

Loop Detector Turning Movement Count Information

Intersection: **45th St & 17th Ave S**

Month Counts

Dates: **5/1/2009** to **5/31/2009**

Note: Cells values represent the average of the dates above.

| Start Time | EB Approach | | | WB Approach | | | NB Approach | | | SB Approach | | | Int. Total | Int. Hr. Total |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|--------------|--------------|--------------|----------------|
| | EB Left | EB Thru | EB Total | WB Left | WB Thru | WB Total | NB Left | NB Thru | NB Total | SB Left | SB Thru | SB Total | | |
| 12:00 AM | 5 | 16 | 21 | 12 | 11 | 24 | 7 | 36 | 43 | 6 | 46 | 52 | 140 | 429 |
| 12:15 AM | 4 | 13 | 17 | 9 | 9 | 18 | 6 | 30 | 36 | 4 | 40 | 45 | 115 | 360 |
| 12:30 AM | 4 | 12 | 16 | 6 | 7 | 13 | 5 | 25 | 29 | 3 | 32 | 35 | 93 | 311 |
| 12:45 AM | 4 | 10 | 14 | 5 | 6 | 10 | 4 | 22 | 26 | 3 | 28 | 31 | 81 | 281 |
| 1:00 AM | 3 | 8 | 11 | 4 | 5 | 10 | 4 | 18 | 23 | 3 | 25 | 28 | 71 | 263 |
| 1:15 AM | 2 | 8 | 10 | 4 | 5 | 9 | 3 | 16 | 20 | 2 | 25 | 27 | 66 | 265 |
| 1:30 AM | 2 | 8 | 11 | 4 | 5 | 9 | 3 | 15 | 19 | 2 | 23 | 25 | 63 | 252 |
| 1:45 AM | 2 | 8 | 9 | 5 | 5 | 10 | 3 | 14 | 17 | 2 | 25 | 27 | 63 | 228 |
| 2:00 AM | 2 | 9 | 11 | 7 | 7 | 14 | 3 | 15 | 18 | 3 | 27 | 30 | 73 | 201 |
| 2:15 AM | 2 | 6 | 8 | 4 | 4 | 7 | 2 | 13 | 15 | 2 | 21 | 23 | 53 | 159 |
| 2:30 AM | 1 | 5 | 6 | 2 | 2 | 5 | 2 | 11 | 13 | 1 | 14 | 15 | 39 | 136 |
| 2:45 AM | 2 | 4 | 6 | 2 | 2 | 4 | 2 | 11 | 13 | 1 | 12 | 13 | 36 | 122 |
| 3:00 AM | 1 | 4 | 5 | 2 | 2 | 3 | 1 | 10 | 11 | 1 | 10 | 11 | 31 | 111 |
| 3:15 AM | 1 | 3 | 4 | 2 | 2 | 3 | 2 | 9 | 10 | 1 | 11 | 13 | 30 | 104 |
| 3:30 AM | 1 | 3 | 4 | 1 | 2 | 3 | 1 | 6 | 7 | 1 | 10 | 11 | 25 | 98 |
| 3:45 AM | 1 | 2 | 3 | 1 | 1 | 3 | 1 | 9 | 11 | 1 | 7 | 8 | 25 | 105 |
| 4:00 AM | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 7 | 8 | 1 | 8 | 9 | 24 | 126 |
| 4:15 AM | 1 | 3 | 4 | 1 | 2 | 3 | 1 | 8 | 9 | 1 | 9 | 9 | 24 | 144 |
| 4:30 AM | 1 | 4 | 5 | 1 | 2 | 3 | 1 | 13 | 14 | 1 | 9 | 10 | 32 | 166 |
| 4:45 AM | 2 | 4 | 7 | 1 | 2 | 4 | 2 | 23 | 25 | 1 | 10 | 11 | 46 | 198 |
| 5:00 AM | 3 | 7 | 10 | 2 | 1 | 3 | 1 | 17 | 18 | 1 | 11 | 11 | 42 | 259 |
| 5:15 AM | 2 | 7 | 9 | 2 | 2 | 3 | 1 | 19 | 20 | 1 | 12 | 13 | 46 | 332 |
| 5:30 AM | 4 | 8 | 12 | 4 | 3 | 7 | 1 | 26 | 27 | 1 | 16 | 17 | 64 | 425 |
| 5:45 AM | 3 | 13 | 16 | 5 | 4 | 9 | 2 | 52 | 55 | 1 | 26 | 27 | 107 | 552 |
| 6:00 AM | 5 | 13 | 18 | 3 | 3 | 6 | 3 | 59 | 62 | 2 | 28 | 29 | 115 | 760 |
| 6:15 AM | 7 | 18 | 25 | 6 | 6 | 12 | 3 | 58 | 61 | 2 | 39 | 41 | 139 | 942 |
| 6:30 AM | 10 | 25 | 35 | 8 | 7 | 15 | 7 | 81 | 88 | 3 | 50 | 53 | 191 | 1185 |
| 6:45 AM | 13 | 42 | 55 | 12 | 10 | 23 | 9 | 154 | 163 | 6 | 67 | 73 | 315 | 1477 |
| 7:00 AM | 13 | 41 | 54 | 11 | 13 | 24 | 11 | 129 | 140 | 5 | 75 | 80 | 297 | 1812 |
| 7:15 AM | 18 | 58 | 76 | 12 | 16 | 28 | 12 | 170 | 182 | 10 | 87 | 96 | 382 | 2028 |
| 7:30 AM | 28 | 72 | 100 | 15 | 21 | 37 | 21 | 211 | 232 | 12 | 103 | 115 | 483 | 2105 |
| 7:45 AM | 29 | 102 | 131 | 22 | 26 | 48 | 23 | 288 | 311 | 22 | 139 | 161 | 650 | 2057 |
| 8:00 AM | 22 | 76 | 98 | 17 | 23 | 39 | 26 | 215 | 241 | 14 | 121 | 135 | 513 | 1877 |
| 8:15 AM | 25 | 69 | 94 | 17 | 24 | 41 | 24 | 172 | 196 | 13 | 115 | 128 | 459 | 1784 |
| 8:30 AM | 20 | 60 | 80 | 16 | 20 | 36 | 22 | 166 | 188 | 11 | 121 | 132 | 435 | 1759 |
| 8:45 AM | 20 | 61 | 81 | 20 | 25 | 46 | 23 | 179 | 202 | 12 | 129 | 141 | 470 | 1790 |
| 9:00 AM | 17 | 49 | 66 | 15 | 21 | 36 | 23 | 162 | 185 | 10 | 123 | 133 | 420 | 1856 |
| 9:15 AM | 21 | 53 | 74 | 18 | 22 | 40 | 21 | 155 | 176 | 11 | 133 | 144 | 434 | 1969 |
| 9:30 AM | 21 | 56 | 77 | 18 | 23 | 40 | 22 | 172 | 194 | 11 | 144 | 154 | 466 | 2087 |
| 9:45 AM | 28 | 67 | 95 | 19 | 28 | 47 | 25 | 203 | 228 | 12 | 155 | 166 | 536 | 2220 |
| 10:00 AM | 23 | 58 | 81 | 20 | 27 | 47 | 25 | 205 | 230 | 13 | 162 | 175 | 533 | 2341 |
| 10:15 AM | 28 | 62 | 90 | 24 | 30 | 53 | 28 | 197 | 225 | 13 | 170 | 184 | 552 | 2486 |
| 10:30 AM | 27 | 67 | 94 | 25 | 35 | 60 | 28 | 212 | 240 | 15 | 190 | 205 | 599 | 2650 |
| 10:45 AM | 31 | 73 | 103 | 31 | 35 | 66 | 33 | 231 | 264 | 17 | 206 | 223 | 657 | 2844 |
| 11:00 AM | 31 | 70 | 101 | 32 | 38 | 70 | 30 | 231 | 261 | 19 | 227 | 246 | 678 | 3051 |
| 11:15 AM | 34 | 74 | 107 | 34 | 38 | 72 | 37 | 239 | 276 | 20 | 241 | 260 | 716 | 3287 |
| 11:30 AM | 37 | 81 | 118 | 41 | 43 | 84 | 37 | 266 | 303 | 23 | 265 | 288 | 793 | 3502 |
| 11:45 AM | 39 | 87 | 126 | 42 | 52 | 94 | 39 | 294 | 334 | 28 | 283 | 311 | 864 | 3655 |
| 12:00 PM | 39 | 94 | 133 | 43 | 56 | 99 | 45 | 305 | 350 | 28 | 304 | 332 | 914 | 3762 |
| 12:15 PM | 44 | 94 | 138 | 44 | 55 | 98 | 43 | 317 | 360 | 28 | 306 | 334 | 931 | 3777 |
| 12:30 PM | 47 | 102 | 148 | 43 | 53 | 96 | 46 | 317 | 363 | 30 | 308 | 338 | 946 | 3744 |
| 12:45 PM | 50 | 107 | 157 | 48 | 53 | 101 | 44 | 324 | 368 | 31 | 314 | 345 | 971 | 3685 |
| 1:00 PM | 48 | 102 | 151 | 48 | 49 | 97 | 40 | 302 | 341 | 31 | 309 | 340 | 929 | 3606 |
| 1:15 PM | 46 | 100 | 146 | 43 | 49 | 92 | 40 | 291 | 331 | 30 | 299 | 329 | 898 | 3552 |
| 1:30 PM | 44 | 93 | 137 | 48 | 49 | 96 | 38 | 284 | 321 | 30 | 303 | 333 | 887 | 3512 |
| 1:45 PM | 41 | 91 | 132 | 45 | 54 | 98 | 39 | 294 | 333 | 28 | 301 | 329 | 892 | 3484 |
| 2:00 PM | 42 | 88 | 131 | 44 | 52 | 97 | 43 | 281 | 324 | 29 | 295 | 324 | 875 | 3466 |
| 2:15 PM | 41 | 89 | 130 | 43 | 52 | 96 | 40 | 271 | 310 | 27 | 295 | 322 | 858 | 3488 |
| 2:30 PM | 41 | 88 | 128 | 44 | 55 | 99 | 37 | 262 | 299 | 29 | 304 | 333 | 859 | 3518 |
| 2:45 PM | 38 | 88 | 126 | 46 | 54 | 101 | 37 | 269 | 306 | 34 | 308 | 342 | 874 | 3576 |
| 3:00 PM | 38 | 95 | 133 | 49 | 57 | 105 | 39 | 281 | 321 | 31 | 308 | 338 | 897 | 3642 |
| 3:15 PM | 34 | 89 | 122 | 43 | 58 | 102 | 48 | 287 | 334 | 30 | 299 | 330 | 888 | 3704 |
| 3:30 PM | 36 | 86 | 123 | 54 | 59 | 113 | 48 | 283 | 331 | 33 | 317 | 350 | 917 | 3786 |
| 3:45 PM | 42 | 104 | 146 | 52 | 58 | 110 | 49 | 280 | 329 | 33 | 321 | 355 | 940 | 3917 |
| 4:00 PM | 39 | 98 | 137 | 54 | 67 | 120 | 49 | 280 | 329 | 37 | 336 | 373 | 959 | 4040 |
| 4:15 PM | 37 | 98 | 135 | 52 | 68 | 120 | 51 | 286 | 337 | 35 | 343 | 378 | 970 | 4175 |
| 4:30 PM | 37 | 98 | 135 | 60 | 74 | 133 | 54 | 304 | 357 | 41 | 381 | 422 | 1048 | 4279 |
| 4:45 PM | 38 | 105 | 143 | 55 | 72 | 128 | 66 | 316 | 382 | 39 | 371 | 410 | 1063 | 4243 |
| 5:00 PM | 44 | 107 | 151 | 64 | 82 | 146 | 62 | 317 | 378 | 41 | 377 | 419 | 1094 | 4147 |
| 5:15 PM | 40 | 102 | 142 | 58 | 87 | 145 | 65 | 306 | 370 | 41 | 376 | 417 | 1074 | 3987 |
| 5:30 PM | 36 | 106 | 142 | 57 | 76 | 133 | 60 | 287 | 347 | 41 | 349 | 390 | 1012 | 3801 |
| 5:45 PM | 38 | 105 | 143 | 51 | 67 | 118 | 53 | 280 | 333 | 36 | 337 | 373 | 967 | 3630 |
| 6:00 PM | 36 | 100 | 136 | 51 | 61 | 112 | 54 | 275 | 329 | 33 | 323 | 356 | 934 | 3481 |
| 6:15 PM | 38 | 97 | 135 | 52 | 58 | 110 | 50 | 260 | 309 | 30 | 304 | 334 | 888 | 3342 |
| 6:30 PM | 38 | 97 | 134 | 49 | 52 | 101 | 41 | 244 | 286 | 29 | 292 | 321 | 841 | 3199 |
| 6:45 PM | 35 | 96 | 131 | 45 | 53 | 98 | 40 | 242 | 282 | 28 | 280 | 307 | 818 | 3064 |
| 7:00 PM | 34 | 89 | 123 | 45 | 51 | 96 | 40 | 241 | 282 | 28 | 266 | 294 | 795 | 2924 |
| 7:15 PM | 31 | 87 | 119 | 39 | 46 | 85 | 38 | 225 | 262 | 25 | 254 | 279 | 745 | 2800 |
| 7:30 PM | 28 | 83 | 111 | 37 | 50 | 87 | 39 | 209 | 247 | 23 | 237 | 260 | 706 | 2690 |
| 7:45 PM | 30 | 80 | 110 | 39 | 43 | 82 | 34 | 195 | 228 | 27 | 231 | 257 | 678 | 2572 |
| 8:00 PM | 29 | 75 | 104 | 39 | 43 | 81 | 34 | 190 | 224 | 25 | 236 | 262 | 671 | 2449 |
| 8:15 PM | 26 | 76 | 102 | 36 | 39 | 74 | 33 | 174 | 206 | 24 | 229 | 253 | 635 | 2336 |
| 8:30 PM | 24 | 68 | 92 | 34 | 37 | 71 | 32 | 164 | 196 | 21 | 208 | 229 | 588 | 2191 |
| 8:45 PM | 21 | 65 | 87 | 34 | 39 | 72 | 31 | 148 | 178 | 20 | 198 | 218 | 555 | 2039 |
| 9:00 PM | 22 | 65 | 87 | 46 | 44 | 90 | 27 | 137 | 165 | 21 | 195 | 216 | 558 | 1874 |
| 9:15 PM | 18 | 60 | 77 | 39 | 36 | 75 | 25 | 124 | 150 | 18 | 171 | 189 | 490 | 1666 |
| 9:30 PM | 16 | 54 | 70 | 27 | 28 | 56 | 24 | 117 | 141 | 18 | 151 | 169 | 436 | 1469 |
| 9:45 PM | 13 | 49 | 62 | 24 | 22 | 47 | 21 | 110 | 131 | 14 | 137 | 151 | 390 | 1298 |
| 10:00 PM | 11 | 40 | 51 | 24 | 23 | 48 | 19 | 96 | 115 | 13 | 123 | 137 | 350 | 1145 |
| 10:15 PM | 10 | 38 | 48 | 17 | 20 | 37 | 19 | 83 | 101 | 11 | 96 | 107 | 293 | 1013 |
| 10:30 PM | 10 | 34 | 44 | 17 | 19 | 36 | 16 | 74 | 90 | 10 | 86 | 95 | 265 | 910 |
| 10:45 PM | 9 | 30 | 39 | 15 | 15 | 29 | 14 | 67 | 81 | 9 | 79 | 88 | 237 | 821 |
| 11:00 PM | 8 | 27 | 35 | 14 | 14 | 28 | 12 | 64 | 76 | 6 | 73 | 79 | 218 | 728 |
| 11:15 PM | 7 | 23 | 30 | 13 | 13 | 26 | 11 | 57 | 68 | 6 | 61 | 66 | 190 | 650 |
| 11:30 PM | 5 | 22 | 27 | 14 | 13 | 27 | 10 | 46 | 56 | 8 | 57 | 66 | 176 | 575 |
| 11:45 PM | 5 | 18 | 22 | 9 | 10 | 19 | 8 | 37 | 45 | 6 | 52 | 58 | 144 | 492 |
| TOTALS | 2085 | 5403 | 7486 | 2512 | 2964 | 5474 | 2399 | 15477 | 17871 | 1594 | 15930 | 17521 | 48350 | |

* Intersection hour count total equals the current time period and the following three time periods.

Loop Detector Turning Movement Count Information

Intersection: **45th St & 17th Ave S**

Weekday Counts

Dates: **5/1/2009** to **5/31/2009**

Note: Cells values represent the average of the dates above.

| Start Time | EB Approach | | | WB Approach | | | NB Approach | | | SB Approach | | | Int. Total | Int. Hr. Total * |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|--------------|--------------|--------------|------------------|
| | EB Left | EB Thru | EB Total | WB Left | WB Thru | WB Total | NB Left | NB Thru | NB Total | SB Left | SB Thru | SB Total | | |
| 12:00 AM | 5 | 14 | 18 | 9 | 8 | 17 | 5 | 30 | 35 | 4 | 36 | 41 | 111 | 348 |
| 12:15 AM | 4 | 11 | 14 | 8 | 7 | 15 | 5 | 24 | 29 | 4 | 33 | 38 | 96 | 288 |
| 12:30 AM | 3 | 10 | 13 | 4 | 6 | 10 | 3 | 22 | 25 | 3 | 27 | 30 | 78 | 242 |
| 12:45 AM | 3 | 7 | 10 | 3 | 4 | 7 | 3 | 17 | 21 | 2 | 23 | 25 | 63 | 208 |
| 1:00 AM | 2 | 6 | 7 | 3 | 3 | 7 | 3 | 14 | 17 | 2 | 19 | 21 | 51 | 187 |
| 1:15 AM | 1 | 6 | 7 | 3 | 3 | 6 | 3 | 13 | 16 | 2 | 19 | 21 | 50 | 185 |
| 1:30 AM | 2 | 5 | 7 | 3 | 3 | 6 | 2 | 11 | 13 | 2 | 17 | 18 | 44 | 172 |
| 1:45 AM | 1 | 5 | 6 | 3 | 3 | 6 | 2 | 9 | 11 | 2 | 17 | 18 | 42 | 157 |
| 2:00 AM | 2 | 5 | 6 | 6 | 5 | 11 | 2 | 11 | 13 | 2 | 17 | 19 | 49 | 141 |
| 2:15 AM | 1 | 4 | 5 | 3 | 3 | 5 | 1 | 10 | 12 | 1 | 14 | 15 | 37 | 116 |
| 2:30 AM | 1 | 3 | 4 | 2 | 1 | 3 | 1 | 9 | 10 | 1 | 11 | 12 | 29 | 104 |
| 2:45 AM | 2 | 3 | 5 | 1 | 2 | 3 | 1 | 8 | 9 | 1 | 8 | 9 | 26 | 95 |
| 3:00 AM | 1 | 3 | 4 | 1 | 1 | 2 | 1 | 8 | 9 | 1 | 8 | 9 | 24 | 90 |
| 3:15 AM | 1 | 2 | 2 | 2 | 1 | 3 | 1 | 7 | 8 | 1 | 10 | 11 | 25 | 88 |
| 3:30 AM | 1 | 2 | 3 | 1 | 1 | 2 | 1 | 5 | 6 | 1 | 8 | 9 | 20 | 86 |
| 3:45 AM | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 9 | 10 | 0 | 6 | 7 | 21 | 99 |
| 4:00 AM | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 7 | 8 | 1 | 8 | 8 | 22 | 131 |
| 4:15 AM | 1 | 3 | 3 | 1 | 1 | 2 | 1 | 8 | 8 | 0 | 9 | 9 | 23 | 158 |
| 4:30 AM | 1 | 4 | 5 | 1 | 1 | 2 | 1 | 14 | 15 | 1 | 9 | 10 | 33 | 190 |
| 4:45 AM | 3 | 5 | 8 | 1 | 2 | 4 | 1 | 28 | 30 | 1 | 11 | 11 | 53 | 234 |
| 5:00 AM | 3 | 7 | 11 | 2 | 1 | 3 | 1 | 21 | 22 | 1 | 12 | 13 | 49 | 313 |
| 5:15 AM | 3 | 8 | 11 | 2 | 2 | 4 | 1 | 24 | 25 | 1 | 15 | 15 | 55 | 404 |
| 5:30 AM | 5 | 10 | 15 | 5 | 4 | 8 | 1 | 32 | 34 | 1 | 19 | 20 | 77 | 519 |
| 5:45 AM | 5 | 17 | 21 | 6 | 4 | 10 | 2 | 66 | 69 | 2 | 30 | 32 | 132 | 680 |
| 6:00 AM | 6 | 15 | 21 | 4 | 4 | 7 | 4 | 73 | 77 | 2 | 33 | 35 | 140 | 941 |
| 6:15 AM | 9 | 23 | 32 | 7 | 7 | 13 | 4 | 74 | 78 | 3 | 45 | 47 | 170 | 1173 |
| 6:30 AM | 12 | 32 | 44 | 10 | 8 | 19 | 9 | 102 | 112 | 4 | 60 | 64 | 238 | 1490 |
| 6:45 AM | 17 | 54 | 71 | 16 | 12 | 28 | 11 | 195 | 205 | 8 | 80 | 88 | 393 | 1875 |
| 7:00 AM | 17 | 52 | 69 | 13 | 16 | 29 | 14 | 166 | 179 | 6 | 89 | 95 | 372 | 2318 |
| 7:15 AM | 23 | 75 | 98 | 14 | 20 | 34 | 15 | 221 | 236 | 12 | 106 | 118 | 487 | 2596 |
| 7:30 AM | 38 | 93 | 131 | 17 | 28 | 45 | 27 | 278 | 306 | 15 | 127 | 142 | 623 | 2667 |
| 7:45 AM | 38 | 134 | 173 | 27 | 32 | 59 | 28 | 375 | 403 | 30 | 172 | 201 | 836 | 2544 |
| 8:00 AM | 28 | 98 | 126 | 20 | 29 | 49 | 32 | 278 | 309 | 19 | 147 | 166 | 650 | 2223 |
| 8:15 AM | 31 | 85 | 116 | 20 | 29 | 49 | 30 | 210 | 240 | 18 | 135 | 153 | 558 | 2031 |
| 8:30 AM | 23 | 72 | 95 | 17 | 22 | 40 | 23 | 191 | 214 | 13 | 138 | 151 | 500 | 1927 |
| 8:45 AM | 22 | 65 | 87 | 22 | 27 | 49 | 23 | 196 | 219 | 14 | 145 | 159 | 515 | 1905 |
| 9:00 AM | 19 | 50 | 69 | 16 | 23 | 39 | 23 | 180 | 203 | 11 | 136 | 147 | 458 | 1933 |
| 9:15 AM | 22 | 53 | 75 | 18 | 22 | 41 | 22 | 167 | 189 | 13 | 137 | 150 | 454 | 2014 |
| 9:30 AM | 22 | 53 | 74 | 18 | 23 | 41 | 22 | 181 | 203 | 12 | 148 | 160 | 478 | 2110 |
| 9:45 AM | 27 | 63 | 90 | 18 | 26 | 44 | 25 | 211 | 236 | 12 | 161 | 173 | 543 | 2225 |
| 10:00 AM | 23 | 55 | 78 | 18 | 27 | 45 | 25 | 213 | 238 | 14 | 163 | 177 | 539 | 2333 |
| 10:15 AM | 27 | 59 | 86 | 22 | 28 | 50 | 27 | 200 | 227 | 14 | 172 | 186 | 550 | 2472 |
| 10:30 AM | 27 | 64 | 90 | 24 | 34 | 58 | 26 | 213 | 239 | 16 | 190 | 206 | 593 | 2644 |
| 10:45 AM | 29 | 70 | 99 | 31 | 34 | 64 | 31 | 232 | 264 | 18 | 205 | 223 | 651 | 2856 |
| 11:00 AM | 31 | 68 | 98 | 32 | 38 | 70 | 29 | 233 | 263 | 20 | 228 | 248 | 678 | 3069 |
| 11:15 AM | 33 | 71 | 104 | 34 | 39 | 73 | 36 | 239 | 276 | 20 | 248 | 269 | 722 | 3315 |
| 11:30 AM | 38 | 81 | 119 | 41 | 43 | 84 | 37 | 262 | 300 | 25 | 276 | 302 | 805 | 3526 |
| 11:45 AM | 38 | 86 | 124 | 41 | 52 | 93 | 37 | 285 | 322 | 30 | 295 | 325 | 864 | 3655 |
| 12:00 PM | 40 | 91 | 131 | 44 | 59 | 102 | 46 | 298 | 344 | 30 | 317 | 347 | 924 | 3752 |
| 12:15 PM | 45 | 95 | 139 | 45 | 54 | 98 | 42 | 312 | 354 | 29 | 313 | 342 | 933 | 3742 |
| 12:30 PM | 46 | 101 | 147 | 43 | 54 | 96 | 44 | 308 | 352 | 31 | 307 | 339 | 934 | 3680 |
| 12:45 PM | 52 | 110 | 162 | 46 | 53 | 99 | 41 | 320 | 361 | 31 | 308 | 339 | 961 | 3599 |
| 1:00 PM | 48 | 104 | 152 | 47 | 48 | 95 | 37 | 295 | 332 | 30 | 305 | 335 | 914 | 3495 |
| 1:15 PM | 46 | 100 | 146 | 41 | 47 | 88 | 37 | 280 | 317 | 30 | 290 | 320 | 871 | 3417 |
| 1:30 PM | 42 | 88 | 130 | 46 | 47 | 93 | 35 | 276 | 311 | 28 | 291 | 319 | 853 | 3367 |
| 1:45 PM | 40 | 90 | 130 | 41 | 52 | 93 | 36 | 282 | 318 | 26 | 291 | 316 | 857 | 3338 |
| 2:00 PM | 39 | 84 | 124 | 42 | 48 | 90 | 41 | 267 | 308 | 28 | 286 | 314 | 836 | 3324 |
| 2:15 PM | 38 | 83 | 121 | 41 | 50 | 91 | 37 | 259 | 297 | 25 | 287 | 313 | 821 | 3365 |
| 2:30 PM | 38 | 83 | 121 | 43 | 54 | 97 | 34 | 249 | 283 | 26 | 297 | 323 | 824 | 3410 |
| 2:45 PM | 35 | 85 | 120 | 45 | 52 | 97 | 37 | 256 | 293 | 31 | 303 | 334 | 843 | 3497 |
| 3:00 PM | 36 | 94 | 130 | 47 | 52 | 99 | 39 | 276 | 316 | 28 | 305 | 333 | 877 | 3601 |
| 3:15 PM | 34 | 85 | 119 | 42 | 58 | 100 | 48 | 278 | 327 | 28 | 293 | 321 | 866 | 3698 |
| 3:30 PM | 34 | 84 | 118 | 54 | 59 | 113 | 49 | 280 | 329 | 31 | 319 | 351 | 911 | 3827 |
| 3:45 PM | 43 | 106 | 149 | 52 | 58 | 110 | 51 | 279 | 330 | 33 | 325 | 358 | 947 | 4025 |
| 4:00 PM | 40 | 100 | 140 | 54 | 67 | 120 | 50 | 285 | 335 | 37 | 342 | 379 | 974 | 4206 |
| 4:15 PM | 37 | 99 | 136 | 54 | 72 | 126 | 53 | 291 | 344 | 35 | 353 | 388 | 995 | 4406 |
| 4:30 PM | 37 | 99 | 137 | 66 | 81 | 147 | 58 | 317 | 375 | 44 | 406 | 450 | 1109 | 4577 |
| 4:45 PM | 39 | 109 | 148 | 59 | 79 | 138 | 74 | 329 | 403 | 42 | 397 | 439 | 1128 | 4556 |
| 5:00 PM | 46 | 111 | 157 | 68 | 94 | 162 | 71 | 335 | 406 | 43 | 406 | 449 | 1174 | 4459 |
| 5:15 PM | 42 | 106 | 148 | 62 | 102 | 164 | 74 | 329 | 404 | 46 | 404 | 450 | 1166 | 4271 |
| 5:30 PM | 39 | 112 | 151 | 61 | 85 | 146 | 70 | 304 | 374 | 44 | 372 | 416 | 1088 | 4033 |
| 5:45 PM | 40 | 111 | 151 | 53 | 74 | 128 | 60 | 298 | 358 | 39 | 355 | 394 | 1031 | 3827 |
| 6:00 PM | 38 | 107 | 146 | 53 | 65 | 118 | 58 | 289 | 348 | 35 | 340 | 375 | 986 | 3660 |
| 6:15 PM | 40 | 101 | 141 | 52 | 61 | 113 | 54 | 272 | 326 | 31 | 317 | 348 | 928 | 3514 |
| 6:30 PM | 40 | 99 | 139 | 52 | 54 | 105 | 45 | 257 | 302 | 30 | 307 | 336 | 882 | 3382 |
| 6:45 PM | 38 | 102 | 141 | 45 | 57 | 103 | 43 | 257 | 300 | 29 | 291 | 320 | 864 | 3248 |
| 7:00 PM | 36 | 91 | 127 | 49 | 54 | 103 | 43 | 256 | 299 | 30 | 282 | 311 | 840 | 3104 |
| 7:15 PM | 33 | 90 | 123 | 41 | 51 | 92 | 42 | 240 | 282 | 26 | 273 | 299 | 796 | 2976 |
| 7:30 PM | 30 | 87 | 118 | 39 | 53 | 93 | 41 | 222 | 263 | 25 | 249 | 274 | 748 | 2857 |
| 7:45 PM | 32 | 85 | 117 | 42 | 48 | 90 | 35 | 203 | 238 | 28 | 247 | 275 | 720 | 2727 |
| 8:00 PM | 31 | 78 | 109 | 41 | 45 | 86 | 35 | 201 | 237 | 27 | 253 | 280 | 712 | 2594 |
| 8:15 PM | 27 | 81 | 108 | 38 | 42 | 80 | 34 | 180 | 214 | 26 | 248 | 274 | 677 | 2469 |
| 8:30 PM | 25 | 71 | 96 | 36 | 39 | 75 | 33 | 171 | 204 | 22 | 221 | 243 | 618 | 2304 |
| 8:45 PM | 22 | 67 | 90 | 35 | 42 | 78 | 31 | 153 | 184 | 21 | 215 | 235 | 587 | 2138 |
| 9:00 PM | 24 | 69 | 93 | 48 | 47 | 95 | 28 | 141 | 169 | 21 | 209 | 230 | 587 | 1952 |
| 9:15 PM | 18 | 61 | 79 | 40 | 38 | 78 | 27 | 128 | 155 | 18 | 182 | 199 | 512 | 1722 |
| 9:30 PM | 16 | 55 | 72 | 29 | 29 | 58 | 24 | 121 | 145 | 19 | 158 | 177 | 452 | 1507 |
| 9:45 PM | 13 | 50 | 63 | 25 | 23 | 48 | 22 | 113 | 135 | 14 | 141 | 155 | 401 | 1326 |
| 10:00 PM | 11 | 40 | 51 | 24 | 24 | 48 | 19 | 97 | 116 | 13 | 128 | 141 | 357 | 1159 |
| 10:15 PM | 11 | 38 | 48 | 17 | 20 | 37 | 19 | 84 | 102 | 11 | 98 | 109 | 297 | 1017 |
| 10:30 PM | 12 | 34 | 46 | 17 | 19 | 36 | 17 | 74 | 91 | 9 | 89 | 98 | 271 | 902 |
| 10:45 PM | 9 | 31 | 39 | 15 | 14 | 29 | 14 | 66 | 79 | 9 | 78 | 87 | 234 | 800 |
| 11:00 PM | 8 | 25 | 33 | 12 | 14 | 26 | 12 | 61 | 73 | 7 | 76 | 82 | 215 | 703 |
| 11:15 PM | 7 | 23 | 30 | 12 | 12 | 24 | 10 | 53 | 63 | 5 | 59 | 65 | 182 | 599 |
| 11:30 PM | 5 | 22 | 27 | 14 | 12 | 26 | 10 | 43 | 53 | 7 | 55 | 63 | 169 | 513 |
| 11:45 PM | 4 | 18 | 23 | 8 | 9 | 17 | 7 | 35 | 42 | 6 | 49 | 54 | 137 | 422 |
| TOTALS | 2159 | 5570 | 7725 | 2552 | 3063 | 5614 | 2471 | 16102 | 18584 | 1650 | 16459 | 18105 | 50036 | |

* Intersection hour count total equals the current time period and the following three time periods.

Loop Detector Turning Movement Count Information

Intersection: **45th St & 17th Ave S**

Weekend Counts

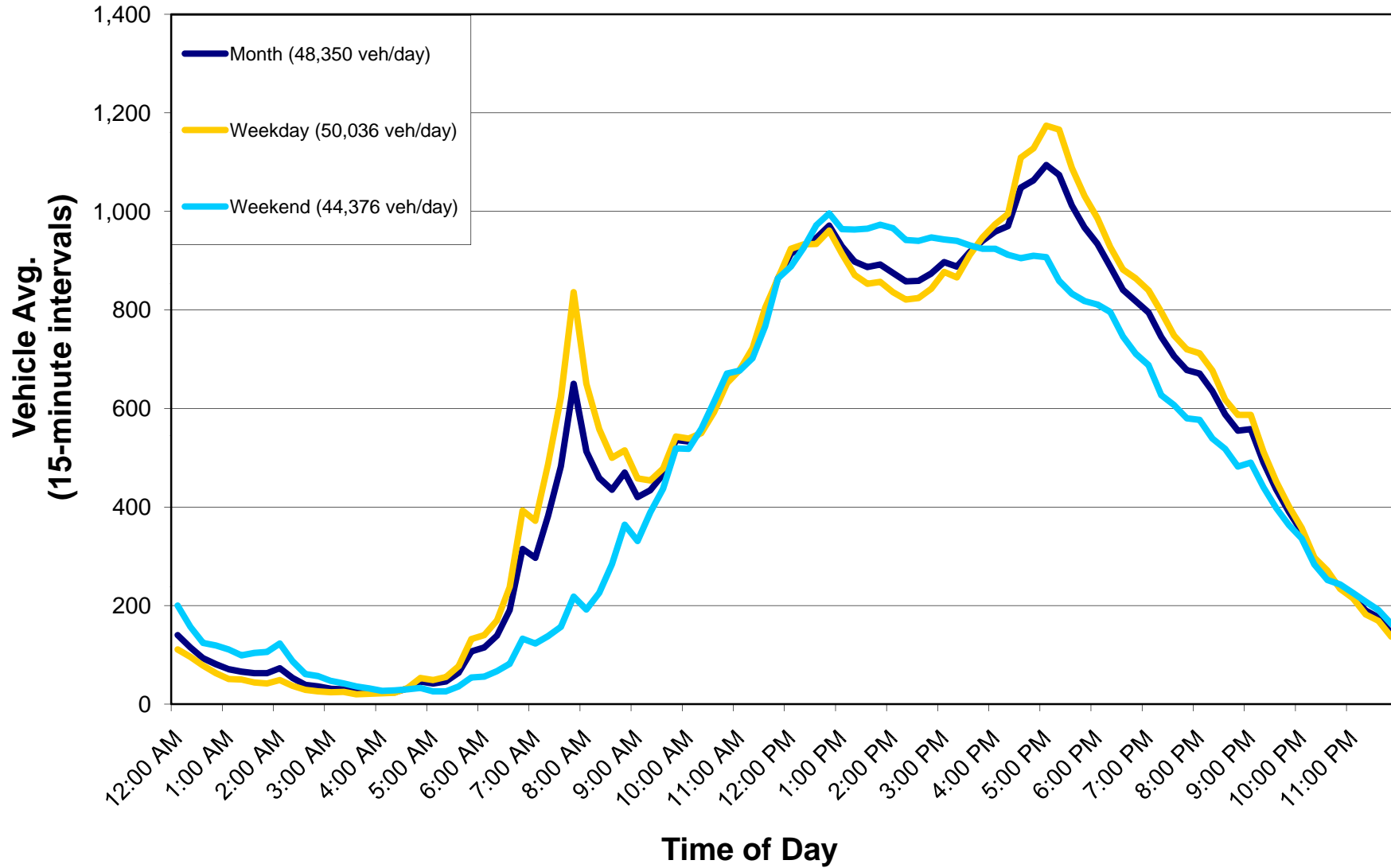
Dates: **5/1/2009** to **5/31/2009**

Note: Cells values represent the average of the dates above.

| Start Time | EB Approach | | | WB Approach | | | NB Approach | | | SB Approach | | | Int. Total | Int. Hr. Total * |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|--------------|--------------|--------------|------------------|
| | EB Left | EB Thru | EB Total | WB Left | WB Thru | WB Total | NB Left | NB Thru | NB Total | SB Left | SB Thru | SB Total | | |
| 12:00 AM | 5 | 22 | 27 | 20 | 17 | 37 | 11 | 49 | 60 | 8 | 68 | 76 | 200 | 600 |
| 12:15 AM | 4 | 19 | 23 | 11 | 13 | 24 | 7 | 43 | 50 | 5 | 55 | 60 | 157 | 511 |
| 12:30 AM | 5 | 17 | 22 | 9 | 9 | 18 | 8 | 31 | 38 | 4 | 42 | 46 | 124 | 453 |
| 12:45 AM | 5 | 17 | 22 | 8 | 9 | 16 | 5 | 31 | 36 | 4 | 41 | 45 | 119 | 433 |
| 1:00 AM | 4 | 13 | 17 | 7 | 7 | 14 | 7 | 27 | 35 | 3 | 40 | 43 | 111 | 420 |
| 1:15 AM | 4 | 14 | 18 | 7 | 7 | 14 | 5 | 23 | 28 | 3 | 36 | 39 | 99 | 432 |
| 1:30 AM | 4 | 15 | 18 | 7 | 8 | 15 | 6 | 25 | 31 | 3 | 37 | 40 | 104 | 420 |
| 1:45 AM | 4 | 13 | 17 | 7 | 9 | 16 | 5 | 24 | 29 | 3 | 42 | 44 | 106 | 377 |
| 2:00 AM | 3 | 17 | 20 | 10 | 11 | 21 | 6 | 23 | 29 | 5 | 48 | 53 | 123 | 328 |
| 2:15 AM | 3 | 12 | 15 | 5 | 6 | 11 | 5 | 18 | 23 | 3 | 35 | 38 | 87 | 252 |
| 2:30 AM | 3 | 8 | 11 | 4 | 4 | 8 | 4 | 16 | 20 | 2 | 20 | 22 | 61 | 207 |
| 2:45 AM | 1 | 7 | 8 | 4 | 4 | 7 | 3 | 16 | 20 | 2 | 21 | 23 | 57 | 182 |
| 3:00 AM | 2 | 6 | 8 | 3 | 3 | 6 | 3 | 14 | 17 | 2 | 15 | 17 | 47 | 157 |
| 3:15 AM | 1 | 6 | 7 | 2 | 2 | 4 | 3 | 12 | 15 | 1 | 14 | 15 | 42 | 137 |
| 3:30 AM | 1 | 5 | 6 | 3 | 4 | 6 | 2 | 8 | 10 | 1 | 13 | 14 | 36 | 123 |
| 3:45 AM | 1 | 4 | 5 | 2 | 2 | 4 | 3 | 9 | 12 | 2 | 9 | 11 | 32 | 117 |
| 4:00 AM | 1 | 3 | 4 | 2 | 3 | 4 | 2 | 7 | 9 | 1 | 9 | 10 | 27 | 118 |
| 4:15 AM | 1 | 4 | 5 | 1 | 3 | 4 | 1 | 8 | 9 | 1 | 9 | 10 | 28 | 117 |
| 4:30 AM | 1 | 4 | 5 | 1 | 2 | 3 | 1 | 10 | 12 | 1 | 9 | 10 | 30 | 115 |
| 4:45 AM | 1 | 4 | 5 | 1 | 3 | 3 | 2 | 13 | 14 | 1 | 10 | 11 | 33 | 121 |
| 5:00 AM | 1 | 5 | 7 | 1 | 1 | 2 | 1 | 8 | 10 | 0 | 8 | 8 | 26 | 142 |
| 5:15 AM | 1 | 4 | 5 | 1 | 1 | 2 | 2 | 9 | 11 | 1 | 7 | 8 | 26 | 172 |
| 5:30 AM | 1 | 5 | 6 | 1 | 2 | 4 | 2 | 12 | 13 | 1 | 11 | 12 | 36 | 213 |
| 5:45 AM | 1 | 5 | 7 | 3 | 3 | 6 | 1 | 23 | 24 | 1 | 17 | 17 | 54 | 259 |
| 6:00 AM | 2 | 8 | 10 | 2 | 1 | 3 | 2 | 25 | 27 | 1 | 16 | 17 | 56 | 338 |
| 6:15 AM | 3 | 8 | 10 | 4 | 3 | 7 | 2 | 21 | 23 | 2 | 25 | 27 | 67 | 405 |
| 6:30 AM | 4 | 11 | 15 | 3 | 4 | 7 | 2 | 30 | 33 | 2 | 26 | 27 | 82 | 476 |
| 6:45 AM | 4 | 15 | 19 | 4 | 6 | 11 | 4 | 61 | 65 | 3 | 35 | 38 | 133 | 551 |
| 7:00 AM | 4 | 13 | 18 | 7 | 6 | 13 | 5 | 42 | 47 | 2 | 44 | 46 | 123 | 636 |
| 7:15 AM | 6 | 17 | 23 | 7 | 6 | 13 | 6 | 52 | 58 | 3 | 42 | 45 | 138 | 705 |
| 7:30 AM | 6 | 22 | 28 | 10 | 7 | 17 | 6 | 53 | 59 | 3 | 50 | 53 | 157 | 793 |
| 7:45 AM | 7 | 28 | 35 | 10 | 11 | 21 | 10 | 86 | 95 | 4 | 64 | 67 | 218 | 920 |
| 8:00 AM | 7 | 24 | 31 | 8 | 9 | 17 | 11 | 69 | 80 | 2 | 62 | 64 | 192 | 1066 |
| 8:15 AM | 10 | 31 | 41 | 9 | 13 | 22 | 10 | 82 | 92 | 3 | 67 | 70 | 226 | 1205 |
| 8:30 AM | 12 | 33 | 44 | 14 | 13 | 27 | 18 | 108 | 126 | 6 | 81 | 87 | 284 | 1368 |
| 8:45 AM | 14 | 51 | 64 | 17 | 20 | 37 | 21 | 141 | 162 | 8 | 92 | 100 | 364 | 1521 |
| 9:00 AM | 14 | 45 | 59 | 14 | 16 | 30 | 22 | 119 | 141 | 8 | 92 | 100 | 331 | 1676 |
| 9:15 AM | 20 | 52 | 73 | 16 | 22 | 37 | 19 | 128 | 147 | 8 | 124 | 132 | 389 | 1863 |
| 9:30 AM | 19 | 64 | 83 | 17 | 22 | 39 | 22 | 151 | 173 | 7 | 135 | 142 | 437 | 2033 |
| 9:45 AM | 31 | 75 | 106 | 22 | 31 | 53 | 23 | 185 | 209 | 11 | 140 | 151 | 519 | 2210 |
| 10:00 AM | 22 | 65 | 88 | 23 | 27 | 50 | 24 | 187 | 211 | 11 | 157 | 169 | 518 | 2362 |
| 10:15 AM | 30 | 70 | 100 | 28 | 32 | 60 | 31 | 189 | 221 | 13 | 166 | 178 | 559 | 2521 |
| 10:30 AM | 28 | 74 | 102 | 28 | 36 | 64 | 32 | 212 | 244 | 15 | 190 | 204 | 614 | 2664 |
| 10:45 AM | 33 | 79 | 112 | 32 | 39 | 71 | 37 | 227 | 265 | 15 | 208 | 222 | 671 | 2817 |
| 11:00 AM | 31 | 75 | 107 | 33 | 38 | 71 | 32 | 226 | 259 | 17 | 224 | 241 | 677 | 3010 |
| 11:15 AM | 35 | 80 | 115 | 32 | 36 | 68 | 38 | 240 | 277 | 18 | 222 | 241 | 702 | 3221 |
| 11:30 AM | 34 | 80 | 113 | 42 | 43 | 85 | 36 | 276 | 312 | 19 | 238 | 257 | 767 | 3445 |
| 11:45 AM | 41 | 88 | 130 | 44 | 53 | 97 | 44 | 316 | 361 | 21 | 255 | 276 | 864 | 3650 |
| 12:00 PM | 38 | 99 | 137 | 40 | 51 | 91 | 43 | 322 | 364 | 24 | 272 | 296 | 888 | 3782 |
| 12:15 PM | 42 | 93 | 135 | 41 | 58 | 99 | 46 | 329 | 375 | 26 | 291 | 317 | 926 | 3858 |
| 12:30 PM | 48 | 104 | 152 | 45 | 51 | 96 | 50 | 338 | 388 | 28 | 308 | 336 | 972 | 3895 |
| 12:45 PM | 47 | 101 | 147 | 52 | 55 | 107 | 50 | 332 | 382 | 32 | 328 | 360 | 996 | 3888 |
| 1:00 PM | 50 | 97 | 147 | 50 | 52 | 102 | 47 | 317 | 364 | 34 | 317 | 351 | 964 | 3865 |
| 1:15 PM | 45 | 102 | 146 | 47 | 55 | 102 | 47 | 316 | 363 | 31 | 321 | 352 | 963 | 3867 |
| 1:30 PM | 49 | 104 | 152 | 52 | 52 | 104 | 42 | 302 | 345 | 35 | 330 | 364 | 965 | 3846 |
| 1:45 PM | 46 | 93 | 138 | 53 | 57 | 110 | 46 | 321 | 367 | 32 | 325 | 358 | 973 | 3821 |
| 2:00 PM | 49 | 98 | 147 | 49 | 62 | 111 | 46 | 314 | 360 | 31 | 316 | 347 | 966 | 3795 |
| 2:15 PM | 48 | 102 | 150 | 48 | 58 | 106 | 45 | 296 | 341 | 32 | 313 | 346 | 942 | 3772 |
| 2:30 PM | 47 | 98 | 145 | 47 | 57 | 104 | 42 | 294 | 336 | 33 | 322 | 356 | 940 | 3770 |
| 2:45 PM | 45 | 93 | 139 | 49 | 61 | 110 | 38 | 299 | 337 | 41 | 320 | 361 | 947 | 3761 |
| 3:00 PM | 41 | 99 | 140 | 53 | 67 | 120 | 39 | 293 | 332 | 37 | 314 | 351 | 943 | 3738 |
| 3:15 PM | 34 | 97 | 131 | 47 | 59 | 107 | 46 | 306 | 352 | 37 | 314 | 350 | 940 | 3719 |
| 3:30 PM | 41 | 92 | 134 | 52 | 59 | 111 | 45 | 291 | 336 | 37 | 313 | 350 | 931 | 3691 |
| 3:45 PM | 40 | 99 | 139 | 53 | 58 | 110 | 44 | 283 | 327 | 34 | 314 | 348 | 924 | 3665 |
| 4:00 PM | 39 | 92 | 131 | 54 | 67 | 121 | 46 | 268 | 314 | 37 | 322 | 359 | 924 | 3651 |
| 4:15 PM | 36 | 95 | 131 | 47 | 60 | 107 | 46 | 276 | 321 | 34 | 319 | 353 | 912 | 3634 |
| 4:30 PM | 36 | 96 | 132 | 45 | 56 | 102 | 43 | 272 | 315 | 32 | 325 | 356 | 905 | 3581 |
| 4:45 PM | 37 | 95 | 132 | 46 | 57 | 103 | 48 | 284 | 332 | 33 | 310 | 343 | 910 | 3509 |
| 5:00 PM | 38 | 98 | 137 | 54 | 55 | 109 | 39 | 275 | 314 | 36 | 311 | 348 | 907 | 3417 |
| 5:15 PM | 34 | 94 | 128 | 47 | 53 | 100 | 42 | 250 | 292 | 29 | 310 | 339 | 859 | 3321 |
| 5:30 PM | 30 | 91 | 121 | 47 | 54 | 101 | 36 | 248 | 283 | 34 | 294 | 328 | 833 | 3258 |
| 5:45 PM | 33 | 91 | 125 | 45 | 50 | 95 | 37 | 238 | 275 | 29 | 294 | 324 | 818 | 3171 |
| 6:00 PM | 30 | 84 | 114 | 46 | 52 | 98 | 44 | 243 | 287 | 28 | 284 | 312 | 811 | 3064 |
| 6:15 PM | 33 | 90 | 122 | 51 | 51 | 102 | 39 | 231 | 270 | 28 | 274 | 302 | 796 | 2941 |
| 6:30 PM | 32 | 91 | 123 | 44 | 48 | 92 | 32 | 215 | 248 | 27 | 257 | 284 | 746 | 2772 |
| 6:45 PM | 28 | 80 | 107 | 43 | 43 | 85 | 35 | 206 | 241 | 25 | 252 | 277 | 711 | 2633 |
| 7:00 PM | 31 | 82 | 113 | 36 | 45 | 81 | 33 | 208 | 241 | 23 | 230 | 253 | 688 | 2502 |
| 7:15 PM | 28 | 80 | 108 | 35 | 35 | 71 | 29 | 188 | 217 | 20 | 210 | 231 | 627 | 2391 |
| 7:30 PM | 24 | 73 | 96 | 32 | 41 | 72 | 32 | 178 | 210 | 20 | 208 | 228 | 607 | 2303 |
| 7:45 PM | 24 | 70 | 94 | 32 | 32 | 64 | 31 | 175 | 206 | 24 | 192 | 216 | 580 | 2214 |
| 8:00 PM | 24 | 68 | 93 | 34 | 37 | 71 | 30 | 165 | 195 | 21 | 197 | 219 | 577 | 2116 |
| 8:15 PM | 22 | 65 | 87 | 30 | 30 | 60 | 30 | 158 | 189 | 20 | 183 | 203 | 539 | 2029 |
| 8:30 PM | 23 | 61 | 84 | 28 | 32 | 60 | 28 | 149 | 178 | 19 | 177 | 196 | 518 | 1930 |
| 8:45 PM | 19 | 60 | 79 | 29 | 31 | 60 | 31 | 134 | 164 | 17 | 161 | 178 | 482 | 1810 |
| 9:00 PM | 18 | 57 | 75 | 42 | 38 | 80 | 26 | 128 | 154 | 19 | 163 | 182 | 490 | 1691 |
| 9:15 PM | 16 | 56 | 72 | 36 | 32 | 68 | 21 | 116 | 137 | 17 | 146 | 163 | 440 | 1537 |
| 9:30 PM | 14 | 52 | 67 | 23 | 26 | 49 | 25 | 107 | 132 | 16 | 135 | 150 | 398 | 1380 |
| 9:45 PM | 12 | 46 | 58 | 23 | 21 | 44 | 18 | 102 | 120 | 14 | 127 | 141 | 363 | 1234 |
| 10:00 PM | 11 | 40 | 51 | 25 | 21 | 47 | 19 | 93 | 112 | 14 | 112 | 127 | 336 | 1114 |
| 10:15 PM | 9 | 38 | 47 | 16 | 19 | 36 | 18 | 81 | 99 | 11 | 91 | 101 | 283 | 1004 |
| 10:30 PM | 8 | 33 | 41 | 16 | 19 | 35 | 13 | 74 | 87 | 10 | 79 | 89 | 252 | 929 |
| 10:45 PM | 8 | 30 | 38 | 15 | 16 | 32 | 13 | 71 | 84 | 9 | 81 | 90 | 243 | 868 |
| 11:00 PM | 9 | 30 | 39 | 17 | 15 | 33 | 11 | 71 | 82 | 5 | 67 | 72 | 226 | 788 |
| 11:15 PM | 7 | 24 | 31 | 14 | 16 | 30 | 12 | 66 | 78 | 6 | 63 | 69 | 208 | 762 |
| 11:30 PM | 6 | 22 | 28 | 14 | 14 | 28 | 9 | 54 | 63 | 10 | 62 | 72 | 191 | 711 |
| 11:45 PM | 5 | 16 | 21 | 13 | 11 | 24 | 10 | 41 | 51 | 8 | 59 | 67 | 163 | 644 |
| TOTALS | 1909 | 5008 | 6918 | 2403 | 2718 | 5122 | 2194 | 14003 | 16202 | 1459 | 14684 | 16141 | 44376 | |

* Intersection hour count total equals the current time period and the following three time periods.

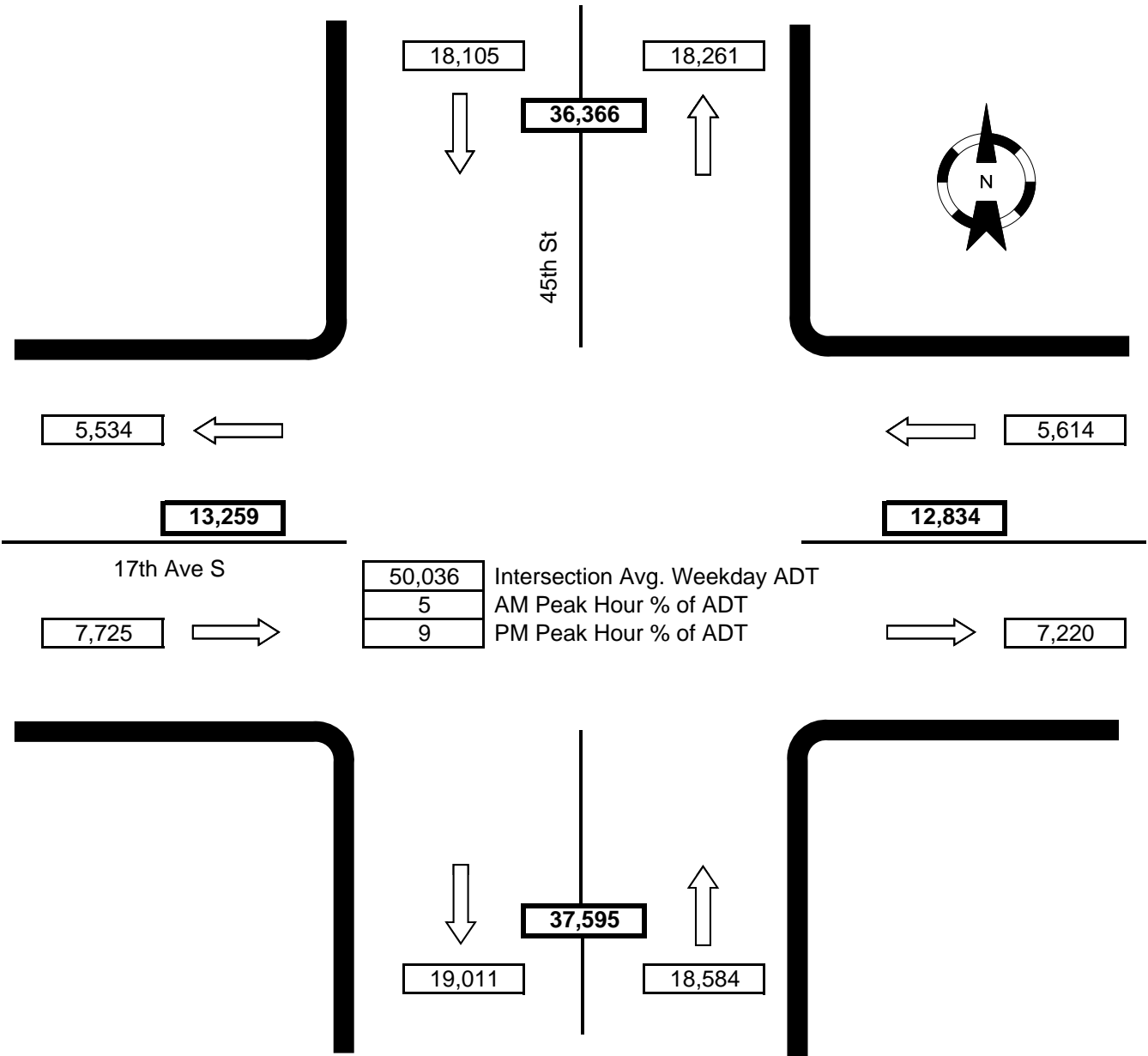
45th St. & 17th Ave. S. Intersection Volume Comparison May 2009



Average Daily Traffic (Approach and Roadway)

Intersection Name: 45th St & 17th Ave S

Date: May 2009



Notes:

- WB right-turn movement not recorded.
- EB right-turn movement not recorded.
- NB right-turn movement included in NB thru movement.
- SB right-turn movement included in SB thru movement.