TN TDOT Department of Transportation

Planning Division Traffic Forecasting

The objective of our office is to collect, analyze, and develop traffic data for current and future projects.

Traffic Forecasting

It is used for many purposes such as estimating financial viability of projects, corridor planning, number of lanes, signal design, pavement design, length of turning lanes, and intersection analysis.

Traffic Forecasting is based on twenty years beyond the construction dates [Design Year]. The future is unknown, but special tools and models are used to estimate the future traffic forecasts.

Data provided is used to get base and Design Year average daily traffic, Design Hour Volumes, Truck percentages, and Axle Loads [ADL].

Requesting Traffic

• All requests for Traffic must fill out the Planning Traffic Form.

| | TRAFFIC REPORT REQUEST |
|----------|---|
| TO: | Tony Armstrong, <u>Tony Armstrong@tn.gov</u> Special Projects Office, Planning Division |
| FROM: | Aurora Davenport, Pavement Design, 505 Deadrick Street, Nashville, TN 37243 |
| DATE: | <u>11/7/2021</u> |
| SUBJECT: | COUNTY: Davidson PIN: 131733.00 PROJECT NO. N/A PROJECT DESCRIPTION: SR-45, INTERSECTION @ S.R. 6 & S.R. 45. PROJECTED LETTING DATE: 1/29/2022. |

TRAFFIC ASSIGNMENT:

| BASE | YEAR | | DES | IGN Y | 'EAR | | DES ROADV TRU | VAY % | DESIGN AVERAGE DAILY LOADS | | |
|------|------|------|-----|-------|------|--------------|---------------------|-------|-------------------------------|-------|--|
| AADT | YEAR | AADT | DHV | % | YEAR | DIR. DIS. | DHV | AADT | FLEX | RIGID | |
| | | | | | | | | | | | |

Reviewed By:

Approved By: _____ Date _____ Comments: _____ Date

S Furnish the 2022-2042 AADT & ADL for pavement design on a (6) lane roadway.

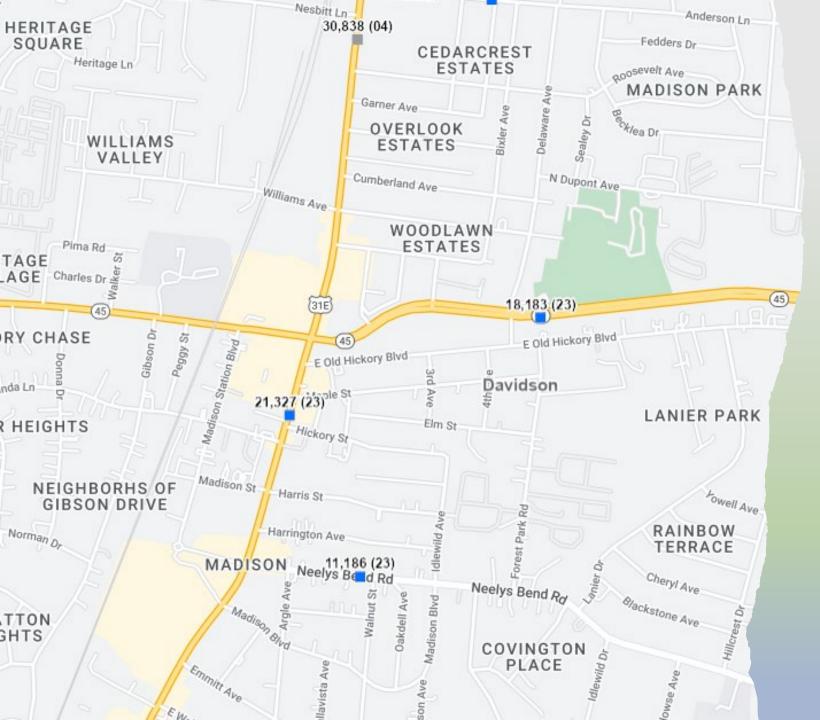
- Furnish the 20xx-20xx ADL for pavement design on a (number of lanes) lane roadway and the present ADT on all crossroads within the limits of the project.
- Furnish the 20xx-20xx ADL for pavement design on a (number of lanes) lane roadway and the present ADT on all crossroads outside the limits of the project. (specify locations)

DHV'S ARE NOT REQUIRED FOR SIDE ROADS LESS THAN 1000 AADT

NOTE: FOR BRIDGE REPLACEMENT PROJECTS, ADLS ARE NOT REQUIRED FOR ADTS OF 1000 OR LESS AND PERCENTAGE OF TRUCKS OF 7% OR LESS. SEE ATTACHMENTS FOR TURNING MOVEMENTS AND/OR OTHER DETAILS.

Types of Data Collected

- Traffic Volume Counts
- Tube Counts
- Ramp Counts
- Classification Counts
- Turning Movement Counts
- Trip Generation
- MPO/TPO Models



TN-Times Traffic Map

AADT a Turning Movement

Turning Movement Count

0600 - 0900 (Weekday 3h Session) (12-14-2021)

All vehicles

| | ٣ | Ma | rthbou | und | | Southbound | | | | Eastbound | | | | | Westbound | | | | | | |
|----------------|-------|--------------------------|--------|--------|-------|------------|----------------------------|-------|--------|---------------------------------|-------|--------|-------|---------------------------------|-----------|-------|-------|-------|------|-------|-------|
| | | | | Pike S | ; | _ | | | Pike N | | TN | 1-45 W | | | lvd | | w | TN-45 | | | |
| | Left | | | U-Turr | | Left | | | U-Turr | | Left | | | U-Turr | | Left | Thru | | | App | Int |
| TIME | 1.1 | 1.2 | 1.3 | 1.4 | Total | 1.5 | 1.6 | 1.7 | 1.8 | Total | 1.9 | 1.10 | 1.11 | 1.12 | Total | 1.13 | 1.14 | 1.15 | 1.16 | Total | Total |
| 0600 - 0615 | 25 | 39 | 15 | 0 | 79 | 4 | 93 | 55 | 0 | 152 | 14 | 60 | 19 | 0 | 93 | 36 | 105 | 4 | 0 | 145 | 469 |
| 0615 - 0630 | 27 | 62 | 26 | 0 | 115 | 4 | 117 | 47 | 0 | 168 | 16 | 69 | 16 | 0 | 101 | 34 | 128 | 5 | 0 | 167 | 551 |
| 0630 - 0645 | 30 | 48 | 26 | 0 | 104 | 3 | 102 | 53 | 0 | 158 | 17 | 93 | 27 | 0 | 137 | 57 | 181 | 8 | 0 | 246 | 645 |
| 0645 - 0700 | 36 | 65 | 38 | 0 | 139 | 17 | 144 | 64 | 0 | 225 | 41 | 109 | 29 | 0 | 179 | 41 | 188 | 10 | 0 | 239 | 782 |
| Hourly Total | 118 | 214 | 105 | 0 | 437 | 28 | 456 | 219 | 0 | 703 | 88 | 331 | 91 | 0 | 510 | 168 | 602 | 27 | 0 | 797 | 2447 |
| 0700 - 0715 | 25 | 71 | 33 | 0 | 129 | 8 | 153 | 61 | 0 | 222 | 32 | 92 | 29 | 0 | 153 | 64 | 180 | 9 | 0 | 253 | 757 |
| 0715 - 0730 | 34 | 81 | 38 | 0 | 153 | 10 | 141 | 77 | 0 | 228 | 28 | 90 | 27 | 0 | 145 | 52 | 211 | 8 | 0 | 271 | 797 |
| 0730 - 0745 | 44 | 80 | 31 | 0 | 155 | 19 | 125 | 46 | 0 | 190 | 28 | 103 | 21 | 0 | 152 | 64 | 205 | 11 | 0 | 280 | 777 |
| 0745 - 0800 | 43 | 106 | 42 | 0 | 191 | 17 | 126 | 43 | 0 | 186 | 54 | 158 | 35 | 0 | 247 | 58 | 227 | 20 | 0 | 305 | 929 |
| Hourly Total | 146 | 338 | 144 | 0 | 628 | 54 | 545 | 227 | 0 | 826 | 142 | 443 | 112 | 0 | 697 | 238 | 823 | 48 | 0 | 1109 | 3260 |
| 0800 - 0815 | 26 | 109 | 28 | 0 | 163 | 14 | 166 | 43 | 0 | 223 | 32 | 109 | 42 | 0 | 183 | 67 | 144 | 20 | 0 | 231 | 800 |
| 0815 - 0830 | 28 | 93 | 32 | 0 | 153 | 10 | 126 | 40 | 0 | 176 | 43 | 124 | 48 | 0 | 215 | 60 | 110 | 19 | 0 | 189 | 733 |
| 0830 - 0845 | 36 | 115 | 33 | 0 | 184 | 16 | 147 | 56 | 0 | 219 | 33 | 84 | 44 | 0 | 161 | 49 | 113 | 12 | 0 | 174 | 738 |
| 0845 - 0900 | 32 | 122 | 25 | 0 | 179 | 21 | 113 | 34 | 0 | 168 | 48 | 83 | 36 | 0 | 167 | 81 | 112 | 17 | 0 | 210 | 724 |
| Hourly Total | 122 | 439 | 118 | 0 | 679 | 61 | 552 | 173 | 0 | 786 | 156 | 400 | 170 | 0 | 726 | 257 | 479 | 68 | 0 | 804 | 2995 |
| | | | | | | | | | | | | | | | | | | | - | | |
| Grand Total | 386 | 991 | 367 | 0 | 1744 | 143 | 1553 | 619 | 0 | 2315 | 386 | 1174 | 373 | 0 | 1933 | 663 | 1904 | 143 | 0 | 2710 | 8702 |
| Approach % | 22.13 | 56.82 | 21.04 | 0.00 | - | 6.18 | 67.08 | 26.74 | 0.00 | - | 19.97 | 60.73 | 19.30 | 0.00 | - | 24.46 | | 5.28 | 0.00 | - | |
| Intersection % | 4.44 | 11.39 | 4.22 | 0.00 | 20.04 | 1.64 | 17.85 | 7.11 | 0.00 | 26.60 | 4.44 | 13.49 | 4.29 | 0.00 | 22.21 | 7.62 | 21.88 | 1.64 | 0.00 | 31.14 | 1 |
| | | | | | | | | | | | | | | | | | | | | | |
| PHF | 0.84 | 0.84 0.86 0.83 0.00 0.87 | | | | | 7 0.79 0.84 0.68 0.00 0.91 | | | 0.66 0.73 0.74 0.00 0.74 | | | | 0.90 0.87 0.74 0.00 0.89 | | | | 0.89 | | | |
| | | | | | | | | | | | | | | | | | | | | 1 | |

Turning Movement Count

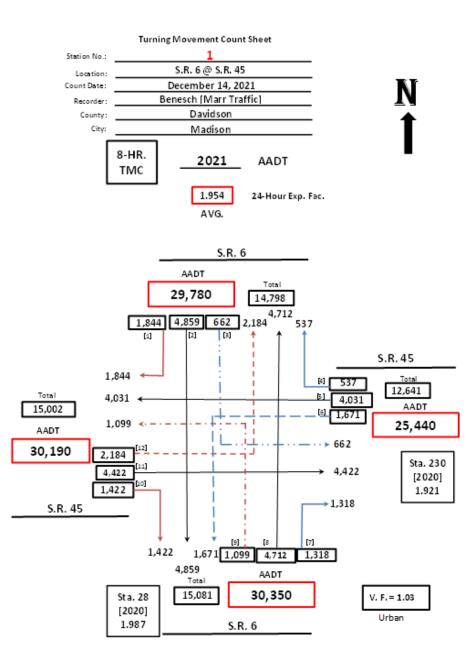
1100 - 1300 (Weekday 2h Session) (12-14-2021) All vehicles

| | | No | rthbou | ınd | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | |
|----------------|-------|--------|----------|--------|-------|------------|--------|----------|--------|-------|-----------|--------|---------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | | TN-6 0 | Gallatin | Pike S | ì | | TN-6 G | iallatin | Pike N | | TN | J-45 W | Old Hid | kory B | lvd | | | TN-45 | | | |
| | Left | Thru | Right | Ú-Turr | Арр | Left | Thru | Right | Ú-Turr | Арр | Left | Thru | Right | U-Turr | Арр | Left | Thru | Right | Ú-Turr | Арр | Int |
| TIME | 1.1 | 1.2 | 1.3 | 1.4 | Total | 1.5 | 1.6 | 1.7 | 1.8 | Total | 1.9 | 1.10 | 1.11 | 1.12 | Total | 1.13 | 1.14 | 1.15 | 1.16 | Total | Total |
| 1100 - 1115 | 47 | 160 | 48 | 0 | 255 | 13 | 136 | 81 | 0 | 230 | 60 | 125 | 67 | 0 | 252 | 64 | 99 | 9 | 0 | 172 | 909 |
| 1115 - 1130 | 31 | 186 | 47 | 0 | 264 | 27 | 144 | 88 | 0 | 259 | 89 | 120 | 46 | 0 | 255 | 41 | 100 | 19 | 0 | 160 | 938 |
| 1130 - 1145 | 51 | 183 | 45 | 0 | 279 | 19 | 169 | 83 | 0 | 271 | 69 | 111 | 45 | 0 | 225 | 56 | 109 | 18 | 0 | 183 | 958 |
| 1145 - 1200 | 40 | 183 | 39 | 0 | 262 | 27 | 161 | 62 | 0 | 250 | 70 | 124 | 43 | 0 | 237 | 47 | 92 | 13 | 0 | 152 | 901 |
| Hourly Total | 169 | 712 | 179 | 0 | 1060 | 86 | 610 | 314 | 0 | 1010 | 288 | 480 | 201 | 0 | 969 | 208 | 400 | 59 | 0 | 667 | 3706 |
| 1200 - 1215 | 31 | 175 | 47 | 0 | 253 | 17 | 143 | 69 | 0 | 229 | 71 | 126 | 52 | 0 | 249 | 65 | 107 | 20 | 0 | 192 | 923 |
| 1215 - 1230 | 42 | 164 | 40 | 0 | 246 | 24 | 174 | 56 | 0 | 254 | 68 | 115 | 73 | 0 | 256 | 54 | 91 | 18 | 0 | 163 | 919 |
| 1230 - 1245 | 28 | 198 | 52 | 0 | 278 | 17 | 168 | 60 | 0 | 245 | 66 | 125 | 66 | 0 | 257 | 51 | 79 | 14 | 0 | 144 | 924 |
| 1245 - 1300 | 22 | 145 | 23 | 0 | 190 | 16 | 156 | 68 | 0 | 240 | 92 | 126 | 73 | 0 | 291 | 43 | 95 | 25 | 0 | 163 | 884 |
| Hourly Total | 123 | 682 | 162 | 0 | 967 | 74 | 641 | 253 | 0 | 968 | 297 | 492 | 264 | 0 | 1053 | 213 | 372 | 77 | 0 | 662 | 3650 |
| | | _ | _ | | | | | | | | | | | | | | | | | | |
| Grand Total | 292 | 1394 | 341 | 0 | 2027 | 160 | 1251 | 567 | 0 | 1978 | 585 | 972 | 465 | 0 | 2022 | 421 | 772 | 136 | 0 | 1329 | 7356 |
| Approach % | 14.41 | 68.77 | 16.82 | 0.00 | - | 8.09 | 63.25 | 28.67 | 0.00 | - | 28.93 | 48.07 | 23.00 | 0.00 | - | 31.68 | 58.09 | 10.23 | 0.00 | - | |
| Intersection % | 3.97 | 18.95 | 4.64 | 0.00 | 27.56 | 2.18 | 17.01 | 7.71 | 0.00 | 26.89 | 7.95 | 13.21 | 6.32 | 0.00 | 27.49 | 5.72 | 10.49 | 1.85 | 0.00 | 18.07 | |
| | | | | | | | | | | | | | | | | | | | | | |
| PHF | 0.75 | 0.98 | 0.95 | 0.00 | 0.95 | 0.83 | 0.91 | 0.86 | 0.00 | 0.93 | 0.84 | 0.95 | 0.89 | 0.00 | 0.95 | 0.80 | 0.94 | 0.88 | 0.00 | 0.89 | 0.97 |
| | | | | | | | | | | | | | | | | | | | | | |

Turning Movement Count

1500 - 1800 (Weekday 3h Session) (12-14-2021) All vehicles

| | | ۴ | No | rthbou | ınd | | Southbound | | | | ۶ | Fa | stbou | nd | | Westbound | | | | | I I | |
|---|----------------|-------|-------|--------|--------|-------|------------|-------|----------|------|-------|-------|-------|---------|------|-----------|-------|-------|-------|--------|-------|-------|
| | | | | | Pike S | 6 | | | iallatin | | | TN | | Old Hid | | lvd | | | TN-45 | | | |
| | | Left | | | Ú-Turr | | Left | | Right | | Арр | Left | | | | | Left | Thru | | Ú-Turr | App | Int |
| | TIME | 1.1 | 1.2 | 1.3 | 1.4 | Total | 1.5 | 1.6 | 1.7 | 1.8 | Total | 1.9 | 1.10 | 1.11 | 1.12 | Total | 1.13 | 1.14 | 1.15 | 1.16 | Total | Total |
| | 1500 - 1515 | 44 | 183 | 44 | 0 | 271 | 28 | 179 | 48 | 0 | 255 | 81 | 154 | 52 | 0 | 287 | 58 | 124 | 26 | 0 | 208 | 1021 |
| | 1515 - 1530 | 36 | 172 | 53 | 0 | 261 | 28 | 197 | 52 | 0 | 277 | 87 | 176 | 51 | 0 | 314 | 38 | 120 | 29 | 0 | 187 | 1039 |
| | 1530 - 1545 | 31 | 204 | 40 | 0 | 275 | 32 | 163 | 54 | 0 | 249 | 63 | 156 | 49 | 0 | 268 | 51 | 114 | 13 | 0 | 178 | 970 |
| | 1545 - 1600 | 36 | 203 | 47 | 0 | 286 | 23 | 156 | 53 | 0 | 232 | 90 | 184 | 59 | 0 | 333 | 47 | 109 | 19 | 0 | 175 | 1026 |
| | Hourly Total | 147 | 762 | 184 | 0 | 1093 | 111 | 695 | 207 | 0 | 1013 | 321 | 670 | 211 | 0 | 1202 | 194 | 467 | 87 | 0 | 748 | 4056 |
| | 1600 - 1615 | 41 | 180 | 49 | 0 | 270 | 20 | 141 | 64 | 0 | 225 | 108 | 198 | 42 | 0 | 348 | 50 | 127 | 13 | 0 | 190 | 1033 |
| | 1615 - 1630 | 35 | 225 | 58 | 0 | 318 | 17 | 188 | 47 | 0 | 252 | 101 | 179 | 33 | 0 | 313 | 47 | 90 | 24 | 0 | 161 | 1044 |
| | 1630 - 1645 | 39 | 185 | 49 | 0 | 273 | 48 | 172 | 57 | 0 | 277 | 117 | 229 | 53 | 0 | 399 | 54 | 133 | 20 | 0 | 207 | 1156 |
| | 1645 - 1700 | 40 | 199 | 61 | 0 | 300 | 34 | 151 | 64 | 0 | 249 | 93 | 210 | 52 | 0 | 355 | 57 | 134 | 22 | 0 | 213 | 1117 |
| | Hourly Total | 155 | 789 | 217 | 0 | 1161 | 119 | 652 | 232 | 0 | 1003 | 419 | 816 | 180 | 0 | 1415 | 208 | 484 | 79 | 0 | 771 | 4350 |
| | 1700 - 1715 | 32 | 198 | 55 | 0 | 285 | 32 | 199 | 53 | 0 | 284 | 117 | 186 | 46 | 0 | 349 | 46 | 102 | 23 | 0 | 171 | 1089 |
| | 1715 - 1730 | 29 | 171 | 50 | 0 | 250 | 34 | 177 | 54 | 0 | 265 | 111 | 201 | 44 | 0 | 356 | 51 | 113 | 18 | 0 | 182 | 1053 |
| | 1730 - 1745 | 36 | 214 | 49 | 0 | 299 | 21 | 167 | 54 | 0 | 242 | 107 | 201 | 52 | 0 | 360 | 49 | 115 | 22 | 0 | 186 | 1087 |
| | 1745 - 1800 | 22 | 193 | 55 | 0 | 270 | 42 | 165 | 58 | 0 | 265 | 138 | 202 | 51 | 0 | 391 | 39 | 74 | 29 | 0 | 142 | 1068 |
| | Hourly Total | 119 | 776 | 209 | 0 | 1104 | 129 | 708 | 219 | 0 | 1056 | 473 | 790 | 193 | 0 | 1456 | 185 | 404 | 92 | 0 | 681 | 4297 |
| | | | | | | | | | | | | | | | | | | | | | | |
| | Grand Total | 421 | 2327 | 610 | 0 | 3358 | 359 | 2055 | 658 | 0 | 3072 | 1213 | 2276 | 584 | 0 | 4073 | 587 | 1355 | 258 | 0 | 2200 | ### |
| | Approach % | 12.54 | 69.30 | 18.17 | 0.00 | - | 11.69 | 66.89 | 21.42 | 0.00 | - | 29.78 | 55.88 | 14.34 | 0.00 | - | 26.68 | 61.59 | 11.73 | 0.00 | - | |
| L | Intersection % | 3.31 | 18.32 | 4.80 | 0.00 | 26.43 | 2.83 | 16.18 | 5.18 | 0.00 | 24.18 | 9.55 | 17.92 | 4.60 | 0.00 | 32.06 | 4.62 | 10.67 | 2.03 | 0.00 | 17.32 | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | PHF | 0.88 | 0.95 | 0.88 | 0.00 | 0.92 | 0.77 | 0.88 | 0.89 | 0.00 | 0.95 | 0.94 | 0.90 | 0.92 | 0.00 | 0.91 | 0.91 | 0.90 | 0.90 | 0.00 | 0.91 | 0.95 |
| | | | | | | | | | | | | | | | | | | | | | | 1 |



Variation Factors [8]



Seasonal Factors By Day and Month for 1/1/2023 - 12/31/2023

| Seasonal F | actors | | | | | | | |
|-----------------------|--------|--------|--------|---------|-----------|----------|--------|----------------------|
| Group | Month | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
| Urban | Jan | 1.431 | 1.026 | 0.999 | 0.987 | 0.98 | 0.936 | 1.14 |
| Principal Arterial | Feb | 1.344 | 0.989 | 0.932 | 0.961 | 0.99 | 0.907 | 1.104 |
| | Mar | 1.288 | 0.964 | 0.954 | 0.949 | 0.931 | 0.91 | 1.057 |
| | Apr | 1.249 | 0.958 | 0.926 | 0.936 | 0.923 | 0.901 | 1.015 |
| | Мау | 1.283 | 0.943 | 0.939 | 0.915 | 0.899 | 0.868 | 1.057 |
| | Jun | 1.285 | 0.996 | 0.941 | 0.945 | 0.917 | 0.874 | 1.053 |
| | Jul | 1.378 | 0.973 | 0.933 | 0.942 | 0.915 | 0.887 | 1.109 |
| | Aug | 1.369 | 0.954 | 0.916 | 0.924 | 0.907 | 0.872 | 1.085 |
| | Sep | 1.355 | 0.948 | 0.931 | 0.912 | 0.899 | 0.849 | 1.071 |
| | Oct | 1.376 | 0.969 | 0.927 | 0.93 | 0.914 | 0.87 | 1.072 |
| | Nov | 1.382 | 0.956 | 0.949 | 0.921 | 0.907 | 0.869 | 1.099 |
| | Dec | 1.364 | 0.924 | 0.922 | 0.909 | 0.893 | 0.868 | 1. <mark>1</mark> 23 |

Roadway Designations:

- 1. Freeway & Expressway
- 2. Lower FC (Rural County Rds.)
- 3. Rural Interstate
- 4. Rural Minor Arterial
- 5. Rural Principal Arterial
- 6. Urban Interstate
- 7. Urban Minor Arterial
- 8. Urban Principal Arterial

🕨 ... 🛛 Rural Principal Arterial

Urban Interstate Urban

Urban Minor Arterial Urban Principal Arterial

Traffic Counts

Station 28

Volume Count Report

| Station 2 | 28 |
|-----------|----|
|-----------|----|

| AADT | 0 | | | | | | | Graph |
|------|------|---------------------|----------|----|-----|--------------|------------|-------|
| | Year | AADT | DHV-30 | К% | D % | PA | BC | Src |
| | 2023 | 21,327 | 1,527 | 7 | 58 | 19,791 (93%) | 1,536 (7%) | |
| | 2022 | 28,597 | 2,375 | 8 | 53 | 27,194 (95%) | 1,403 (5%) | |
| | 2021 | 27,696 ⁷ | | 8 | 53 | 25,287 (91%) | 2,409 (9%) | |
| | 2020 | 31,474 | 2,461 | 8 | 53 | 28,711 (91%) | 2,770 (9%) | |
| | 2019 | 29,881 | | 10 | 57 | | | |
| << | < | > $>>$ | 1-5 of 3 | 9 | | | | |

| LOCATION INF | -0 |
|--------------|--------------|
| Location ID | 19000028 |
| Туре | SPOT |
| Fnct'l Class | 3 |
| Located On | SR006 |
| Loc On Alias | GALLATIN PK. |
| Direction | 2-WAY |
| County | Davidson |
| Community | Nashville |
| MPO ID | |
| HPMS ID | |
| Agency | tdot |

| COUNT DATA INF | -0 |
|--------------------|--------------------------|
| Count Status | Accepted |
| Holiday | No |
| Start Date | Wed 3/11/2020 |
| End Date | Thu 3/12/2020 |
| Start Time | 11:00:00 AM |
| End Time | 11:00:00 AM |
| Direction | 2-WAY |
| Notes | |
| Station | UL28272 |
| Filename | 20-03-12 J1900282 (Start |
| Study | |
| Speed Limit | |
| Description | |
| Sensor Type | Axle/Tube |
| Source | |
| Latitude,Longitude | |
| Owner | jj01380 |
| | |

| INTERVAL:15-M | | | | | |
|---------------|-----|-------|--------|------|--------------------|
| | 1 | 5-min | Interv | al | Hourly |
| Time | 1st | 2nd | 3rd | 4th | Count |
| 0:00-1:00 | 64 | 50 | 36 | 39 | 189 |
| 1:00-2:00 | 32 | 32 | 24 | 32 | 120 |
| 2:00-3:00 | 25 | 26 | 17 | 27 | 95 |
| 3:00-4:00 | 26 | 40 | 34 | 50 | 150 |
| 4:00-5:00 | 56 | 63 | 87 | 102 | 308 |
| 5:00-6:00 | 139 | 174 | 215 | 234 | 762 |
| 6:00-7:00 | 275 | 306 | 336 | 349 | 1,266 |
| 7:00-8:00 | 406 | 387 | 388 | 417 | 1,598 |
| 8:00-9:00 | 391 | 425 | 405 | 447 | 1,668 |
| 9:00-10:00 | 411 | 439 | 419 | 488 | 1,757 |
| 10:00-11:00 🔳 | 385 | 456 | 469 | 535 | 1,845 |
| 11:00-12:00 | 483 | 521 | 529 | 515 | 2,048 |
| 12:00-13:00 | 507 | 540 | 580 | 563 | 2,190 |
| 13:00-14:00 | 527 | 525 | 537 | 573 | 2,162 |
| 14:00-15:00 | 611 | 591 | 575 | 585 | 2,362 |
| 15:00-16:00 | 607 | 596 | 662 | 596 | 2,461 |
| 16:00-17:00 | 561 | 599 | 612 | 610 | 2,382 |
| 17:00-18:00 | 617 | 568 | 522 | 523 | 2,230 |
| 18:00-19:00 | 500 | 523 | 478 | 422 | 1,923 |
| 19:00-20:00 | 430 | 370 | 353 | 359 | 1,512 |
| 20:00-21:00 | 356 | 309 | 318 | 258 | 1,241 |
| 21:00-22:00 | 258 | 228 | 178 | 180 | 844 |
| 22:00-23:00 | 148 | 134 | 117 | 139 | 538 |
| 23:00-24:00 | 109 | 94 | 71 | - 77 | 351 |
| Total | | | | | 32,002 |
| AADT | | | | | 31,474 |
| AM Peak | | | | | :45-12:45 2,142 |
| PM Peak | | | | 15 | 00-16:00: 2,461 |

Count Navigation: << < > >>

Directions: 2-WAY NB SB 😢

2010 Nashville MPO



MPO / TPO Models



Tools of the Trade

MPO / TPO Models

2040 Nashville MPO



2020 Classification Count

| FHWA C | FHWA Classification 🕐 | | | | | | | | | | | | | | | |
|---------------|-----------------------|-------|------------|-----|----------|----------|-----------|-----------|----------|-----------|------------|-----------|------------|-----|-----|-------|
| Start Time | Motor cycle | Car | Pick up | Bus | 2A SU | 3A SU | >3A SU | <5A 2U | 5A 2U | >5A 2U | <6A >2U | 6A >2U | >6A >2U | Unk | Err | TOTAL |
| 12:00 AM | 0 | 269 | 35 | 0 | 3 | 0 | 1 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 314 |
| 1:00 AM | 0 | 193 | 21 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 221 |
| 2:00 AM | 0 | 164 | 19 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 187 |
| 3:00 AM | 0 | 171 | 30 | 1 | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 209 |
| 4:00 AM | 0 | 256 | 57 | 0 | 5 | 4 | 0 | 4 | 9 | 0 | 0 | 1 | 1 | 0 | 0 | 337 |
| 5:00 AM | 2 | 577 | 186 | 0 | 5 | 7 | 5 | 13 | 10 | 2 | 12 | 4 | 6 | 0 | 0 | 829 |
| 6:00 AM | 3 | 798 | 221 | 1 | 16 | 10 | 16 | 38 | 9 | 6 | 38 | 25 | 52 | 0 | 0 | 1233 |
| 7:00 AM | 11 | 1075 | 296 | 0 | 17 | 13 | 30 | 60 | 16 | 10 | 53 | 19 | 81 | 0 | 0 | 1681 |
| 8:00 AM | 6 | 901 | 259 | 1 | 14 | 12 | 17 | 50 | 17 | 13 | 40 | 14 | 49 | 0 | 0 | 1393 |
| 9:00 AM | 4 | 892 | 313 | 1 | 19 | 17 | 20 | 41 | 22 | 9 | 43 | 18 | 34 | 0 | 0 | 1433 |
| 10:00 AM | 3 | 988 | 342 | 0 | 19 | 17 | 26 | 48 | 18 | 5 | 22 | 15 | 30 | 0 | 0 | 1533 |
| 11:00 AM | 5 | 977 | 334 | 0 | 32 | 12 | 27 | 40 | 26 | 7 | 45 | 13 | 37 | 0 | 0 | 1555 |
| 12:00 PM | 9 | 1051 | 356 | 1 | 25 | 10 | 32 | 63 | 16 | 7 | 35 | 23 | 33 | 0 | 0 | 1661 |
| 1:00 PM | 8 | 1071 | 335 | 0 | 14 | 20 | 21 | 61 | 24 | 11 | 45 | 22 | 43 | 0 | 0 | 1675 |
| 2:00 PM | 7 | 1185 | 351 | 0 | 18 | 14 | 30 | 62 | 20 | 11 | 69 | 28 | 49 | 0 | 0 | 1844 |
| 3:00 PM | 6 | 1026 | 315 | 1 | 10 | 18 | 41 | 83 | 21 | 12 | 74 | 23 | 112 | 0 | 0 | 1742 |
| 4:00 PM | 15 | 952 | 284 | 2 | 7 | 6 | 56 | 61 | 22 | 16 | 67 | 28 | 158 | 0 | 0 | 1674 |
| 5:00 PM | 16 | 1001 | 266 | 3 | 4 | 23 | 42 | 79 | 16 | 20 | 102 | 36 | 142 | 0 | 0 | 1750 |
| 6:00 PM | 5 | 1135 | 282 | 0 | 6 | 9 | 32 | 54 | 10 | 5 | 44 | 14 | 42 | 0 | 0 | 1638 |
| 7:00 PM | 5 | 1057 | 222 | 0 | 7 | 8 | 13 | 34 | 8 | 5 | 22 | 13 | 10 | 0 | 0 | 1404 |
| 8:00 PM | 1 | 952 | 148 | 0 | 5 | 3 | 8 | 15 | 6 | 2 | 12 | 4 | 4 | 0 | 0 | 1160 |
| 9:00 PM | 5 | 794 | 123 | 0 | 5 | 5 | 10 | 16 | 3 | 0 | 9 | 3 | 2 | 0 | 0 | 975 |
| 10:00 PM | 0 | 659 | 95 | 0 | 5 | 1 | 2 | 12 | 3 | 2 | 6 | 1 | 1 | 0 | 0 | 787 |
| 11:00 PM | 0 | 448 | 57 | 0 | 1 | 0 | 3 | 5 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 519 |
| TOTAL | 111 | 18592 | 4947 | 11 | 240 | 214 | 433 | 846 | 281 | 143 | 744 | 305 | 887 | 0 | 0 | 27754 |

FHWA Vehicle Classification

Tools of the Trade

Vehicle Classification

| Class I Motorcycles | 0 | Class 7 Four or more axle, single unit | |
|---|-------|--|--|
| Class 2 Passenger cars | | axie, single unit | |
| | 610e | | |
| | | Class 8 Four or less sxle, | |
| | | single trailer | |
| Class 3 Four tire, | | | |
| single unit | | Class 9 S-Axle tractor semitration | |
| | | | |
| Class 4 Buses | | Class 10 Six or more axle, | |
| | | single trailer | |
| | | Class I I Five or less skie, multi trailer | |
| Class 5 Two axle, six tire, single unit | offic | Class 12 Six sxle, multi- | |
| | To | trailer | |
| | Pro | Class 13 Seven or more axle, multi-trailer | |
| Class 6 Three axle, single unit | | | |
| | | | |
| | | | |

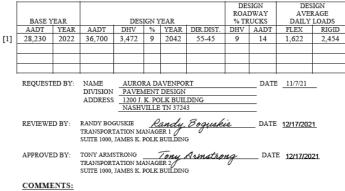
Completed Project

TENNESSEE DEPARTMENT OF TRANSPORTATION STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

| PROJECT NO.: <u>NH-45(36)</u> : 19S045-F8-003 COUNTY: <u>DAVIDSQN</u> PROJECT PIN NUMBER: <u>1</u> 31733.00 | ROUTE: S.R. 45 CITY: MADISON | | | |
|---|---------------------------------|--|--|--|
| PROJECT DESCRIPTION: INTERSECTION @ S.R. 6 & | S.R. 45 | | | |
| [1] RESURFACING S.R. 451 | FROM L.M. 7.13 TO L.M. 7.26 | | | |
| DIVISION REQUESTING: | | | | |
| | PAVEMENT DESIGN | | | |
| MAINTENANCE | STRUCTURES | | | |
| S.T.I.D. | SURVEY & ROADWAY DESIGN | | | |
| PROG. DEVELOPMENT & ADM. | TRAFFIC SIGNAL DESIGN | | | |
| PUBLIC TRANS. & AERO. | OTHER | | | |
| YEAR PROJECT PROGRAMMED FOR CONSTRUCTION | 2022 | | | |

TRAFFIC ASSIGNMENT:

PROJECTED LETTING DATE: 2022



FURNISH THE 2022-2042 TRAFFIC DATA AND ADL'S FOR A SEVEN LANE ROADWAY.

THIS TRAFFIC IS BASED ON 2019 CYCLE COUNTS AND AN 8-HOUR TURNING MOVEMENT COUNT [DEC. 2021]. THE DESIGN YEAR TRAFFIC IS BASED ON GROWTH RATE FROM THE NASHVILLE MPO COMPUTER ASSIGNMENT MODEL. AADT's, DHV's AND ADL's ARE INCLUDED.

DHV'S ARE NOT REQUIRED FOR SIDE ROADS LESS THAN 1000 AADT. NOTE: FOR BRIDGE REPLACEMENT PROJECTS, ADLS ARE NOT REQUIRED FOR ADTS OF 1000 OR LESS AND PERCENTAGE OF TRUCKS OF 7% OR LESS. SEE ATTACHMENTS FOR TURNING MOVEMENTS AND/OR OTHER DETAILS. (REV. 6/9/21)

TENNESSEE DEPARTMENT OF TRANSPORTATION STRATEGIC TRANSPORTATION INVESTMENT DIVISION

| PROJECT NO.: NH-45(36) : 19S045-F8-003 | ROUTE NO.: S.R. 45 |
|---|--------------------|
| COUNTY: DAVIDSON | CITY: MADISON |
| PROJECT DESCRIPTION: RESURFACING FROM L.M. 7.13 TO L.M. | 7.26. |

FAP Urban Pavement Structural Design

Calculation of Equivalent Daily 18 Kip Single Axle Loads

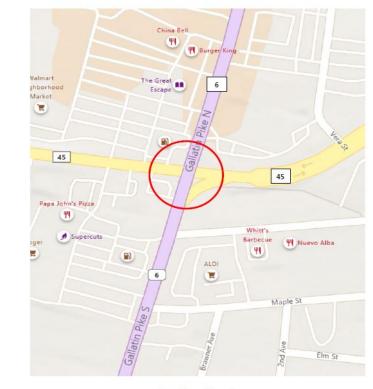
| | | ADT | Flexible | | Rigid | |
|----------------|-------------|---------------|---------------|-------|---------------|-------|
| Type Vehicle | | (No. Counted) | 18-kip Factor | ADL | 18-kip Factor | ADL |
| Pass. cars and | | | | | | |
| motorc | ycles (1-2) | 19,804 | 0.001 | 20 | 0.001 | 20 |
| Pick-up | , Panel, | | | | | |
| Van | (3) | 8,116 | 0.004 | 32 | 0.004 | 32 |
| | Buses (4) | 21 | 0.300 | 6 | 0.300 | 6 |
| Sing. | 2-axle, | | | | | |
| | 6-tire (5) | 179 | 0.260 | 47 | 0.260 | 47 |
| Unit | 3-axle or | | | | | |
| | more (6-7) | 833 | 1.000 | 833 | 1.500 | 1,250 |
| | 4-axle (8) | 923 | 0.640 | 591 | 0.800 | 738 |
| Comb. | 5-axle or | | | | | |
| | more (9-13) | 2,589 | 1.200 | 3,107 | 1.900 | 4,919 |
| | Totals | | | | | |
| (2032 AADT) | | 32,465 | | 4,636 | | 7,012 |

Suggested Percentages of Trucks in Design Lane

| 5,000 or less ADT | 95% |
|---------------------|-----|
| 5,000 - 10,000 ADT | 90% |
| 10,000 - 15,000 ADT | 85% |
| 15,000 - 20,000 ADT | 80% |
| 20,000 - 30,000 ADT | 75% |
| 30,000 - 40,000 ADT | 70% |
| 40,000 Plus | 60% |
| | |

| No. of Lanes: | | | 7 | | | | |
|-------------------------------------|------|---|------|---|--------|----|------------|
| % Trucks in Design Lane: | | | 70% | | | | |
| ADL in Design Lane: | | | | | | | |
| FLEX: | 0.5 | X | 0.70 | Х | 4635.6 | = | 1,622 |
| RIGID: | 0.5 | Х | 0.70 | Х | 7012.1 | = | 2,454 |
| | | | | | | | |
| ADL Calculations By: RANDY BOGUSKIE | | | | | Dat | e: | 12/17/2021 |
| Reviewed By: Tony Armst | rong | | | | Dat | e: | 12/17/2021 |





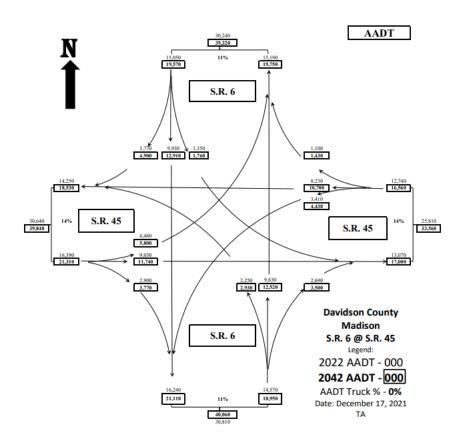
Davidson County

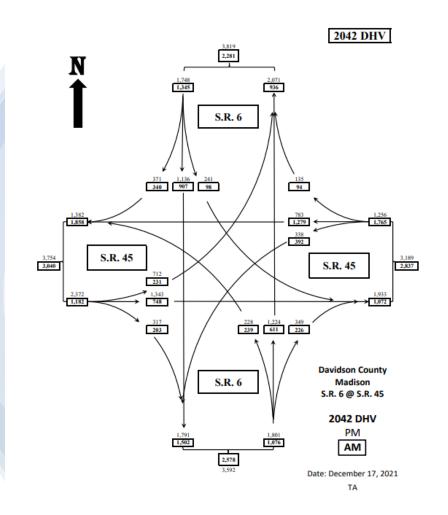
Madison

S.R. 6 @ S.R. 45

Resurfacing S.R. 45 From L.M. 7.13 to L.M. 7.26

Completed Project





How long does it take?

 The average Traffic forecast takes about six to eight weeks, which includes time needed for requesting and receiving special field count data. (Turning Movement Counts, Classification Counts, and Volume Counts)

• QUESTIONS?