

|   |  |
|---|--|
| <b>STH 29: IH 93 TO CTH X (MARATHON COUNTY)</b><br><b>CONTINUOUS (24 HOUR) CLOSURE</b><br><b>DIVERSION ROUTE: BUS 51, IH 39</b> | <b>MAY</b>                               |
|   | Analyzed for 2009<br>Construction Season |

**SUMMARY OF TRAFFIC MODEL OUTPUT**

MON-THUR                      WESTBOUND DIRECTION

| TIME OF DAY | FLOWS AND CAPACITY IN VEH/HR |           |                 |           |                |                 |                  | AVERAGE SPEEDS IN MPH |                       |                     |                 |              |                 |                 |              |
|-------------|------------------------------|-----------|-----------------|-----------|----------------|-----------------|------------------|-----------------------|-----------------------|---------------------|-----------------|--------------|-----------------|-----------------|--------------|
|             | MAIN ROUTE                   |           | ALTERNATE ROUTE |           | SITE CAPA CITY | FLOW MAIN ROUTE | FLOW DIVER -TING | TOTAL DIVN FLOW       | AV.DEL PER VEH (MINS) | AVERAGE QUEUE (VEH) | MAIN ROUTE      |              | ALTERNATE ROUTE |                 |              |
|             | DEMAND FLOW                  | PCT HEAVY | NORMAL FLOW     | PCT HEAVY |                |                 |                  |                       |                       |                     | WITHOUT WORK ZN | WITH WORK ZN | SITE            | WITHOUT WORK ZN | WITH WORK ZN |
| MID-1 AM    | 77                           | 0.0       | 40              | 0.0       | 1500           | 77              | 0                | 40                    | 0.43                  | 0                   | 66.3            | 48.5         | 45.2            | 38.4            | 38.4         |
| 1-2 AM      | 63                           | 0.0       | 33              | 0.0       | 1500           | 63              | 0                | 33                    | 0.43                  | 0                   | 66.3            | 48.6         | 45.3            | 38.4            | 38.4         |
| 2-3 AM      | 64                           | 0.0       | 33              | 0.0       | 1500           | 64              | 0                | 33                    | 0.43                  | 0                   | 66.3            | 48.6         | 45.2            | 38.4            | 38.4         |
| 3-4 AM      | 109                          | 0.0       | 57              | 0.0       | 1500           | 109             | 0                | 57                    | 0.43                  | 0                   | 66.2            | 48.4         | 45.0            | 38.4            | 38.4         |
| 4-5 AM      | 293                          | 0.0       | 153             | 0.0       | 1500           | 293             | 0                | 153                   | 0.45                  | 0                   | 65.8            | 47.7         | 44.3            | 38.2            | 38.2         |
| 5-6 AM      | 800                          | 0.0       | 417             | 0.0       | 1500           | 800             | 0                | 417                   | 0.50                  | 0                   | 64.9            | 45.8         | 42.4            | 37.6            | 37.6         |
| 6-7 AM      | 1446                         | 0.0       | 755             | 0.0       | 1499           | 1446            | 0                | 755                   | 1.07                  | 4                   | 63.7            | 34.0         | 32.4            | 36.9            | 36.9         |
| 7-8 AM      | 1515                         | 0.0       | 792             | 0.0       | 1500           | 1515            | 0                | 792                   | 2.40                  | 37                  | 63.6            | 21.5         | 30.8            | 36.8            | 36.8         |
| 8-9 AM      | 1058                         | 0.0       | 553             | 0.0       | 1500           | 1058            | 0                | 553                   | 0.57                  | 1                   | 64.4            | 43.8         | 41.2            | 37.3            | 37.3         |
| 9-10 AM     | 974                          | 0.0       | 510             | 0.0       | 1500           | 974             | 0                | 510                   | 0.52                  | 0                   | 64.6            | 45.2         | 41.8            | 37.4            | 37.4         |
| 10-11 AM    | 998                          | 0.0       | 522             | 0.0       | 1500           | 998             | 0                | 522                   | 0.52                  | 0                   | 64.5            | 45.1         | 41.7            | 37.4            | 37.4         |
| 11A-NOON    | 1031                         | 0.0       | 539             | 0.0       | 1500           | 1031            | 0                | 539                   | 0.52                  | 0                   | 64.5            | 45.0         | 41.5            | 37.4            | 37.4         |
| NOON-1PM    | 1064                         | 0.0       | 557             | 0.0       | 1500           | 1064            | 0                | 557                   | 0.53                  | 0                   | 64.4            | 44.9         | 41.5            | 37.3            | 37.3         |
| 1-2 PM      | 1170                         | 0.0       | 612             | 0.0       | 1500           | 1170            | 0                | 612                   | 0.60                  | 0                   | 64.2            | 43.0         | 39.4            | 37.2            | 37.2         |
| 2-3 PM      | 1329                         | 0.0       | 695             | 0.0       | 1500           | 1329            | 0                | 695                   | 0.80                  | 0                   | 63.9            | 38.5         | 34.7            | 37.1            | 37.1         |
| 3-4 PM      | 1425                         | 0.0       | 744             | 0.0       | 1499           | 1425            | 0                | 744                   | 0.93                  | 0                   | 63.7            | 36.3         | 32.4            | 36.9            | 36.9         |
| 4-5 PM      | 1481                         | 0.0       | 774             | 0.0       | 1499           | 1481            | 0                | 774                   | 1.07                  | 2                   | 63.7            | 34.0         | 31.3            | 36.9            | 36.9         |
| 5-6 PM      | 1169                         | 0.0       | 610             | 0.0       | 1500           | 1169            | 0                | 610                   | 0.60                  | 0                   | 64.2            | 43.0         | 39.4            | 37.2            | 37.2         |
| 6-7 PM      | 813                          | 0.0       | 425             | 0.0       | 1500           | 813             | 0                | 425                   | 0.50                  | 0                   | 64.9            | 45.8         | 42.4            | 37.6            | 37.6         |
| 7-8 PM      | 622                          | 0.0       | 325             | 0.0       | 1500           | 622             | 0                | 325                   | 0.48                  | 0                   | 65.2            | 46.5         | 43.0            | 37.8            | 37.8         |
| 8-9 PM      | 449                          | 0.0       | 234             | 0.0       | 1500           | 449             | 0                | 234                   | 0.47                  | 0                   | 65.6            | 47.1         | 43.7            | 38.0            | 38.0         |
| 9-10 PM     | 346                          | 0.0       | 180             | 0.0       | 1500           | 346             | 0                | 180                   | 0.46                  | 0                   | 65.8            | 47.4         | 44.1            | 38.1            | 38.1         |
| 10-11 PM    | 267                          | 0.0       | 139             | 0.0       | 1500           | 267             | 0                | 139                   | 0.45                  | 0                   | 65.9            | 47.8         | 44.4            | 38.2            | 38.2         |
| 11PM-MID    | 133                          | 0.0       | 69              | 0.0       | 1500           | 133             | 0                | 69                    | 0.44                  | 0                   | 66.1            | 48.3         | 45.0            | 38.4            | 38.4         |

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

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

| AVERAGE ACCIDENT NUMBERS (PIA/DAY) |        |
|------------------------------------|--------|
| MAIN ROUTE WITHOUT WORKS           | 0.0039 |
| MAIN ROUTE WITH WORKS              | 0.0026 |
| DIVERSION                          | 0.0860 |

PIA: Personal Injury Accidents

| IMPACTS ON ROAD USERS              |         |
|------------------------------------|---------|
| ROAD USER COSTS PER DAY ( DOLLARS) | \$3,407 |
| CONGESTED HOURS PER DAY*           | 0       |

\*Delays Exceeding 15 Minutes

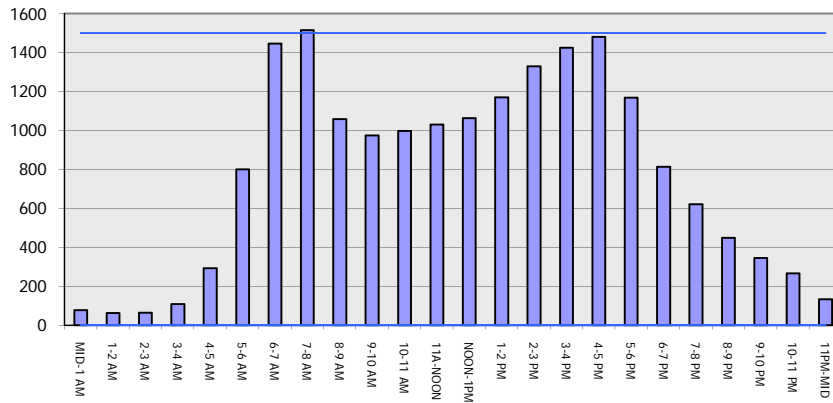
**STH 29: IH 93 TO CTH X (MARATHON COUNTY)  
CONTINUOUS (24 HOUR) CLOSURE  
DIVERSION ROUTE: BUS 51, IH 39**

**MAY**  
Analyzed for 2009  
Construction Season

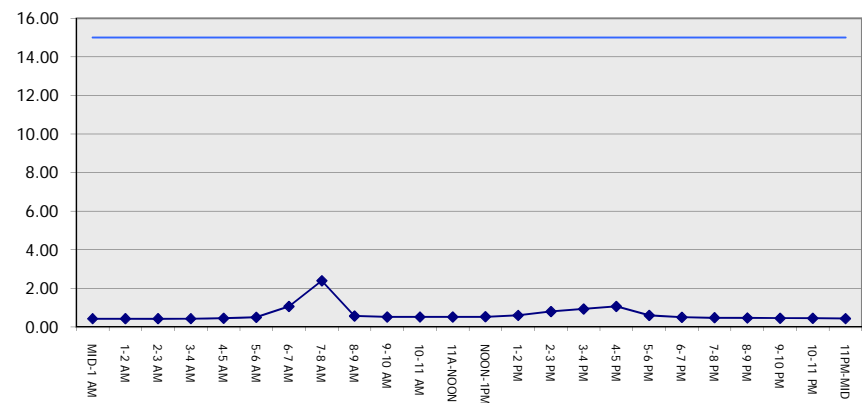
**GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT**

**MON-THUR WESTBOUND DIRECTION**

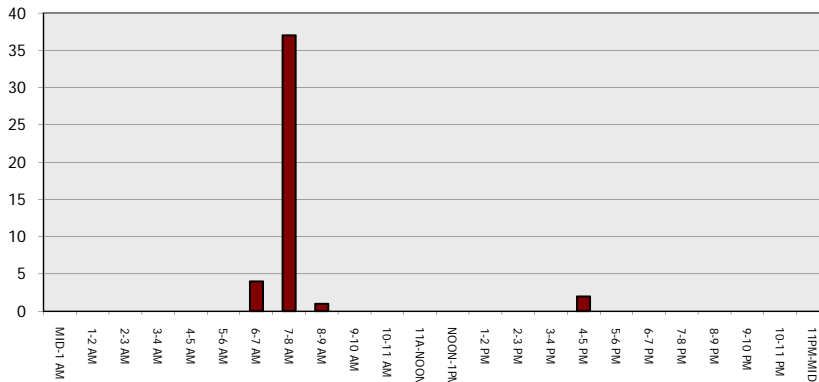
**Main Route - Traffic Demand (Vehicles Per Hour)**



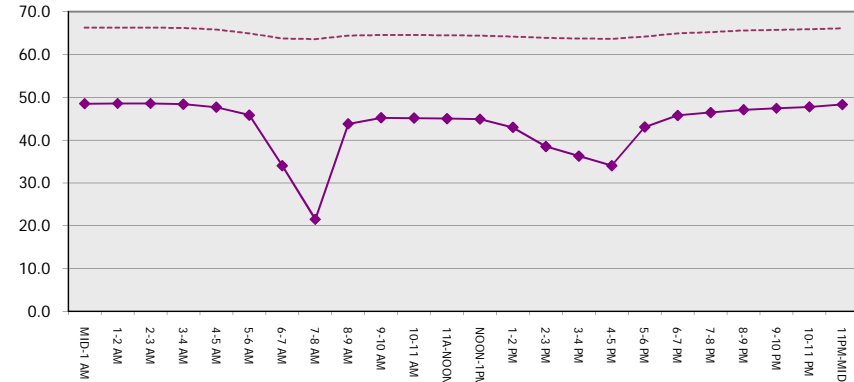
**Main Route Average Delay Per Vehicle (Minutes)**



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



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



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| <b>STH 29: IH 93 TO CTH X (MARATHON COUNTY)</b><br><b>CONTINUOUS (24 HOUR) CLOSURE</b><br><b>DIVERSION ROUTE: BUS 51, IH 39</b> | <b>MAY</b>                               |
|   | Analyzed for 2009<br>Construction Season |

**SUMMARY OF TRAFFIC MODEL OUTPUT**

MON-THUR                      EASTBOUND DIRECTION

| TIME OF DAY | FLOWS AND CAPACITY IN VEH/HR |           |             |           |                |                 |                  |                 | AVERAGE SPEEDS IN MPH |                     |                 |              |      |                 |              |
|-------------|------------------------------|-----------|-------------|-----------|----------------|-----------------|------------------|-----------------|-----------------------|---------------------|-----------------|--------------|------|-----------------|--------------|
|             | MAIN                         |           | DIVERSION   |           | SITE CAPA CITY | FLOW MAIN ROUTE | FLOW DIVER -TING | TOTAL DIVN FLOW | AV.DEL PER VEH (MINS) | AVERAGE QUEUE (VEH) | MAIN ROUTE      |              | SITE | ALTERNATE ROUTE |              |
|             | DEMAND FLOW                  | PCT HEAVY | NORMAL FLOW | PCT HEAVY |                |                 |                  |                 |                       |                     | WITHOUT WORK ZN | WITH WORK ZN |      | WITHOUT WORK ZN | WITH WORK ZN |
| MID-1 AM    | 84                           | 0.0       | 44          | 0.0       | 1500           | 84              | 0                | 44              | 0.43                  | 0                   | 66.2            | 48.5         | 45.1 | 38.3            | 38.3         |
| 1-2 AM      | 63                           | 0.0       | 33          | 0.0       | 1500           | 63              | 0                | 33              | 0.43                  | 0                   | 66.3            | 48.6         | 45.3 | 38.4            | 38.4         |
| 2-3 AM      | 60                           | 0.0       | 31          | 0.0       | 1500           | 60              | 0                | 31              | 0.43                  | 0                   | 66.3            | 48.6         | 45.3 | 38.4            | 38.4         |
| 3-4 AM      | 100                          | 0.0       | 52          | 0.0       | 1500           | 100             | 0                | 52              | 0.43                  | 0                   | 66.2            | 48.4         | 45.1 | 38.3            | 38.3         |
| 4-5 AM      | 230                          | 0.0       | 119         | 0.0       | 1500           | 230             | 0                | 119             | 0.44                  | 0                   | 66.0            | 47.9         | 44.6 | 38.0            | 38.0         |
| 5-6 AM      | 520                          | 0.0       | 271         | 0.0       | 1500           | 520             | 0                | 271             | 0.47                  | 0                   | 65.4            | 46.8         | 43.4 | 37.4            | 37.4         |
| 6-7 AM      | 954                          | 0.0       | 498         | 0.0       | 1500           | 954             | 0                | 498             | 0.51                  | 0                   | 64.6            | 45.3         | 41.9 | 35.7            | 35.7         |
| 7-8 AM      | 990                          | 0.0       | 518         | 0.0       | 1500           | 990             | 0                | 518             | 0.52                  | 0                   | 64.5            | 45.1         | 41.7 | 35.4            | 35.4         |
| 8-9 AM      | 776                          | 0.0       | 406         | 0.0       | 1500           | 776             | 0                | 406             | 0.50                  | 0                   | 65.0            | 45.9         | 42.5 | 36.8            | 36.8         |
| 9-10 AM     | 820                          | 0.0       | 429         | 0.0       | 1500           | 820             | 0                | 429             | 0.50                  | 0                   | 64.8            | 45.8         | 42.3 | 36.7            | 36.7         |
| 10-11 AM    | 904                          | 0.0       | 472         | 0.0       | 1500           | 904             | 0                | 472             | 0.51                  | 0                   | 64.7            | 45.5         | 42.0 | 36.1            | 36.1         |
| 11A-NOON    | 1022                         | 0.0       | 534         | 0.0       | 1500           | 1022            | 0                | 534             | 0.52                  | 0                   | 64.5            | 45.0         | 41.6 | 35.1            | 35.1         |
| NOON-1PM    | 1081                         | 0.0       | 565         | 0.0       | 1500           | 1081            | 0                | 565             | 0.53                  | 0                   | 64.4            | 44.8         | 41.4 | 34.5            | 34.5         |
| 1-2 PM      | 1168                         | 0.0       | 611         | 0.0       | 1500           | 1168            | 0                | 611             | 0.60                  | 0                   | 64.2            | 43.0         | 39.5 | 33.7            | 33.7         |
| 2-3 PM      | 1411                         | 0.0       | 738         | 0.0       | 1499           | 1411            | 0                | 738             | 0.91                  | 0                   | 63.8            | 36.6         | 32.8 | 31.5            | 31.5         |
| 3-4 PM      | 1673                         | 0.0       | 875         | 0.0       | 1499           | 1673            | 0                | 875+            | 3.39                  | 76                  | 63.3            | 17.9         | 30.8 | 27.3            | 27.5         |
| 4-5 PM      | 1736                         | 0.0       | 908         | 0.0       | 1500           | 1718            | 18               | 926+            | 11.81                 | 297                 | 63.2            | 9.1          | 30.8 | 26.0            | 26.5         |
| 5-6 PM      | 1371                         | 0.0       | 715         | 0.0       | 1499           | 1281            | 90               | 806+            | 11.52                 | 289                 | 63.8            | 9.2          | 30.9 | 31.9            | 30.2         |
| 6-7 PM      | 904                          | 0.0       | 472         | 0.0       | 1500           | 904             | 0                | 473             | 0.97                  | 28                  | 64.7            | 36.4         | 41.7 | 36.1            | 36.1         |
| 7-8 PM      | 714                          | 0.0       | 374         | 0.0       | 1500           | 714             | 0                | 374             | 0.49                  | 0                   | 65.1            | 46.1         | 42.7 | 36.9            | 36.9         |
| 8-9 PM      | 589                          | 0.0       | 308         | 0.0       | 1500           | 589             | 0                | 308             | 0.48                  | 0                   | 65.3            | 46.6         | 43.2 | 37.2            | 37.2         |
| 9-10 PM     | 400                          | 0.0       | 209         | 0.0       | 1500           | 400             | 0                | 209             | 0.46                  | 0                   | 65.6            | 47.3         | 43.9 | 37.6            | 37.6         |
| 10-11 PM    | 328                          | 0.0       | 171         | 0.0       | 1500           | 328             | 0                | 171             | 0.45                  | 0                   | 65.8            | 47.5         | 44.2 | 37.8            | 37.8         |
| 11PM-MID    | 155                          | 0.0       | 80          | 0.0       | 1500           | 155             | 0                | 80              | 0.44                  | 0                   | 66.1            | 48.2         | 44.8 | 38.2            | 38.2         |

+ INDICATES DIVERSION FLOW EXCEEDS USER-SPECIFIED WARNING LIMIT

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

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

| AVERAGE ACCIDENT NUMBERS (PIA/DAY) |        |
|------------------------------------|--------|
| MAIN ROUTE WITHOUT WORKS           | 0.0037 |
| MAIN ROUTE WITH WORKS              | 0.0025 |
| DIVERSION                          | 0.0840 |

PIA: Personal Injury Accidents

| IMPACTS ON ROAD USERS              |          |
|------------------------------------|----------|
| ROAD USER COSTS PER DAY ( DOLLARS) | \$11,136 |
| CONGESTED HOURS PER DAY*           | 0        |

\*Delays Exceeding 15 Minutes

**STH 29: IH 93 TO CTH X (MARATHON COUNTY)  
 CONTINUOUS (24 HOUR) CLOSURE  
 DIVERSION ROUTE: BUS 51, IH 39**

**MAY**  
 Analyzed for 2009  
 Construction Season

**GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT**  
**MON-THUR EASTBOUND DIRECTION**

