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| <b>USH 45: STH 190 TO NORTH AVE (MILWAUKEE COUNTY)</b><br><b>NIGHTTIME CLOSURE</b><br><b>NO DIVERSION ROUTE (MAX QUEUE METHOD)</b> | <b>AUGUST</b>                            |
|  | Analyzed for 2009<br>Construction Season |

**SUMMARY OF TRAFFIC MODEL OUTPUT**

SUNDAY SOUTHBOUND DIRECTION

| TIME OF DAY | FLOWS AND CAPACITY IN VEH/HR |           |                |            |             |                       | AVERAGE SPEEDS IN MPH |                   |                |      |
|-------------|------------------------------|-----------|----------------|------------|-------------|-----------------------|-----------------------|-------------------|----------------|------|
|             | MAIN ROUTE                   |           | SITE CAPA CITY | FLOW       |             | AV.DEL PER VEH (MINS) | AVERAGE QUEUE (VEH)   | MAIN ROUTE        |                | SITE |
|             | DEMAND FLOW                  | PCT HEAVY |                | MAIN ROUTE | 'DIVER TED' |                       |                       | WITHOUT WORK ZONE | WITH WORK ZONE |      |
| MID-1 AM    | 873                          | 0.0       | 3000           | 873        | 0           | 0.35                  | 0                     | 69.7              | 58.3           | 49.7 |
| 1-2 AM      | 483                          | 0.0       | 3000           | 483        | 0           | 0.36                  | 0                     | 70.1              | 58.4           | 49.7 |
| 2-3 AM      | 451                          | 0.0       | 3000           | 451        | 0           | 0.36                  | 0                     | 70.2              | 58.5           | 49.7 |
| 3-4 AM      | 268                          | 0.0       | 3000           | 268        | 0           | 0.36                  | 0                     | 70.2              | 58.5           | 49.7 |
| 4-5 AM      | 311                          | 0.0       | 3000           | 311        | 0           | 0.36                  | 0                     | 70.2              | 58.5           | 49.7 |
| 5-6 AM      | 460                          | 0.0       | 3000           | 460        | 0           | 0.36                  | 0                     | 70.2              | 58.4           | 49.7 |
| 6-7 AM      | 971                          | 0.0       | 3000           | 971        | 0           | 0.35                  | 0                     | 69.6              | 58.2           | 49.7 |
| 7-8 AM      | 1288                         | 0.0       | 3000           | 1288       | 0           | 0.35                  | 0                     | 69.1              | 58.1           | 49.7 |
| 8-9 AM      | 1686                         | 0.0       | 3000           | 1686       | 0           | 0.34                  | 0                     | 68.6              | 57.9           | 49.7 |
| 9-10 AM     | 2573                         | 0.0       | OFF            | 2573       | 0           | 0.00                  | 0                     | 67.6              | 67.6           | 67.6 |
| 10-11 AM    | 3402                         | 0.0       | OFF            | 3402       | 0           | 0.00                  | 0                     | 66.5              | 66.5           | 66.5 |
| 11AM-NOON   | 3853                         | 0.0       | OFF            | 3853       | 0           | 0.00                  | 0                     | 64.5              | 64.5           | 64.5 |
| NOON-1PM    | 4313                         | 0.0       | OFF            | 4313       | 0           | 0.00                  | 0                     | 61.4              | 61.4           | 61.4 |
| 1-2 PM      | 4144                         | 0.0       | OFF            | 4144       | 0           | 0.00                  | 0                     | 62.5              | 62.5           | 62.5 |
| 2-3 PM      | 4399                         | 0.0       | OFF            | 4399       | 0           | 0.00                  | 0                     | 60.8              | 60.8           | 60.8 |
| 3-4 PM      | 4155                         | 0.0       | OFF            | 4155       | 0           | 0.00                  | 0                     | 62.5              | 62.5           | 62.5 |
| 4-5 PM      | 4111                         | 0.0       | OFF            | 4111       | 0           | 0.00                  | 0                     | 62.8              | 62.8           | 62.8 |
| 5-6 PM      | 3288                         | 0.0       | OFF            | 3288       | 0           | 0.00                  | 0                     | 66.6              | 66.6           | 66.6 |
| 6-7 PM      | 3457                         | 0.0       | OFF            | 3457       | 0           | 0.00                  | 0                     | 66.4              | 66.4           | 66.4 |
| 7-8 PM      | 3022                         | 0.0       | 2999           | 3022       | 0           | 1.38                  | 36                    | 67.0              | 38.6           | 37.4 |
| 8-9 PM      | 2638                         | 0.0       | 3000           | 2638       | 0           | 0.51                  | 1                     | 67.4              | 53.1           | 43.9 |
| 9-10 PM     | 1871                         | 0.0       | 3000           | 1871       | 0           | 0.34                  | 0                     | 68.4              | 57.8           | 49.7 |
| 10-11 PM    | 1443                         | 0.0       | 3000           | 1443       | 0           | 0.34                  | 0                     | 68.9              | 58.0           | 49.7 |
| 11PM-MID    | 836                          | 0.0       | 3000           | 836        | 0           | 0.35                  | 0                     | 69.7              | 58.3           | 49.7 |

"OFF" INDICATES NO ROAD WORK (ALL LANES OPEN TO TRAFFIC)

| *----- SITE BREAKDOWN DELAYS -----*    |      |
|--|------|
| BREAKDOWN DURATION (MINS)              | 0    |
| RANGE OF QUEUE DELAY - MIN (VEH-H) MAX | 0.0  |
| AV BREAKDOWNS PER DAY                  | 0.00 |
| AV QUEUE DELAY/DAY (VEH-H)             | 0.0  |
| AV TOTAL DELAY/DAY (VEH-H)             | 0.0  |

| *----- SITE ACCIDENT DELAYS -----*     |   |
|--|---|
| BREAKDOWN DURATION (MINS)              | 0 |
| RANGE OF QUEUE DELAY - MIN (VEH-H) MAX | 0 |
| AV BREAKDOWNS PER DAY                  | 0 |
| AV QUEUE DELAY/DAY (VEH-H)             | 0 |
| AV TOTAL DELAY/DAY (VEH-H)             | 0 |

| AVERAGE ACCIDENT NUMBERS (PIA/DAY) |         |
|------------------------------------|---------|
| MAIN ROUTE WITHOUT WORKS           | 0.0181  |
| MAIN ROUTE WITH WORKS              | 0.0171  |
| 'DIVERSION'                        | 0.0000  |
| PIA: Personal Injury Accidents     |         |
| IMPACTS ON ROAD USERS              |         |
| ROAD USER COSTS PER DAY            | \$2,223 |
| CONGESTED HOURS PER DAY*           | 0       |

\*Delays Exceeding User-Specified Maximum

**USH 45: STH 190 TO NORTH AVE (MILWAUKEE COUNTY)**  
**NIGHTTIME CLOSURE**  
**NO DIVERSION ROUTE (MAX QUEUE METHOD)**

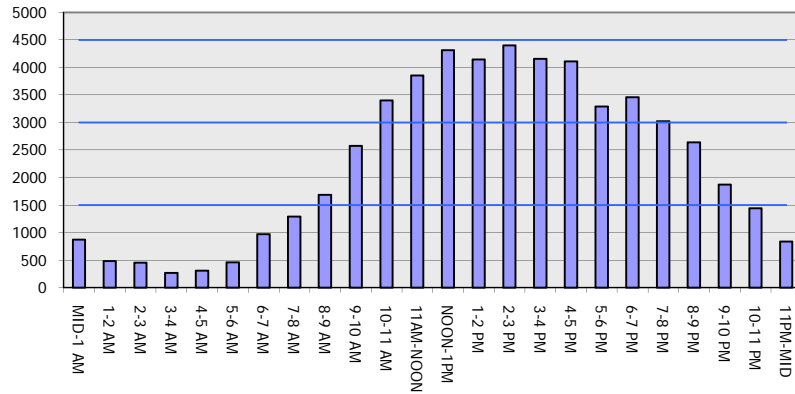
**AUGUST**

Analyzed for 2009  
 Construction Season

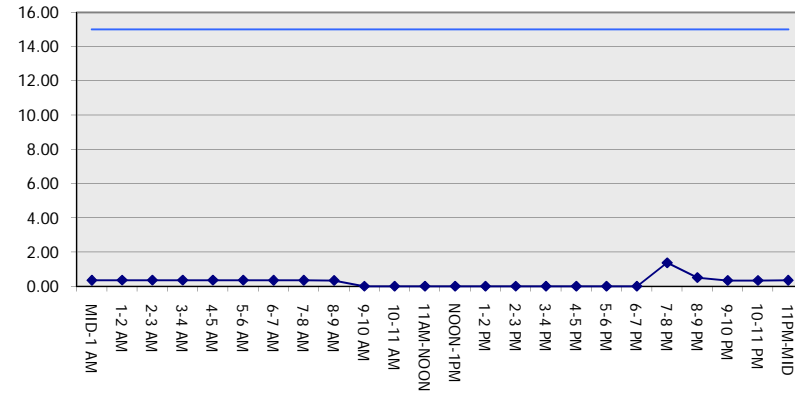
**GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT**

**SUNDAY SOUTHBOUND DIRECTION**

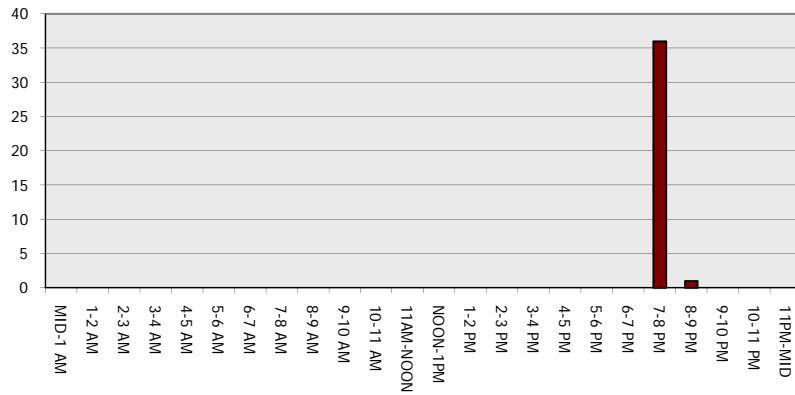
**Main Route - Traffic Demand (Vehicles Per Hour)**



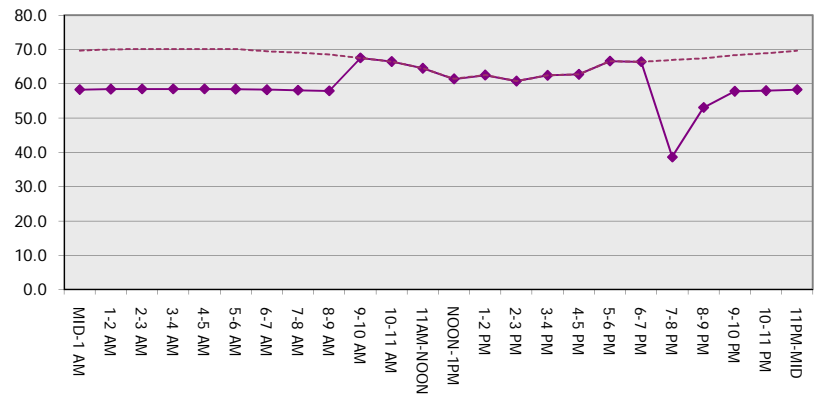
**Main Route Average Delay Per Vehicle (Minutes)**



**Main Route - Average Queue Length (Vehicles)**



**Main Route - Average Speed (MPH)**



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| <b>USH 45: STH 190 TO NORTH AVE (MILWAUKEE COUNTY)</b><br><b>NIGHTTIME CLOSURE</b><br><b>NO DIVERSION ROUTE (MAX QUEUE METHOD)</b> | <b>AUGUST</b>                            |
|  | Analyzed for 2009<br>Construction Season |

**SUMMARY OF TRAFFIC MODEL OUTPUT**

SUNDAY NORTHBOUND DIRECTION

| TIME OF DAY | FLOWS AND CAPACITY IN VEH/HR |           |                |            |             |                       |                     | AVERAGE SPEEDS IN MPH |                |      |
|-------------|------------------------------|-----------|----------------|------------|-------------|-----------------------|---------------------|-----------------------|----------------|------|
|             | MAIN ROUTE                   |           | SITE CAPA CITY | FLOW       |             | AV.DEL PER VEH (MINS) | AVERAGE QUEUE (VEH) | MAIN ROUTE            |                | SITE |
|             | DEMAND FLOW                  | PCT HEAVY |                | MAIN ROUTE | 'DIVER TED' |                       |                     | WITHOUT WORK ZONE     | WITH WORK ZONE |      |
| MID-1 AM    | 1514                         | 0.0       | 3000           | 1514       | 0           | 0.34                  | 0                   | 68.9                  | 58.0           | 49.7 |
| 1-2 AM      | 960                          | 0.0       | 3000           | 960        | 0           | 0.35                  | 0                   | 69.6                  | 58.2           | 49.7 |
| 2-3 AM      | 832                          | 0.0       | 3000           | 832        | 0           | 0.35                  | 0                   | 69.7                  | 58.3           | 49.7 |
| 3-4 AM      | 580                          | 0.0       | 3000           | 580        | 0           | 0.36                  | 0                   | 70.0                  | 58.4           | 49.7 |
| 4-5 AM      | 488                          | 0.0       | 3000           | 488        | 0           | 0.36                  | 0                   | 70.1                  | 58.4           | 49.7 |
| 5-6 AM      | 700                          | 0.0       | 3000           | 700        | 0           | 0.36                  | 0                   | 69.9                  | 58.4           | 49.7 |
| 6-7 AM      | 887                          | 0.0       | 3000           | 887        | 0           | 0.35                  | 0                   | 69.6                  | 58.2           | 49.7 |
| 7-8 AM      | 1256                         | 0.0       | 3000           | 1256       | 0           | 0.35                  | 0                   | 69.2                  | 58.1           | 49.7 |
| 8-9 AM      | 1619                         | 0.0       | 3000           | 1619       | 0           | 0.34                  | 0                   | 68.7                  | 57.9           | 49.7 |
| 9-10 AM     | 2405                         | 0.0       | OFF            | 2405       | 0           | 0.00                  | 0                   | 67.8                  | 67.8           | 67.8 |
| 10-11 AM    | 2750                         | 0.0       | OFF            | 2750       | 0           | 0.00                  | 0                   | 67.3                  | 67.3           | 67.3 |
| 11AM-NOON   | 3292                         | 0.0       | OFF            | 3292       | 0           | 0.00                  | 0                   | 66.6                  | 66.6           | 66.6 |
| NOON-1PM    | 3716                         | 0.0       | OFF            | 3716       | 0           | 0.00                  | 0                   | 65.5                  | 65.5           | 65.5 |
| 1-2 PM      | 3691                         | 0.0       | OFF            | 3691       | 0           | 0.00                  | 0                   | 65.6                  | 65.6           | 65.6 |
| 2-3 PM      | 3663                         | 0.0       | OFF            | 3663       | 0           | 0.00                  | 0                   | 65.8                  | 65.8           | 65.8 |
| 3-4 PM      | 4064                         | 0.0       | OFF            | 4064       | 0           | 0.00                  | 0                   | 63.1                  | 63.1           | 63.1 |
| 4-5 PM      | 3790                         | 0.0       | OFF            | 3790       | 0           | 0.00                  | 0                   | 65.0                  | 65.0           | 65.0 |
| 5-6 PM      | 3604                         | 0.0       | OFF            | 3604       | 0           | 0.00                  | 0                   | 66.3                  | 66.3           | 66.3 |
| 6-7 PM      | 3624                         | 0.0       | OFF            | 3624       | 0           | 0.00                  | 0                   | 66.1                  | 66.1           | 66.1 |
| 7-8 PM      | 2966                         | 0.0       | 2999           | 2966       | 0           | 1.02                  | 19                  | 67.1                  | 43.5           | 38.4 |
| 8-9 PM      | 2576                         | 0.0       | 3000           | 2576       | 0           | 0.45                  | 0                   | 67.5                  | 54.3           | 45.0 |
| 9-10 PM     | 2115                         | 0.0       | 3000           | 2115       | 0           | 0.33                  | 0                   | 68.1                  | 57.7           | 49.7 |
| 10-11 PM    | 1685                         | 0.0       | 3000           | 1685       | 0           | 0.34                  | 0                   | 68.6                  | 57.9           | 49.7 |
| 11PM-MID    | 1104                         | 0.0       | 3000           | 1104       | 0           | 0.35                  | 0                   | 69.4                  | 58.2           | 49.7 |

"OFF" INDICATES NO ROAD WORK (ALL LANES OPEN TO TRAFFIC)

| *----- SITE BREAKDOWN DELAYS -----*    |      |
|--|------|
| BREAKDOWN DURATION (MINS)              | 0    |
| RANGE OF QUEUE DELAY - MIN (VEH-H) MAX | 0.0  |
| AV BREAKDOWNS PER DAY                  | 0.00 |
| AV QUEUE DELAY/DAY (VEH-H)             | 0.0  |
| AV TOTAL DELAY/DAY (VEH-H)             | 0.0  |

| *----- SITE ACCIDENT DELAYS -----*     |   |
|--|---|
| BREAKDOWN DURATION (MINS)              | 0 |
| RANGE OF QUEUE DELAY - MIN (VEH-H) MAX | 0 |
| AV BREAKDOWNS PER DAY                  | 0 |
| AV QUEUE DELAY/DAY (VEH-H)             | 0 |
| AV TOTAL DELAY/DAY (VEH-H)             | 0 |

| AVERAGE ACCIDENT NUMBERS (PIA/DAY) |        |
|------------------------------------|--------|
| MAIN ROUTE WITHOUT WORKS           | 0.0180 |
| MAIN ROUTE WITH WORKS              | 0.0167 |
| 'DIVERSION'                        | 0.0000 |

PIA: Personal Injury Accidents

| ECONOMIC IMPACT ON ROAD USERS |         |
|-------------------------------|---------|
| ROAD USER COSTS PER DAY       | \$2,129 |
| CONGESTED HOURS PER DAY*      | 0       |

\*Delays Exceeding User-Specified Maximum

**USH 45: STH 190 TO NORTH AVE (MILWAUKEE COUNTY)  
NIGHTTIME CLOSURE  
NO DIVERSION ROUTE (MAX QUEUE METHOD)**

**AUGUST**  
Analyzed for 2009  
Construction Season

**GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT**  
**SUNDAY NORTHBOUND DIRECTION**

