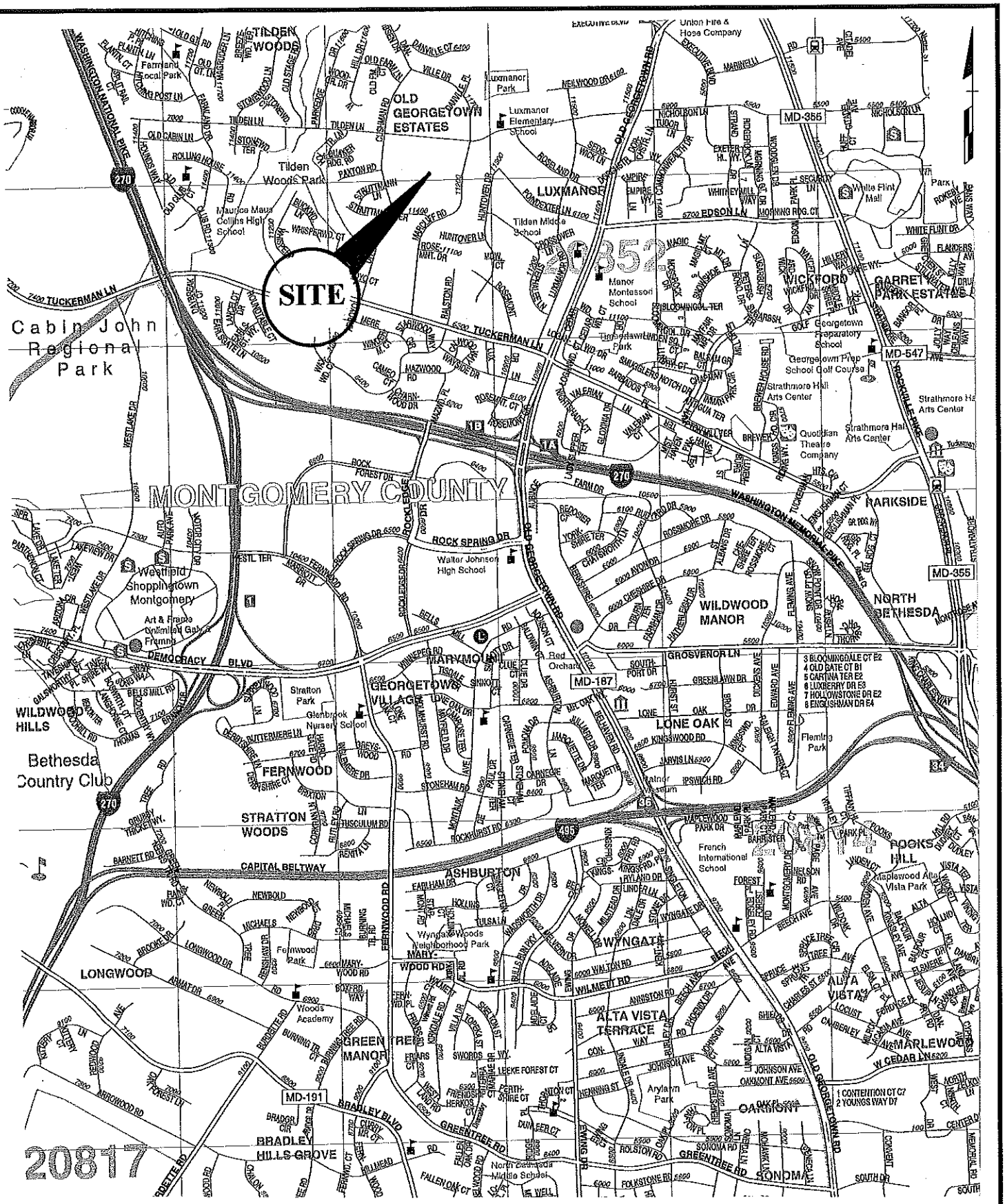


EXHIBIT 1
SITE LOCATION

SCALE: 1" = 2000'

## EXISTING CONDITIONS

### Roadway System Elements

The current Tilden Center site is situated in the southwest corner of the Tilden Lane/Marcliff Road intersection. The site is currently served with an inbound only access on Tilden Lane and two full movement access points on Marcliff Road. The proposed plan will result in an additional access point on Tilden Lane, which together with the existing entrance will serve as the main access points to the site. The existing two full movement access points on Marcliff Road will be retained.

The approach lanes and traffic controls at the intersections analyzed as the basis for this study are shown in Exhibit 2.

***Montrose Road*** is an east-west major roadway. It is a six lane divided highway with exclusive left turn lanes at most intersections within the study area and has a posted speed limit of 40 MPH. Continuous concrete sidewalks are provided along both sides of Montrose Road along this area.

The Montrose Road/Tildenwood Drive intersection is a four legged intersection controlled with signalization. Marked crosswalks with pedestrian signals are provided across the north and south legs of Tildenwood Drive and the east leg of Montrose Road.

***Old Georgetown Road*** is a north-south major roadway. It is a six lane divided highway with exclusive left turn lanes at most intersections within the study area and has a posted speed limit of 40 MPH. Continuous concrete sidewalks are provided along both sides of Old Georgetown Road along this area.

The Old Georgetown Road/Tilden Lane-Nicholson Lane intersection is a four legged intersection controlled with signalization with a split phase on the Tilden Lane/Nicholson Lane approaches. Marked pedestrian crosswalks with pedestrian signals are provided across the north and south legs of Old Georgetown Road and across Tilden Lane and Nicholson Lane.

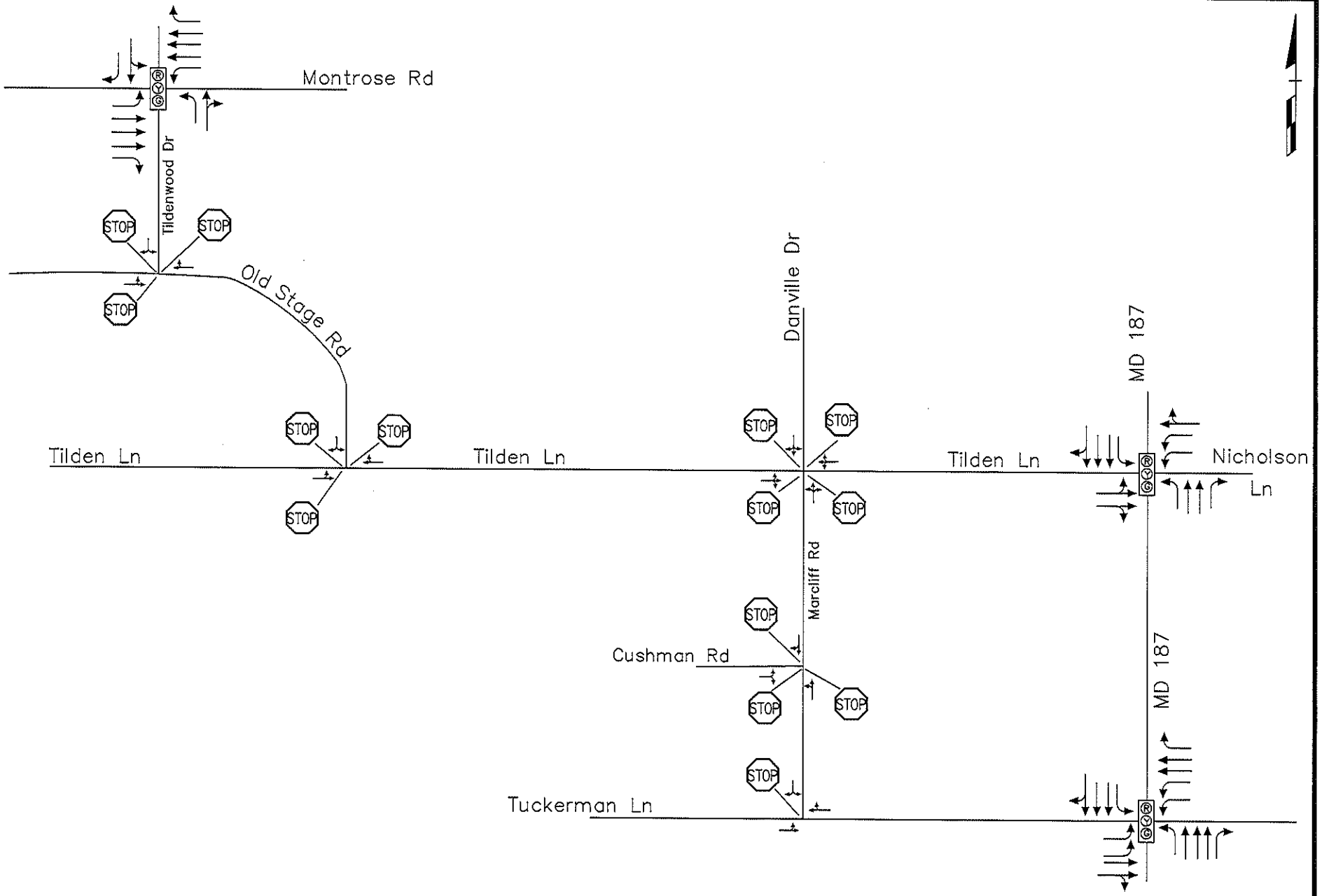


EXHIBIT 2
EXISTING LANE USE

The Old Georgetown Road/Tuckerman Lane intersection is a four legged intersection controlled with signalization with a split phase on the Tuckerman Lane approaches. Marked pedestrian crosswalks with pedestrian signals are provided across the south leg of Old Georgetown Road and both legs of Tuckerman Lane.

***Tuckerman Lane*** is an east-west arterial roadway. It is a two lane undivided open section roadway and has a posted speed limit of 35 MPH. There are no pedestrian facilities along either side of Tuckerman Lane within the study area.

The Tuckerman Lane/Marcliff Road intersection is a "T" type intersection controlled with a Stop sign on the Marcliff Road approach. A turn restriction is in place on eastbound Tuckerman Lane which prohibits left turns onto Marcliff Road between the hours of 4:00 to 6:00 PM, Monday thru Friday.

***Tildenwood Drive*** is a north-south master plan (P11) roadway. It is a two lane undivided roadway and has a posted speed limit of 25 MPH. There are continuous concrete sidewalks along both sides of Tildenwood Drive within the study area and traffic calming devices are in place along this section of Tildenwood Drive.

The Tildenwood Drive/Old Stage Road intersection is a "T" type intersection controlled as an ALL WAY STOP intersection. Marked pedestrian crosswalks are in place on the north leg of this intersection.

***Old Stage Road*** is an U shaped master plan (P9) roadway. It is a two lane undivided roadway and has a posted speed limit of 25 MPH. There are continuous concrete sidewalks along both sides of Old Stage Road within the study area and traffic calming devices are in place along this section of Old Stage Road.

The Old Stage Road/Tilden Lane intersection is a "T" type intersection controlled as an ALL WAY STOP intersection. Marked pedestrian crosswalks in place on the north and west legs of this intersection.

***Tilden Lane*** is an east-west master plan (P7) roadway. It is a two lane undivided roadway and has a posted speed limit of 30 MPH. There are continuous concrete sidewalks along both sides of Tilden Lane within the study area and traffic calming devices are in place along this section of Old Stage Road.

The Tilden Lane/Marcliff Road-Danville Drive intersection is a four legged intersection controlled as an ALL WAY STOP intersection. Marked pedestrian crosswalks are in place on the north, south and west legs of this intersection. Turn restrictions are in place for both east and westbound Tilden Lane motorists which prohibit turns onto Marcliff Road between the hours 7:00 to 9:00 AM, Monday thru Friday.

***Marcliff Road*** is a north-south residential roadway. It is a two lane undivided roadway adjacent to the site; however it transitions to an unmarked two lane roadway south of the site. Marcliff Road does not have a posted speed limit; however speed humps are in place with Advisory Speeds of 20 MPH. There are concrete sidewalks along a portion of the east side of Marcliff Road. This sidewalk ends beyond the school site. Continuous concrete sidewalk is provided along the west side of Marcliff Road across the frontage of the school and this sidewalks continues south to Cushman Road. The sidewalk along Marcliff Road ends at Cushman Road; however the sidewalk continues along the north side of Cushman Road across the frontage of the school site and continues beyond the school property to Tilden Lane.

The Marcliff Road/Cushman Road intersection is a "T" type intersection controlled as an ALL WAY STOP intersection. There are no pedestrian facilities at this intersection.

**Existing Traffic Volumes**

Manual turning movement traffic counts were conducted by Street Traffic Studies, Ltd. in November 2015 at the intersections that were agreed upon with staff and in response to community requests to consider additional intersections. The counts were conducted between 6:30 AM and 9:30 AM in the morning and between 2:00 PM and 5:00 PM in the afternoon/evening. The summarized data for these intersections are included in Appendix A.

Based on the counts conducted at the existing Tilden Middle School the peak hour for the school in the morning was between 7:30 and 8:30 AM; the afternoon peak hour for the school was between 2:30 and 3:30 PM. Therefore the peak one hour traffic flows at the study intersections during these hours are shown in Exhibit 3.

The peak hour traffic volumes shown in Exhibit 3 were subjected to a capacity analysis procedure using the critical lane technique described in M-NCPPC's *LATR/TPAR Guidelines.* The results of the analysis are set forth in Table I and the worksheets from which they are derived are in Appendix B.

**TABLE 1**
**CAPACITY ANALYSES RESULTS**
**(EXISTING PEAK HOUR VOLUMES)**

| INTERSECTION | MORNING PEAK HOUR | EVENING PEAK HOUR |
|---|---|---|
| Montrose Rd @ Tildenwood Dr | (1129) | (1135) |
| Tildenwood Dr @ Old Stage Rd | ( 348) | ( 233) |
| Old Stage Rd @ Tilden Ln | ( 334) | ( 338) |
| Tilden Ln @ Marcliff Rd-Danville Dr | ( 419) | ( 259) |
| MD 187 @ Tilden Ln-Nicholson Ln | (1042) | ( 881) |
| Tuckerman Ln @ Marcliff Rd | (1046) | ( 915) |
| MD 187 @ Tuckerman Ln[1] | (1650) | (1172) |
| Marcliff Rd @ Cushman Rd | ( 139) | ( 113) |

X(0000) - Level of Service(Critical Lane Volume)

As shown in Table I, all of the intersections that were required to be analyzed per M-NCPPC guidelines meet the current Congestion Standard of 1550 critical lane movements for the North Bethesda Policy Area. Only the MD 187/Tuckerman Lane intersection, which is not required to be analyzed and is being included for informational purposes only, does not currently meet the Congestion Standard during the morning peak hour. Thus, there are no existing conditions that require mitigation to provide more street capacity.

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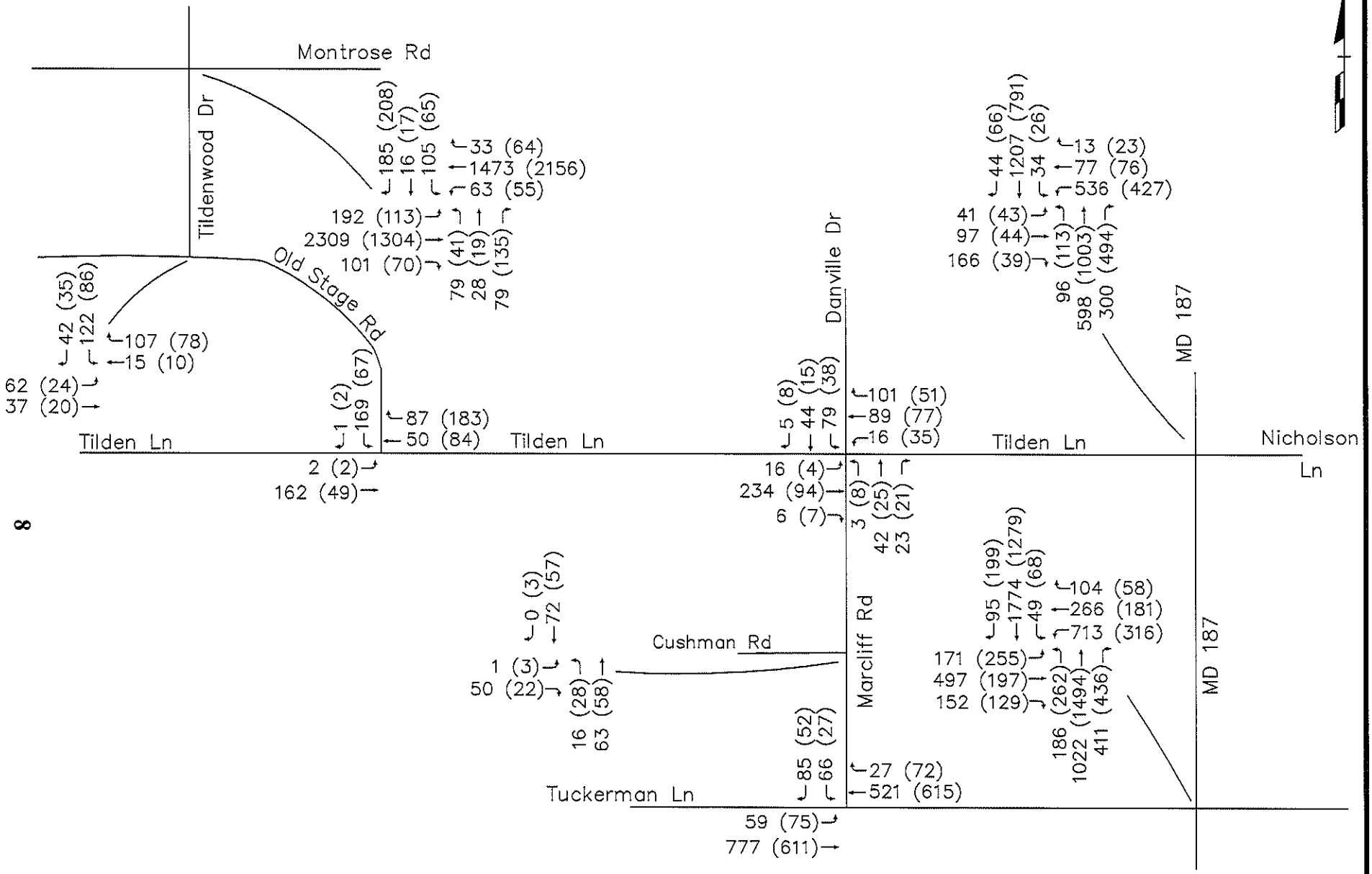
[1] This intersection is included for informational purposes only. It is not required for this analyses per M-NCPPC guidelines. 7




NO SCALE

0000 – MORNING PEAK HOUR
(0000) – EVENING PEAK HOUR

# EXHIBIT 3
# EXISTING TRAFFIC VOLUMES

## School Traffic Circulation and Queuing

Since a school does not currently exist on the site observations of school traffic circulation and queuing was not possible.

A copy of the Proposed Concept Plan is contained in Appendix C.

## BACKGROUND TRAFFIC ANALYSIS

As indicated in the correspondence between the consultant and the staff at M-NCPPC included in Appendix D, there are six background developments in the general vicinity of the site that needed to be analyzed as a part of this study. The details regarding each of these developments are discussed below.

### Planned Developments

In accordance with procedures established by the LATR guidelines, the analysis of the traffic impact of proposed development must include traffic projections for other planned developments in the "vicinity" of the site. The listing of planned developments are shown in Table 2.

**TABLE 2**

**BACKGROUND DEVELOPMENT**

| DEVELOPMENT | LAND USE | DENSITY |
|---|---|---|
| 1. Pike & Rose | Retail | 262,300 s.f |
| | Office | 729,475 s.f. |
| | Restaurant | 97,150 s.f. |
| | Mid-rise apts | 1,107 du's |
| 2. Gables at White Flint | Retail | 31,000 s.f. |
| | Mid-rise apts | 476 du's |
| 3. North Bethesda Market II | Mid-rise apts | 470 du's |
| | Office | 44,840 s.f. |
| | Retail | 190,188 s.f. |
| | Restaurant | 13,500 s.f. |
| 4. North Bethesda Center | Office | 795,378 s.f. |
| | Mid-rise apts | 697 du's |
| | Retail | 140,791 s.f. |
| 5. The Saul Centers | Residential | 655 du's |
| | Office | 175,000 s.f. |
| | Retail | 29,000 s.f. |
| 6. Luxmanor ES | Elementary School | 316 students[2] |

**Trip Generation**

To determine the traffic associated with each of the background developments, trip generation rates for the office, retail and mid-rise apartments were provided by M-NCPPC. The trip rates for the Luxmanor Elementary School were taken from an earlier study at the school derived from counts conducted at the existing school. The trip rates for restaurants were taken from the ITE Trip Generation publication, 9th Edition. The trips generated are shown in Table 3

[2] An expansion project is currently being considered which would result in a core capacity of 745 students. The existing enrollment is 429 students for an increase of 316 students. Since this project has not been approved, it should not be part of this analysis; however it is being included to provide a complete picture of future conditions.

**TABLE 3**
**BACKGROUND TRIP GENERATION**

| DEVELOPMENT | MORNING PEAK HOUR | | | EVENING PEAK HOUR | | |
|---|---|---|---|---|---|---|
| | IN | OUT | TOTAL | IN | OUT | TOTAL |
| Pike & Rose | | | | | | |
| Trips/262,300 s.f | 340 | 209 | 549 | 1054 | 1142 | 2196 |
| Trips/729,475 s.f. | 1084 | 148 | 1232 | 182 | 888 | 1070 |
| Trips/97,150 s.f. | 578 | 472 | 1050 | 574 | 383 | 957 |
| Trips/1,107 du's | 111 | 335 | 446 | 318 | 203 | 521 |
| Total Trips | 2113 | 1164 | 3277 | 2128 | 2216 | 4744 |
| Less 50%[3] | 1057 | 582 | 1639 | 1064 | 1308 | 2372 |
| Gables at White Flint | | | | | | |
| Trips/31,000 s.f. | 74 | 45 | 119 | 229 | 248 | 477 |
| Trips/476 du's | 48 | 145 | 193 | 137 | 88 | 225 |
| Total Trips | 122 | 190 | 312 | 312 | 366 | 678 |
| Less 50% | 61 | 95 | 156 | 183 | 168 | 351 |
| N Bethesda Market II | | | | | | |
| Trips/470 du's | 48 | 143 | 191 | 135 | 87 | 222 |
| Trips/44,840 s.f. | 60 | 8 | 68 | 14 | 71 | 85 |
| Trips/190,188 s.f. | 257 | 158 | 415 | 797 | 863 | 1660 |
| Trips/13,500 s.f. | 80 | 66 | 146 | 80 | 53 | 133 |
| Total Trips | 445 | 375 | 820 | 1026 | 1074 | 2100 |
| Less 50% | 223 | 187 | 410 | 513 | 537 | 1050 |
| Washington Science Center | | | | | | |
| Trips/17,000 s.f. | 18 | 3 | 21 | 7 | 37 | 44 |
| Less 50% | 9 | 2 | 11 | 3 | 19 | 22 |
| Saul Centers | | | | | | |
| Trips/site | 165 | 106 | 272 | 115 | 187 | 302[4] |
| Luxmanor Elementary School | | | | | | |
| Trips/student | 0.455 | 0.348 | 0.803 | 0.151 | 0.185 | 0.336 |
| Trips/316 students | 144 | 110 | 254 | 48 | 58 | 106 |

[3] Consistent with the traffic statements prepared for development projects with the White Flint sector, the trips generated were reduced by 50%.

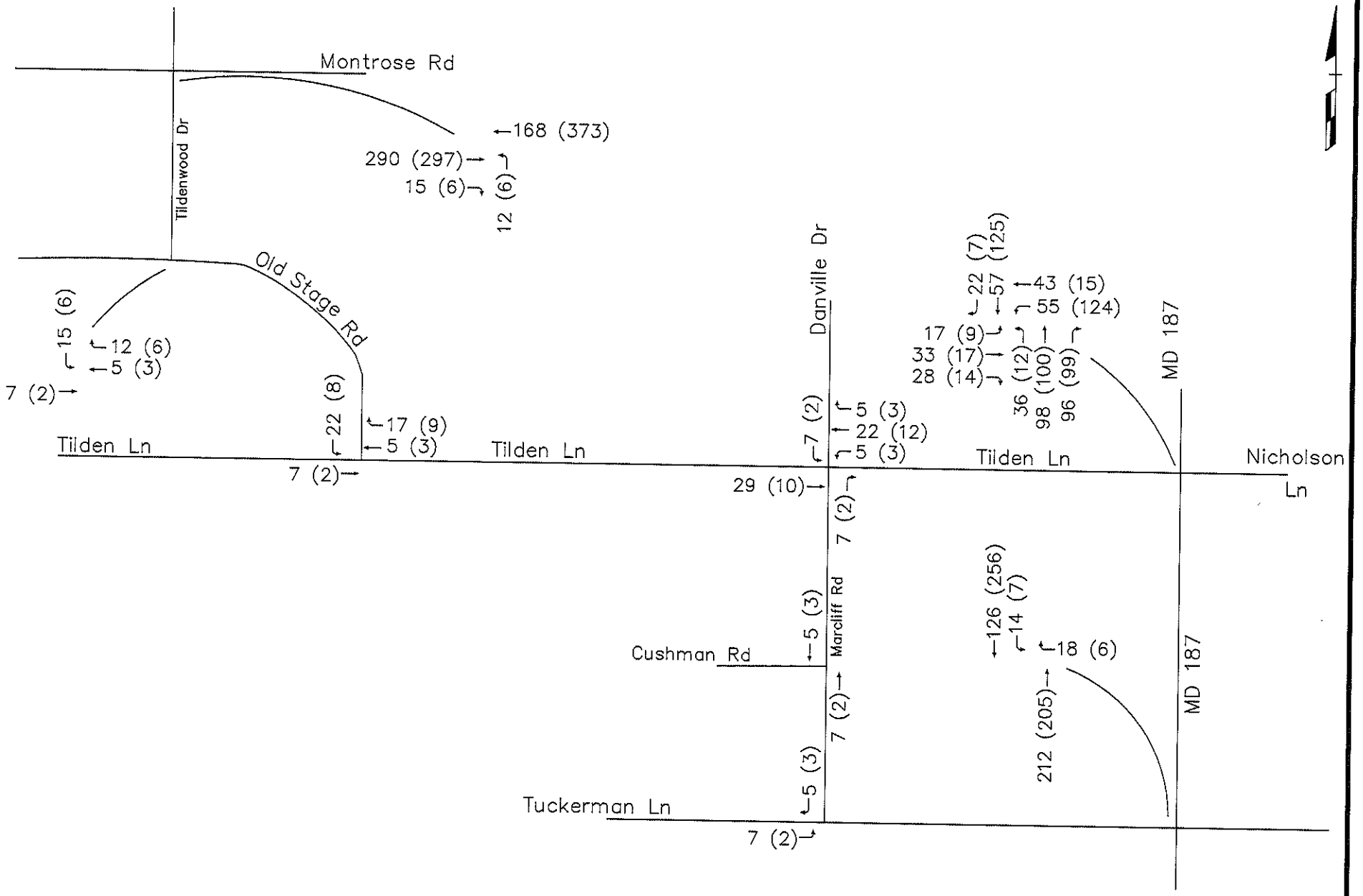


[4] The trips for this development were taken directly from the traffic statement which is included in Appendix D.

## Trip Distribution

The trip distribution for the planned projects was derived through information provided by the M-NCPPC for the Rockville/North Bethesda super district. The total trips generated by the planned developments are shown in Exhibit 4. The individual trip assignment sheets for each development are contained in Appendix D. Adding these trips to the Existing Traffic Volumes yield the Background Traffic Volumes as shown in Exhibit 5.

The peak hour traffic volumes shown in Exhibit 5 were subjected to the same capacity analysis procedures as applied to the existing conditions traffic flows. The results of the analysis are set forth in Table 4 and the worksheets from which they are derived are in Appendix E. As shown by the data in Table 4, none of the intersections that are part of the LATR analyses are projected to exceed the Congestion Standard for the policy area when background trips are added. The only intersection where the Congestion Standard will be exceeded is the MD 187/Tuckerman Lane intersection and that is included for informational purposes only.

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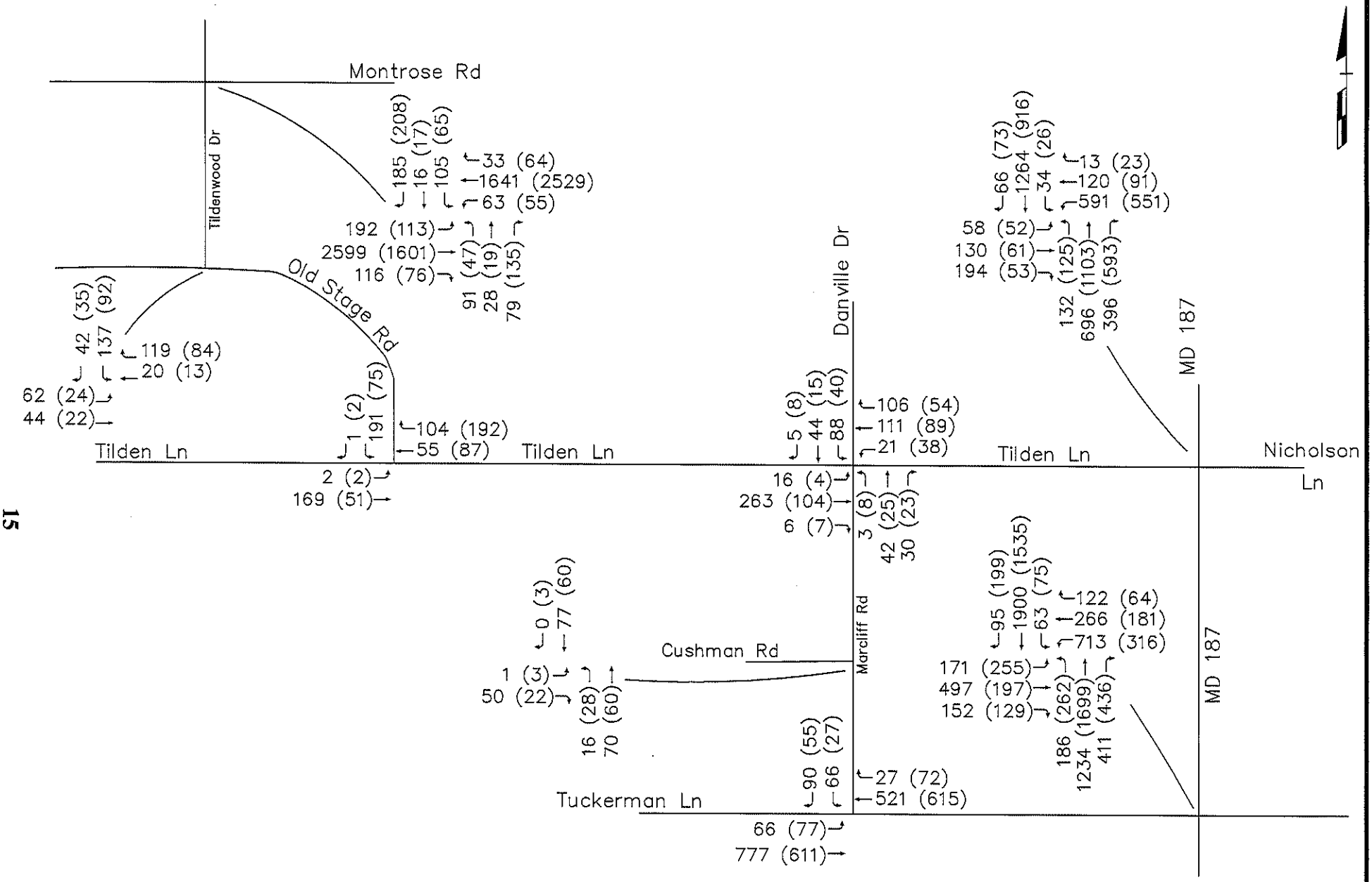
# EXHIBIT 4

## TRIPS GENERATED BY BACKGROUND DEVELOPMENTS

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# EXHIBIT 5
# BACKGROUND TRAFFIC VOLUMES

## TABLE 4
## CAPACITY ANALYSES RESULTS
## (BACKGROUND PEAK HOUR VOLUMES)

| INTERSECTION | MORNING PEAK HOUR | EVENING PEAK HOUR |
|---|---|---|
| Montrose Rd @ Tildenwood Dr | (1248) | (1268) |
| Tildenwood Dr @ Old Stage Rd | ( 280) | ( 248) |
| Old Stage Rd @ Tilden Ln | ( 363) | ( 358) |
| Tilden Ln @ Marcliff Rd-Danville Dr | ( 469) | ( 281) |
| MD 187 @ Tilden Ln-Nicholson Ln | (1181) | (1030) |
| Tuckerman Ln @ Marcliff Rd | (1065) | ( 924) |
| MD 187 @ Tuckerman Ln[5] | (1696) | (1267) |
| Marcliff Rd @ Cushman Rd | ( 144) | ( 116) |

X(0000) - Level of Service(Critical Lane Volume)

[5] This intersection is included for informational purposes only. It is not required for this analyses per M-NCPPC guidelines.

## SITE TRAFFIC ANALYSIS

The existing Tilden Middle School located along Old Georgetown Road near Tuckerman Lane will be relocated to a new facility at the Tilden Lane/Marcliff Road intersection. The new school will replace the existing Tilden Holding Center and consist of the Tilden Middle School with a core capacity of 1500 students and the Rock Terrace School with a capacity for 100 students for a total capacity of 1600 students.

Access to the site will be provided via directional access points on Tilden Lane which will serve as the primary access points for the Tilden Middle School and two full movement access points on Marcliff Road. One of the Marcliff Road access points will serve primarily as the bus loop access, while the second access will serve the Rock Terrace School and staff parking.

### Trip Generation Analysis

Since the Rock Terrace School and Tilden Middle School does not currently exist at this location, a trip generation study was conducted at the existing Tilden Middle School along Old Georgetown Road. In addition, driveway counts were conducted at the existing Tilden Holding Center to determine how many trips are currently generated by the site.

The next step taken was to derive trip generation factors for the site based on the available data. The proposed Rock Terrace School/Tilden Middle School will have a core capacity of 1600 students. The school will replace the existing Tilden Middle School and maintain the existing school boundaries. The existing Tilden Middle School has a current enrollment of 797 students so this proposal will increase the student capacity by 803 students. Further, the proposed school will replace the existing Tilden Holding Center facility. The existing access points to the Tilden Middle School and the Tilden Center were counted and the trips generated by the existing uses are shown in Table 5.

**TABLE 5**

**TRIP GENERATION**

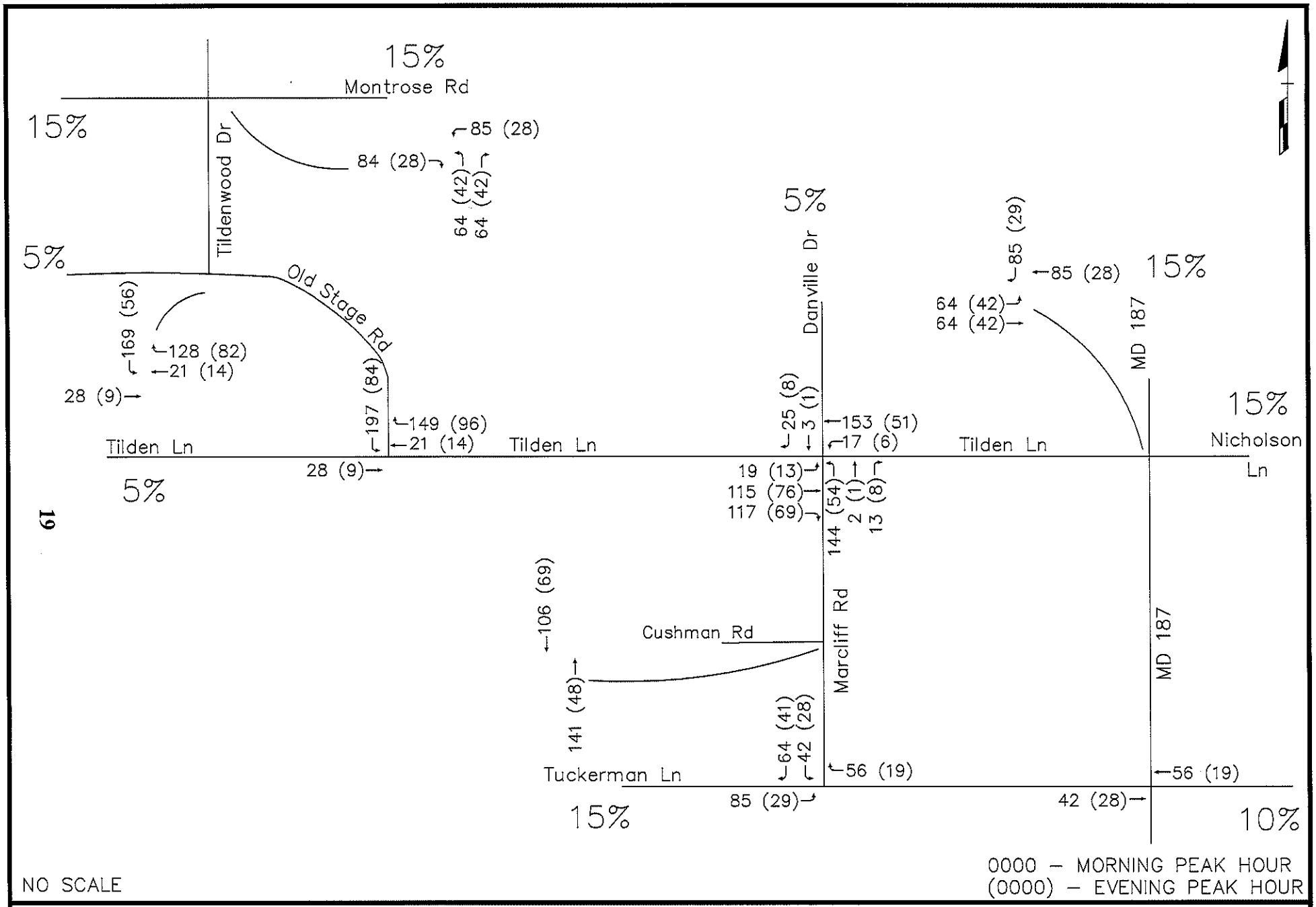
**EXISTING TILDEN MIDDLE SCHOOL/TILDEN HOLDING CENTER**

| LAND USE | MORNING PEAK HOUR | | | EVENING PEAK HOUR | | |
|---|---|---|---|---|---|---|
| | IN | OUT | TOTAL | IN | OUT | TOTAL |
| Existing MS Trips | | | | | | |
| Trips/797 Students | 292 | 224 | 516 | 105 | 140 | 245 |
| Trips/Student | 0.37 | 0.28 | 0.65 | 0.13 | 0.18 | 0.31 |
| Trips/1600 Students | 592 | 448 | 1040 | 208 | 288 | 496 |
| Existing Tilden Ctr Trips | 28 | 23 | 51 | 20 | 9 | 29 |
| Net New Trips | 564 | 425 | 989 | 188 | 279 | 467 |

The above trips were generated during the peak hours analyzed for this use, 7:30 to 8:30 AM and 2:30 to 3:130PM. Since the trips to the Tilden Holding Center will be removed once the proposed school is constructed the above trips were subtracted from the trips generated by the proposed school. Normally, only the trips generated by the additional students would be added to the traffic stream and the incremental impacts analyzed. However in this case since it will be a new location, the trips generated by the full 1600 students were analyzed. Since the school boundaries will remain the same, this will result in a conservative projection of future traffic volumes as the trips associated with the existing 797 students have already been accounted for in the existing traffic volumes. The counts conducted at both the Tilden Middle School and the Tilden Training Center are contained in Appendix A.

## Distribution and Assignment of Generated Trips

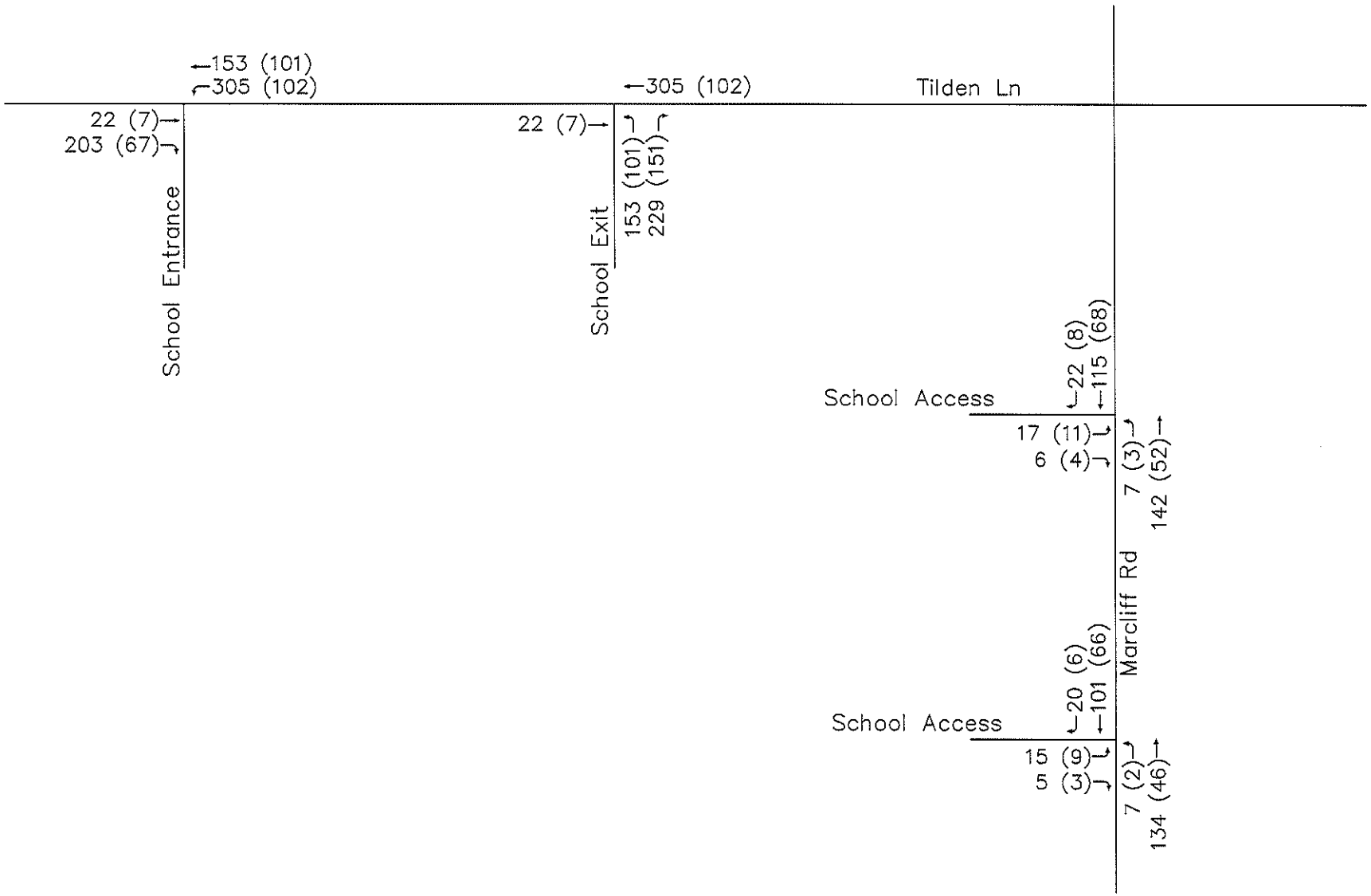
In this step the trips projected to be generated by the proposed school were assigned to the road network. Since this school will maintain the existing boundaries of the Tilden Middle School, the trips were assigned based on those boundaries. The Site Generated Trips (Exhibit 6 and 6A) were added to the Background Traffic Volumes resulting in the Total Traffic Volumes as shown in Exhibit 7. The total traffic volumes were then evaluated using the same methodology as for the previous step. The results of the analyses are shown in Table 6.




NO SCALE

0000 – MORNING PEAK HOUR
(0000) – EVENING PEAK HOUR

# EXHIBIT 6
# SITE GENERATED TRIPS

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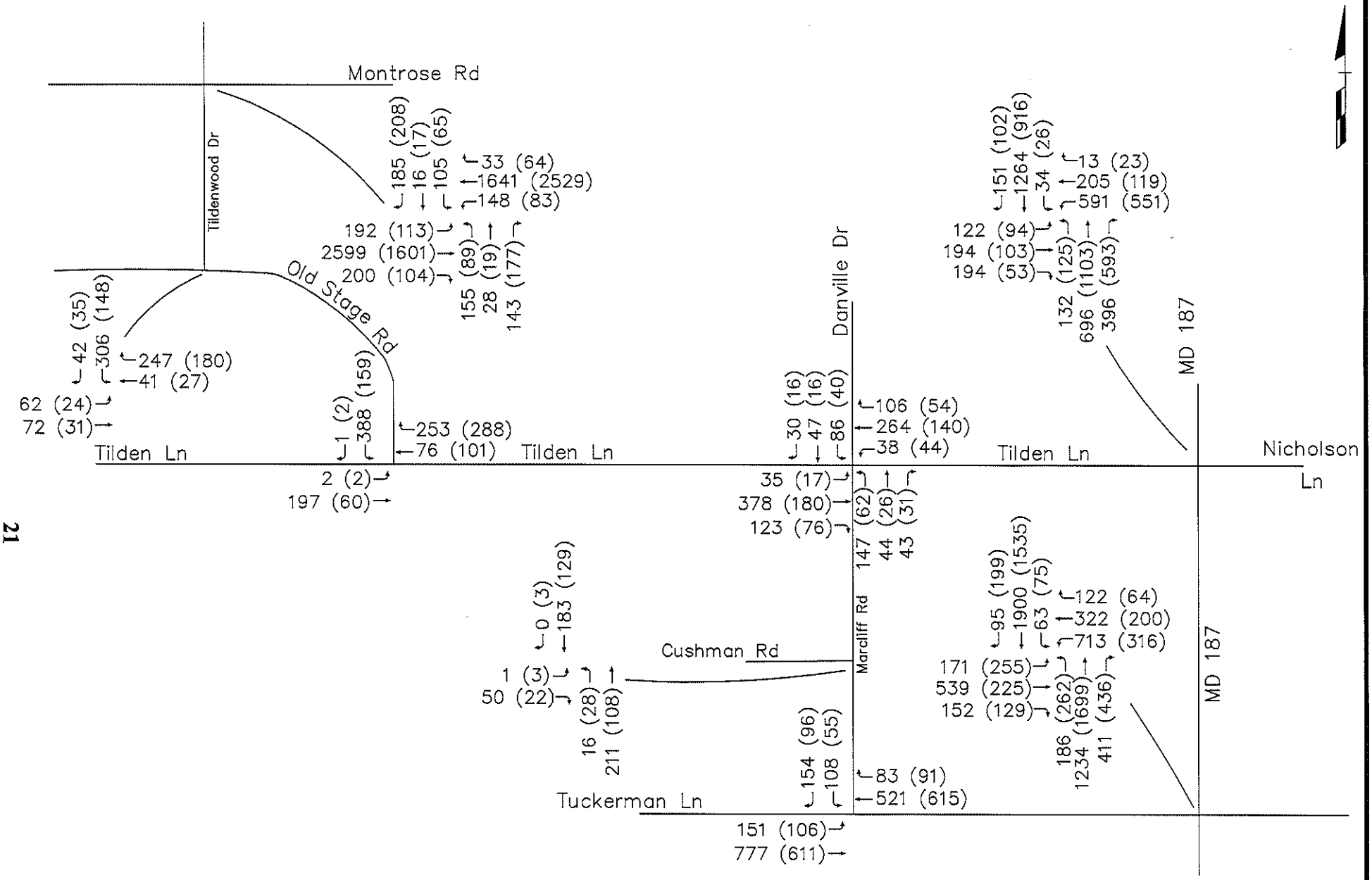
0000 – MORNING PEAK HOUR
(0000) – EVENING PEAK HOUR

# EXHIBIT 6A
# SITE TRIPS AT ACCESS POINTS

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NO SCALE

# EXHIBIT 7
# TOTAL TRAFFIC VOLUMES

## TABLE 6
## CAPACITY ANALYSES RESULTS
## (TOTAL PEAK HOUR VOLUMES)

| INTERSECTION | MORNING PEAK HOUR | EVENING PEAK HOUR |
|---|---|---|
| Montrose Rd @ Tildenwood Dr | (1397) | (1310) |
| Tildenwood Dr @ Old Stage Rd | ( 698) | ( 414) |
| Old Stage Rd @ Tilden Ln | ( 720) | ( 552) |
| Tilden Ln @ Marcliff Rd-Danville Dr | ( 894) | ( 476) |
| MD 187 @ Tilden Ln-Nicholson Ln | (1272) | (1075) |
| Tuckerman Ln @ Marcliff Rd | (1492) | (1080) |
| MD 187 @ Tuckerman Ln[6] | (1718) | (1282) |
| Marcliff Rd @ Cushman Rd | ( 278) | ( 185) |

X(0000) - Level of Service(Critical Lane Volume)

The capacity worksheets are contained in Appendix F.

As shown in Table 6, all of the LARR intersections are projected to meet the current Congestion Standard of 1550 critical lane movements for the North Bethesda Policy Area. Only the Old Georgetown Road/Tuckerman Lane intersection is projected to exceed the Congestion Standard during the morning peak hour.

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[6] This intersection is included for informational purposes only. It is not required for this analyses per M-NCPPC guidelines.

## PEDESTRIAN AND BICYCLIST IMPACT STATEMENT

In accordance with the *LATR/PAMR Guidelines* pedestrian and bicyclist features were inventoried. They are shown on Exhibit 8 and discussed below.

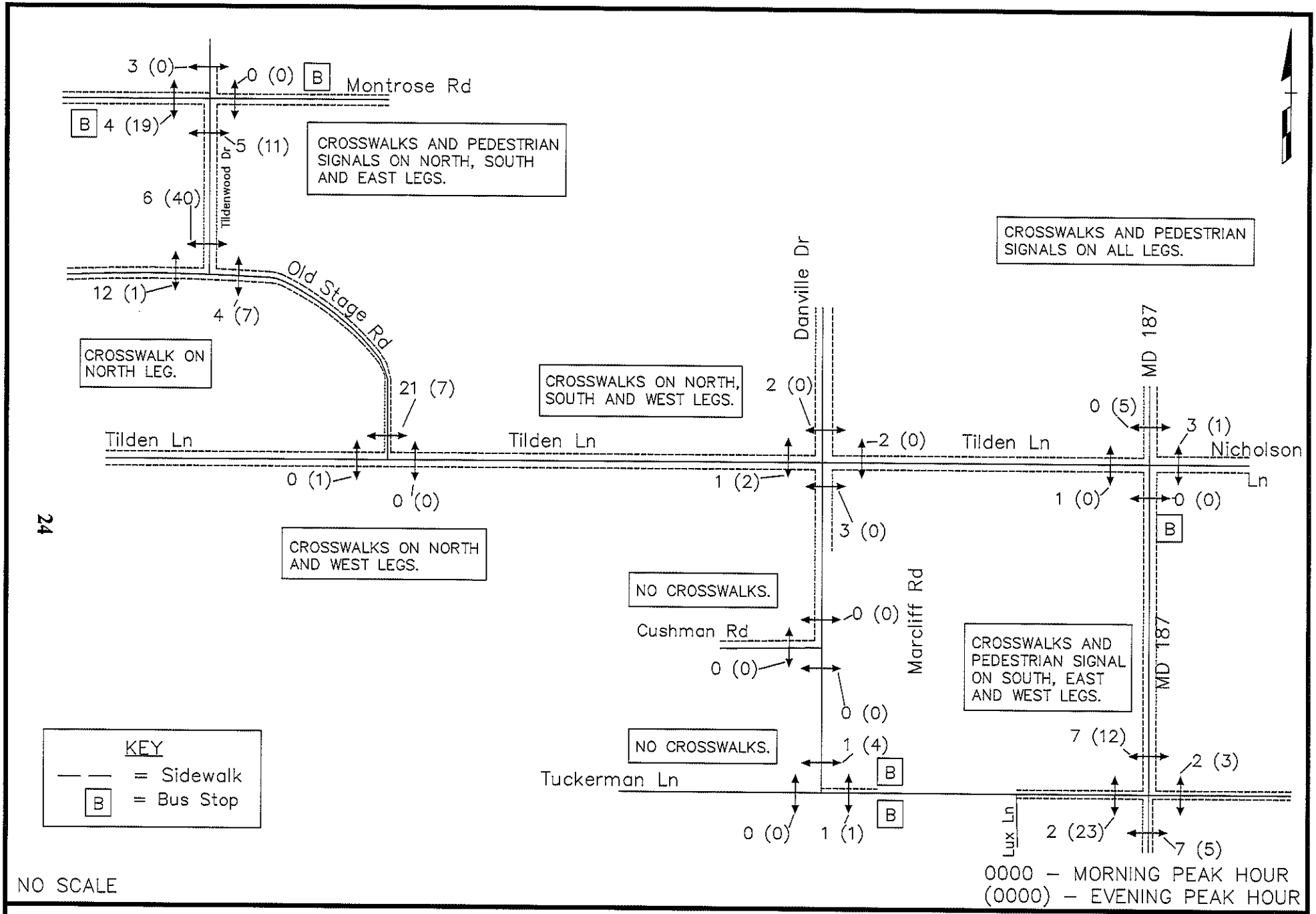
a.) Pedestrian and bicycle counts were performed at the study intersections and are included in Appendix A. These counts show low pedestrian volumes at all of the off-site study intersections.

b.) This project has the potential to increase pedestrian volumes in the immediate vicinity of the school. However the surrounding neighborhood is an established neighborhood with an excellent network of sidewalks and bike paths.

c.) There are no capital or operating modifications necessary to promote and/or maximize safe pedestrian and bicycle access to the site as it is already served with adequate access.

d.) The Rock Terrace School/Tilden Middle School site has direct frontage along Tilden Lane, Marcliff Road and Cushman Road. All of these roads have four (4) foot wide sidewalks along the boundary of the school property. Lead in sidewalks will be provided to the school buildings from Tilden Lane, Marcliff Road and Cushman Road to provide a continuous walkway along these roadways.

e.) The nearest bus stops to the site are located at the Montrose Road/Tildenwood Drive, Old Georgetown Road/Tilden Lane-Nicholson Lane and Tuckerman Lane/Marcliff Road intersections. The Montrose Road/Tildenwood Drive intersection has stops for Ride On routes 42 and 81. The Old Georgetown Road/Tilden Lane-Nicholson Lane intersection has stops for Ride On route 26, while the Tuckerman Lane/Marcilff Road intersection has stops for Ride On route 37.






# EXHIBIT 8
## PEDESTRIAN FEATURES AND VOLUMES

f.) The following pedestrian/bicyclist features are present at the study intersections:

Montrose Road @ Tildenwood Drive - crosswalks are provided across the north and south legs of Tildenwood Drive and the east leg of Montrose Parkway. Pedestrian signals with count down displays are also provided. Handicap ramps are present in each quadrant of the intersection. Four (4) foot wide continuous sidewalks are provided along the north side of Montrose Parkway, both sides of Tildenwood Drive south of Montrose Parkway and along the east side of Tildenwood Drive north of Montrose Parkway. A five (5) foot wide continuous sidewalk is provided along the south side of Montrose Parkway west of Tildenwood Drive and this changes to a 12 foot wide asphalt path east of the intersection. Signal timings were not available for this intersection; however the County is required by law to provide adequate pedestrian walk times.

Old Georgetown Road @ Tilden Drive-Nicholson Lane - crosswalks are provided across all legs of this intersection, supplemented with pedestrian signals with count down displays. Handicap ramps are present in each quadrant of the intersection. Five (5) foot wide continuous sidewalks are provided along both sides of Old Georgetown Road and four (4) foot continuous sidewalks are provided along both sides of Tilden Lane and Nicholson Lane. Signal timings were not available for this intersection; however the County is required by law to provide adequate pedestrian walk times.

Old Georgetown Road @ Tuckerman Lane - crosswalks are provided across the south leg of Old Georgetown Road and both legs of Tuckerman Lane and they are supplemented with pedestrian signals with count down displays. Handicap ramps are present in each quadrant of the intersection. Five (5) foot wide continuous sidewalks are provided along both sides of Old Georgetown Road and four (4) foot continuous sidewalks are provided along both sides of Tuckerman Lane. Signal timings were not available for this intersection; however the County is required by law to provide adequate pedestrian walk times.

Tuckerman Lane @ Marcliff Road - the only pedestrian feature at this unsignalized intersection is a short lead in sidewalk to the bus stop on the north side of Tuckerman Lane east of Marcliff Road. There are 10 foot wide paved shoulders along both sides of Tuckerman Lane in this area.

Tildenwood Drive @ Old Stage Road - there is a marked pedestrian crosswalk across the north leg of this ALL WAY STOP controlled intersection. Four (4) foot wide continuous concrete sidewalks are provided along both sides of Tildenwood Drive and Old Stage Road.

Old Stage Road @ Tilden Lane - there are marked pedestrian crosswalks across the north and west legs of this ALL WAY STOP controlled intersection. Four (4) foot wide continuous concrete sidewalks are provided along both sides of Old Stage Road and Tilden Lane.

Tilden Lane @ Marcliff Road-Danville Drive - there are marked pedestrian crosswalks across the north, south and west legs of this ALL WAY STOP controlled intersection. Four (4) foot wide continuous concrete sidewalks are provided along both sides of all roads at this intersection; however the sidewalk along the east side of Marcliff Road south of Tilden Lane ends approximately mid-way through the school.

Marcliff Road @ Cushman Road - there are no pedestrian crosswalks at this ALL WAY STOP controlled intersection. Four (4) foot wide continuous concrete sidewalks are provided along the west side of Marcliff Road and the north side of Cushman Road.

g.) Bicycle racks will be provided on-site as a result of this reconstruction project.

## TRANSPORTATION POLICY AREA REVIEW

This project is considered a Mandatory Referral, since it is being built solely as a public facility the Montgomery County government is not required to pay a transportation impact tax.

## CONCLUSIONS

A traffic impact study was prepared in accordance with the guidelines published by M-NCPPC for Mandatory Referrals, for projects undertaken by public agencies. The projected relocation and expansion of the Rock Terrace School/Tilden Middle School falls within the parameters of these guidelines.

After collecting current traffic count data at four intersections, it was determined that all the intersections that were analyzed as part of the LATR study met the Congestion Standard for the Rockville/North Bethesda Policy Area of 1550 critical lane movements during the peak hours of school traffic.

The analysis then proceeded to a determination of the trips that could be generated by a projected core capacity of 1600 students at the special needs school/middle school. The new morning and evening peak hour trips were assigned to the intersections included in the study and the capacity analyses were rerun using the procedures set forth in the *LATR/TPAR Guidelines*. The results demonstrate, as shown in Table 6, that all of the LATR locations that were analyzed have projected critical lane volumes that are less than those permitted by the Congestion Standard for the Policy Area and that the additional trips generated by the construction of the Rock Terrace School/Tilden Middle School will not have any adverse effects on the roadway system serving the site.

This mandatory referral is not subject to TPAR requirements as it is a public facility constructed by Montgomery County.

As required by the *LATR/TPAR Guidelines*, pedestrian facilities in the area were also evaluated. The area in which the school is located is a mature neighborhood with continuous sidewalks along the majority of the area roadways to encourage pedestrian traffic to the school. The signalized intersections in the study area are equipped with push-button controlled pedestrian signals to cross the major roadways.