APPENDIX E

MOBILE6-Related Files

Vehicle Age Distribution

RegData.d

REG DIST

* This file contains the default MOBILE6 values for the distribution of
* vehicles by age for July of any calendar year. There are sixteen (16)
* sets of values representing 16 combined gasoline/diesel vehicle class
* distributions. These distributions are split for gasoline and diesel
* using the separate input (or default) values for diesel sales fractions.
* Each distribution contains 25 values which represent the fraction of
* all vehicles in that class (gasoline and diesel) of that age in July.
* The first number is for age 1 (calendar year minus model year plus one)
* and the last number is for age 25. The last age includes all vehicles
* of age 25 or older. The first number in each distribution is an integer
* which indicates which of the 16 vehicle classes are represented by the
* distribution. The sixteen vehicle classes are:
* 1  LDV   Light-Duty Vehicles (Passenger Cars)
* 2  LDT1  Light-Duty Trucks 1 (0-6,000 lbs. GVWR, 0-3750 lbs. LVW)
* 3  LDT2  Light Duty Trucks 2 (0-6,001 lbs. GVWR, 3751-5750 lbs. LVW)
* 4  LDT3  Light Duty Trucks 3 (6,001-8500 lbs. GVWR, 0-3750 lbs. LVW)
* 5  LDT4  Light Duty Trucks 4 (6,001-8500 lbs. GVWR, 3751-5750 lbs. LVW)
* 6  HDV2B Class 2b Heavy Duty Vehicles (8501-10,000 lbs. GVWR)
* 7  HDV3  Class 3 Heavy Duty Vehicles (10,001-14,000 lbs. GVWR)
* 8  HDV4  Class 4 Heavy Duty Vehicles (14,001-16,000 lbs. GVWR)
* 9  HDV5  Class 5 Heavy Duty Vehicles (16,001-19,500 lbs. GVWR)
*10  HDV6  Class 6 Heavy Duty Vehicles (19,501-26,000 lbs. GVWR)
*11  HDV7  Class 7 Heavy Duty Vehicles (26,001-33,000 lbs. GVWR)
*12  HDV8A Class 8a Heavy Duty Vehicles (33,001-60,000 lbs. GVWR)
*13  HDV8B Class 8b Heavy Duty Vehicles (>60,000 lbs. GVWR)
*14  HDBS  School Busses
*15  HDBT  Transit and Urban Busses
*16  MC    Motorcycles (All)

* The 25 age values are arranged in two rows of 10 values followed by a row
* with the last 5 values. Comments (such as this one) are indicated by
* an asterisk in the first column. Empty rows are ignored. Values are
* read "free format," meaning any number may appear in any row with as
* many characters as needed (including a decimal) as long as 25 values
* follow the initial integer value separated by a space.
* If all 28 vehicle classes do not need to be altered from the default
* values, then only the vehicle classes that need to be changed need to
* be included in this file. The order in which the vehicle classes are
* read does not matter, however each vehicle class set must contain 25
* values and be in the proper age order.
*
* LDV
1 0.0405 0.0541 0.0540 0.0559 0.0671 0.0682 0.0599 0.0660 0.0593 0.0677
   0.0571 0.0550 0.0528 0.0457 0.0399 0.0382 0.0293 0.0220 0.0178 0.0129
   0.0091 0.0044 0.0028 0.0023 0.0181
* LDT1
2 0.0398 0.0531 0.0530 0.0329 0.0286 0.0233 0.0248 0.0506 0.0548
   0.0686 0.0546 0.0466 0.0645 0.0503 0.0661 0.0569 0.0605 0.0445 0.0347
   0.0196 0.0095 0.0083 0.0066 0.0160
* LDT2
3 0.0552 0.0736 0.0734 0.0717 0.0963 0.0908 0.0995 0.0892 0.0639 0.0574
   0.0530 0.0443 0.0343 0.0241 0.0169 0.0151 0.0167 0.0048 0.0052 0.0042
   0.0038 0.0024 0.0011 0.0008 0.0061
* LDT3
4 0.0449 0.0598 0.0597 0.0559 0.0759 0.0939 0.0571 0.0593 0.0552 0.0671
   0.0568 0.0473 0.0336 0.0225 0.0280 0.0291 0.0281 0.0222 0.0171 0.0152
   0.0121 0.0070 0.0042 0.0025 0.0455
* LDT4
5 0.0679 0.0905 0.0903 0.0863 0.0917 0.1214 0.0892 0.0734 0.0509 0.0521
   0.0560 0.0169 0.0167 0.0058 0.0098 0.0043 0.0074 0.0040 0.0064 0.0066
   0.0037 0.0015 0.0009 0.0002 0.0460

MOBILE6 Command Files

2004

******************************************************************************
*** Generated By: John-Paul Hopman
*** Date Created: Thu Jan 12 09:51:37 2006
*** File Directory: F:\TransCAD\2030LRP\2004\Build
******************************************************************************

MOBILE6 INPUT FILE : F:\TransCAD\2030LRP\2004\Build\Inputs\1HrOzone.in
REPORT FILE        : F:\TransCAD\2030LRP\2004\Build\Outputs\1HrOzone.out
SPREADSHEET        : F:\TransCAD\2030LRP\2004\Build\Outputs\1HrOzone.tab

POLLUTANTS         : HC CO NOx

******************************************************************************
*** EXPRESS HC AS VOC :
******************************************************************************
NO REBUILD : 
NO REFUELING :
REG DIST : F:\TransCAD\Mobile\RegData.d
MIN/MAX TEMP : 62.8 83.7
FUEL RVP : 9.0

*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2004 Rural Interstate
*****************************************************************************
***
CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway

*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2004 Other Rural Principal Arterial
*****************************************************************************
***
CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 39.3 Non-Ramp

*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2004 Minor Rural Arterial
*****************************************************************************
***
CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 44.9 Arterial

*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2004 Major Rural Collector
*****************************************************************************
***
CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 34.2 Arterial

*****************************************************************************
SCENARIO RECORD : Scenario Title: 2004 Minor Rural Collector

CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 35.1 Arterial

SCENARIO RECORD : Scenario Title: 2004 Rural Local Road

CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 34.3 Local

SCENARIO RECORD : Scenario Title: 2004 Urban Interstate

CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway

SCENARIO RECORD : Scenario Title: 2004 Other Urban Freeways and Expressways

CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 42.6 Freeway

SCENARIO RECORD : Scenario Title: 2004 Other Urban Principal Arterial

CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 30.6 Arterial
SCENARIO RECORD : Scenario Title: 2004 Other Urban Minor Arterial

CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 30.5 Arterial

SCENARIO RECORD : Scenario Title: 2004 Urban Collector

CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 30.4 Arterial

SCENARIO RECORD : Scenario Title: 2004 Urban Local Road

CALENDAR YEAR : 2004
EVALUATION MONTH : 7
AVERAGE SPEED : 31.4 Local

END OF RUN :

2009

MOBILE6 INPUT FILE : F:\TransCAD\2030LRP\2009\Build\Inputs\1HrOzone.in
REPORT FILE : F:\TransCAD\2030LRP\2009\Build\Outputs\1HrOzone.out
SPREADSHEET : F:\TransCAD\2030LRP\2009\Build\Outputs\1HrOzone.tab
POLLUTANTS : HC CO NOx

RUN DATA :

EXPRESS HC AS VOC :
NO REBUILD :
NO REFUELING :
REG DIST : F:\TransCAD\Mobile\RegData.d
MIN/MAX TEMP : 62.8 83.7
FUEL RVP : 9.0

SCENARIO RECORD : Scenario Title: 2009 Rural Interstate

CALENDAR YEAR : 2009
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway

SCENARIO RECORD : Scenario Title: 2009 Other Rural Principal Arterial

CALENDAR YEAR : 2009
EVALUATION MONTH : 7
AVERAGE SPEED : 38.8 Non-Ramp

SCENARIO RECORD : Scenario Title: 2009 Minor Rural Arterial

CALENDAR YEAR : 2009
EVALUATION MONTH : 7
AVERAGE SPEED : 44.8 Arterial
SCENARIO RECORD  : Scenario Title: 2009 Major Rural Collector
*****************************************************************************
***
CALENDAR YEAR      : 2009
EVALUATION MONTH   : 7
AVERAGE SPEED      : 34.2 Arterial
*****************************************************************************
***
SCENARIO RECORD  : Scenario Title: 2009 Minor Rural Collector
*****************************************************************************
***
CALENDAR YEAR      : 2009
EVALUATION MONTH   : 7
AVERAGE SPEED      : 35.1 Arterial
*****************************************************************************
***
SCENARIO RECORD  : Scenario Title: 2009 Rural Local Road
*****************************************************************************
***
CALENDAR YEAR      : 2009
EVALUATION MONTH   : 7
AVERAGE SPEED      : 34.2 Local
*****************************************************************************
***
SCENARIO RECORD  : Scenario Title: 2009 Urban Interstate
*****************************************************************************
***
CALENDAR YEAR      : 2009
EVALUATION MONTH   : 7
AVERAGE SPEED      : 60.7 Freeway
*****************************************************************************
***
SCENARIO RECORD  : Scenario Title: 2009 Other Urban Freeways and Expressways
*****************************************************************************
***
CALENDAR YEAR      : 2009
EVALUATION MONTH   : 7
AVERAGE SPEED      : 43.2 Freeway
*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2009 Other Urban Principal Arterial
*****************************************************************************
***
CALENDAR YEAR    : 2009
EVALUATION MONTH : 7
AVERAGE SPEED    : 30.9 Arterial
*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2009 Other Urban Minor Arterial
*****************************************************************************
***
CALENDAR YEAR    : 2009
EVALUATION MONTH : 7
AVERAGE SPEED    : 30.6 Arterial
*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2009 Urban Collector
*****************************************************************************
***
CALENDAR YEAR    : 2009
EVALUATION MONTH : 7
AVERAGE SPEED    : 30.4 Arterial
*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2009 Urban Local Road
*****************************************************************************
***
CALENDAR YEAR    : 2009
EVALUATION MONTH : 7
AVERAGE SPEED    : 31.5 Local
*****************************************************************************
***
END OF RUN       :

2020

*****************************************************************************
***
* Generated By: [REDACTED]  
* Date Created: Thu Jan 12 10:00:50 2006
* * File Directory: F:\TransCAD\2030LRP\2020\Build
*
*******************************************************************************
***
MOBILE6 INPUT FILE : F:\TransCAD\2030LRP\2020\Build\Inputs\1HrOzone.in
REPORT FILE : F:\TransCAD\2030LRP\2020\Build\Outputs\1HrOzone.out
SPREADSHEET : F:\TransCAD\2030LRP\2020\Build\Outputs\1HrOzone.tab
POLLUTANTS : HC CO NOx
*******************************************************************************
***
RUN DATA :
*******************************************************************************
***
EXPRESS HC AS VOC :
NO REBUILD :
NO REFUELING :
REG DIST : F:\TransCAD\Mobile\RegData.d
MIN/MAX TEMP : 62.8 83.7
FUEL RVP : 9.0
*******************************************************************************
***
SCENARIO RECORD : Scenario Title: 2020 Rural Interstate
*******************************************************************************
***
CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway
*******************************************************************************
***
SCENARIO RECORD : Scenario Title: 2020 Other Rural Principal Arterial
*******************************************************************************
***
CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 40.7 Non-Ramp
*******************************************************************************
***
SCENARIO RECORD : Scenario Title: 2020 Minor Rural Arterial
*******************************************************************************
CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 46.1 Arterial

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 34.1 Arterial

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 34.9 Arterial

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 36.6 Local

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 2020 Other Urban Freeways and
Expressways
*****************************************************************************
***
CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 43 Freeway
*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2020 Other Urban Principal Arterial
*****************************************************************************
***
CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 31.5 Arterial
*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2020 Other Urban Minor Arterial
*****************************************************************************
***
CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 30.9 Arterial
*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2020 Urban Collector
*****************************************************************************
***
CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 30.5 Arterial
*****************************************************************************
***
SCENARIO RECORD : Scenario Title: 2020 Urban Local Road
*****************************************************************************
***
CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 31.5 Local
*****************************************************************************
***
**END OF RUN**

**2020 No build**

*****************************************************************************
***
* Generated By: John-Paul Hopman
* Date Created: Thu Jan 12 10:00:50 2006
* File Directory: F:\TransCAD\2030LRP\2020\NoBuild
*****************************************************************************

**MOBILE6 INPUT FILE**: 2020nb.in

**REPORT FILE**: 2020nb.out
**SPREADSHEET**: 2020nb.tab

**POLLUTANTS**: HC CO NOx

*****************************************************************************
***

**RUN DATA**
*****************************************************************************
***

**EXPRESS HC AS VOC**: 

**NO REBUILD**: 
**NO REFUELING**: 

**REG DIST**: RegData.d
**MIN/MAX TEMP**: 62.8 83.7

**FUEL RVP**: 9.0

*****************************************************************************
***

**SCENARIO RECORD**: Scenario Title: 2020 Rural Interstate
*****************************************************************************
***

**CALENDAR YEAR**: 2020
**EVALUATION MONTH**: 7

**AVERAGE SPEED**: 60.7 Freeway

*****************************************************************************
***

**SCENARIO RECORD**: Scenario Title: 2020 Other Rural Principal Arterial
CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 37.5 Non-Ramp

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 43.5 Arterial

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 33.6 Arterial

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 34.9 Arterial

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 34.0 Local

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 34.0 Local

 SCENARIO RECORD : Scenario Title: 2020 Minor Rural Arterial

 SCENARIO RECORD : Scenario Title: 2020 Major Rural Collector

 SCENARIO RECORD : Scenario Title: 2020 Minor Rural Collector

 SCENARIO RECORD : Scenario Title: 2020 Rural Local Road

 SCENARIO RECORD : Scenario Title: 2020 Urban Interstate
CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 42.2 Freeway

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 29.6 Arterial

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 29.7 Arterial

CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 29.9 Arterial

---

SCENARIO RECORD : Scenario Title: 2020 Other Urban Freeways and Expressways

SCENARIO RECORD : Scenario Title: 2020 Other Urban Principal Arterial

SCENARIO RECORD : Scenario Title: 2020 Other Urban Minor Arterial

SCENARIO RECORD : Scenario Title: 2020 Urban Collector

---

E-14
SCENARIO RECORD : Scenario Title: 2020 Urban Local Road
*****************************************************************************
***
CALENDAR YEAR : 2020
EVALUATION MONTH : 7
AVERAGE SPEED : 31.1 Local
*****************************************************************************
***
END OF RUN :

MOBILE6 Emission Factor Output Files

The following output files were recreated by IDEM using the input files provided by MACOG, above. However, the file names may be inconsistent from the input files due to filename changes for consistency with IDEM’s MOBILE6 naming conventions. The resulting emission factors are identical.

2004

*****************************************************************************
* MOBILE6.2.01 (31-Oct-2002)                                               *
* Input file: 8HR2004.IN (file 1, run 1).                                 *
*****************************************************************************
M603 Comment:
User has disabled the calculation of REFUELING emissions.

* Reading Registration Distributions from the following external
  * data file: REGDATA.D
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)
M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

* # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # #
  * Scenario Title: 2004 Rural Interstate
  * File 1, Run 1, Scenario 1.
  * # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # #
M515 Warning: The combined freeway and ramp average speed entered
cannot be greater than 60.7 miles per hour.
The average speed will be reset to this value.
M582 Warning: The user supplied freeway average speed of 60.7
will be used for all hours of the day. 100% of VMT
has been assigned to a fixed combination of freeways
and freeway ramps for all hours of the day and all
vehicle types.
M 48 Warning: there are no sales for vehicle class HDGV8b
NO HDDV DEFEAT DEVICE REBUILD PROGRAM IN EFFECT.

Calendar Year: 2004
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 121. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No
### Vehicle Type: LDGV, LDGT12, LDGT34, LDGT, HDGV, LDDV, LDDT, HDDV, MC, All

<table>
<thead>
<tr>
<th>Veh</th>
<th>GVWR:</th>
<th>&lt;6000</th>
<th>&gt;6000</th>
<th>(All)</th>
<th>------</th>
<th>------</th>
<th>------</th>
<th>------</th>
<th>------</th>
<th>------</th>
</tr>
</thead>
<tbody>
<tr>
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<td>------</td>
<td>------</td>
<td>------</td>
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<td>------</td>
</tr>
<tr>
<td>VMT Distribution:</td>
<td>0.4145</td>
<td>0.3328</td>
<td>0.1212</td>
<td>0.0368</td>
<td>0.0006</td>
<td>0.0018</td>
<td>0.0862</td>
<td>0.0059</td>
<td>0.0007</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

### Composite Emission Factors (g/mi):

#### Composite VOC:
- 1.239
- 1.016
- 1.342
- 1.103
- 1.022
- 0.542
- 0.549
- 0.380
- 2.41

#### Composite CO:
- 19.55
- 20.57
- 23.58
- 21.38
- 18.81
- 1.580
- 1.112
- 2.674
- 21.32

#### Composite NOX:
- 1.188
- 1.375
- 1.699
- 1.462
- 5.480
- 2.445
- 2.190
- 21.556
- 1.70

### Scenario Title: 2004 Other Rural Principal Arterial
**File 1, Run 1, Scenario 2.**

#### M581 Warning:
The user supplied freeway average speed of 39.3 will be used for all hours of the day. 100% of VMT has been assigned to the freeway roadway type for all hours of the day and all vehicle types.

#### M48 Warning:
there are no sales for vehicle class HDGV8b

### Calendar Year: 2004
**Month: July**

### Minimum Temperature: 62.8 (F)
### Maximum Temperature: 83.7 (F)
### Absolute Humidity: 75. grains/lb
### Nominal Fuel RVP: 9.0 psi
### Weathered RVP: 8.8 psi
### Fuel Sulfur Content: 121. ppm
### Exhaust I/M Program: No
### Evap I/M Program: No
### ATP Program: No
### Reformulated Gas: No

### Vehicle Type: LDGV, LDGT12, LDGT34, LDGT, HDGV, LDDV, LDDT, HDDV, MC, All

<table>
<thead>
<tr>
<th>Veh</th>
<th>GVWR:</th>
<th>&lt;6000</th>
<th>&gt;6000</th>
<th>(All)</th>
<th>------</th>
<th>------</th>
<th>------</th>
<th>------</th>
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</tr>
<tr>
<td>VMT Distribution:</td>
<td>0.4145</td>
<td>0.3328</td>
<td>0.1212</td>
<td>0.0368</td>
<td>0.0006</td>
<td>0.0018</td>
<td>0.0862</td>
<td>0.0059</td>
<td>0.0007</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

### Composite Emission Factors (g/mi):

#### Composite VOC:
- 1.392
- 1.146
- 1.505
- 1.242
- 1.233
- 0.598
- 0.620
- 0.466
- 1.93

#### Composite CO:
- 15.41
- 16.52
- 19.35
- 17.28
- 12.56
- 1.467
- 1.014
- 2.257
- 9.87

#### Composite NOX:
- 1.093
- 1.251
- 1.569
- 1.336
- 4.667
- 1.348
- 1.193
- 13.696
- 1.22

### Scenario Title: 2004 Minor Rural Arterial
**File 1, Run 1, Scenario 3.**

#### M583 Warning:
The user supplied arterial average speed of 44.9 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

#### M48 Warning:
there are no sales for vehicle class HDGV8b

### Calendar Year: 2004
**Month: July**
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 121. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
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<td>&gt;6000</td>
<td>(All)</td>
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</tr>
<tr>
<td>VMT Distribution</td>
<td>0.4145</td>
<td>0.3298</td>
<td>0.1212</td>
<td>0.0368</td>
<td>0.0006</td>
<td>0.0018</td>
<td>0.0862</td>
<td>0.0059</td>
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Composite Emission Factors (g/mi):

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<tr>
<th></th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
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* Scenario Title: 2004 Major Rural Collector
* File 1, Run 1, Scenario 4.

M583 Warning:
The user supplied arterial average speed of 34.2
will be used for all hours of the day.  100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

M 48 Warning:
there are no sales for vehicle class HDGV8b

Calendar Year: 2004
Month: July
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 121. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

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Composite Emission Factors (g/mi):

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### 2004 Minor Rural Collector

#### File 1, Run 1, Scenario 5.

**M583 Warning:**

The user supplied arterial average speed of 35.1 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

**M48 Warning:**

there are no sales for vehicle class HDGV8b

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<th>Calendar Year: 2004</th>
<th>Month: July</th>
<th>Altitude: Low</th>
<th>Minimum Temperature: 62.8 (F)</th>
<th>Maximum Temperature: 83.7 (F)</th>
<th>Absolute Humidity: 75. grains/lb</th>
<th>Nominal Fuel RVP: 9.0 psi</th>
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### 2004 Rural Local Road

#### File 1, Run 1, Scenario 6.

**M585 Warning:**

100% of VMT has been assigned to the local roadway type for all hours of the day for all vehicle types with an average speed of 12.9 mph.

**M48 Warning:**

there are no sales for vehicle class HDGV8b

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E-18
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<td>18.16</td>
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<td>2.007</td>
<td>15.88</td>
<td>1.291</td>
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<td>3.178</td>
<td>36.59</td>
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<td>3.06</td>
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<td></td>
<td>24.94</td>
<td>0.96</td>
</tr>
</tbody>
</table>

### Scenario Title: 2004 Urban Interstate

**File 1, Run 1, Scenario 7.**

**M515 Warning:**

The combined freeway and ramp average speed entered cannot be greater than 60.7 miles per hour. The average speed will be reset to this value.

**M582 Warning:**

The user supplied freeway average speed of 60.7 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

**M 48 Warning:**

there are no sales for vehicle class HDGV8b

### Calendar Year: 2004

- **Month:** July
- **Altitude:** Low
- **Minimum Temperature:** 62.8 (F)
- **Maximum Temperature:** 83.7 (F)
- **Absolute Humidity:** 75. grains/lb
- **Nominal Fuel RVP:** 9.0 psi
- **Weathered RVP:** 9.8 psi
- **Fuel Sulfur Content:** 121. ppm
- **Exhaust I/M Program:** No
- **Evap I/M Program:** No
- **ATP Program:** No
- **Reformulated Gas:** No

### Vehicle Type:

<table>
<thead>
<tr>
<th>Veh</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMT Distribution:</td>
<td>0.4145</td>
<td>0.3328</td>
<td>0.1212</td>
<td>0.0368</td>
<td>0.0006</td>
<td>0.0018</td>
<td>0.0862</td>
<td>0.0059</td>
<td>1.0000</td>
<td></td>
</tr>
</tbody>
</table>

### Composite Emission Factors (g/mi):

<table>
<thead>
<tr>
<th></th>
<th>1.100</th>
<th>18.862</th>
<th>3.233</th>
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</thead>
<tbody>
<tr>
<td>Composite VOC</td>
<td>1.239</td>
<td>19.55</td>
<td>1.188</td>
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<td></td>
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<td>1.375</td>
</tr>
<tr>
<td></td>
<td>1.342</td>
<td>23.58</td>
<td>1.699</td>
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<tr>
<td></td>
<td>1.103</td>
<td>21.38</td>
<td>1.699</td>
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<tr>
<td></td>
<td>1.022</td>
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<td></td>
<td>0.542</td>
<td>1.580</td>
<td>5.480</td>
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<tr>
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<td>0.549</td>
<td>1.112</td>
<td>2.445</td>
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<tr>
<td></td>
<td>0.380</td>
<td>2.674</td>
<td>2.190</td>
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<td></td>
<td>2.41</td>
<td>21.32</td>
<td>21.556</td>
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<tr>
<td></td>
<td></td>
<td>1.70</td>
<td></td>
</tr>
</tbody>
</table>

**Scenario Title: 2004 Other Urban Freeways and Expressways**

**File 1, Run 1, Scenario 8.**

**M582 Warning:**

The user supplied freeway average speed of 42.6 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

**M 48 Warning:**

there are no sales for vehicle class HDGV8b

### Calendar Year: 2004

- **Month:** July
- **Altitude:** Low
- **Minimum Temperature:** 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 121. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

<table>
<thead>
<tr>
<th>Vehicle Type:</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veh GVWR:</td>
<td>&lt;6000</td>
<td>&gt;6000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- VMT Distribution: 0.4145 0.3328 0.1212 0.0368 0.0006 0.0018 0.0862 0.0059 1.0000

---

Composite Emission Factors (g/mi):

<table>
<thead>
<tr>
<th></th>
<th>Composite VOC</th>
<th>Composite CO</th>
<th>Composite NOX</th>
</tr>
</thead>
<tbody>
<tr>
<td>M583 Warning:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The user supplied arterial average speed of 30.6 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 48 Warning:</td>
<td>there are no sales for vehicle class HDGV8b</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Calendar Year: 2004
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 121. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

<table>
<thead>
<tr>
<th>Vehicle Type:</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veh GVWR:</td>
<td>&lt;6000</td>
<td>&gt;6000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- VMT Distribution: 0.4145 0.3328 0.1212 0.0368 0.0006 0.0018 0.0862 0.0059 1.0000

---

Composite Emission Factors (g/mi):

<table>
<thead>
<tr>
<th></th>
<th>Composite VOC</th>
<th>Composite CO</th>
<th>Composite NOX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.222</td>
<td>1.375</td>
<td>1.135</td>
<td>1.491</td>
</tr>
<tr>
<td>15.913</td>
<td>16.60</td>
<td>17.58</td>
<td>20.45</td>
</tr>
<tr>
<td>2.462</td>
<td>1.122</td>
<td>1.287</td>
<td>1.608</td>
</tr>
</tbody>
</table>

---

* Scenario Title: 2004 Other Urban Principal Arterial
* File 1, Run 1, Scenario 9.

* M583 Warning: there are no sales for vehicle class HDGV8b

* Scenario Title: 2004 Other Urban Minor Arterial
* File 1, Run 1, Scenario 10.
The user supplied arterial average speed of 30.5 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:
there are no sales for vehicle class HDGV8b
### Composite Emission Factors (g/mi):

<table>
<thead>
<tr>
<th></th>
<th>1.511</th>
<th>1.242</th>
<th>1.625</th>
<th>1.344</th>
<th>1.498</th>
<th>0.672</th>
<th>0.713</th>
<th>0.578</th>
<th>2.11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Composite VOC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Composite CO</strong></td>
<td>14.59</td>
<td>15.65</td>
<td>18.46</td>
<td>16.40</td>
<td>15.17</td>
<td>1.616</td>
<td>1.143</td>
<td>2.806</td>
<td>12.17</td>
</tr>
<tr>
<td><strong>Composite NOX</strong></td>
<td>1.108</td>
<td>1.256</td>
<td>1.578</td>
<td>1.342</td>
<td>4.354</td>
<td>1.330</td>
<td>1.177</td>
<td>10.764</td>
<td>1.15</td>
</tr>
</tbody>
</table>

---

* Scenario Title: 2004 Urban Local Road
* File 1, Run 1, Scenario 12.

---

**M585 Warning:**

100% of VMT has been assigned to the local roadway type for all hours of the day for all vehicle types with an average speed of 12.9 mph.

**M48 Warning:**

there are no sales for vehicle class HDGV8b

---

### Composite Emission Factors (g/mi):

<table>
<thead>
<tr>
<th></th>
<th>2.219</th>
<th>1.872</th>
<th>2.376</th>
<th>2.007</th>
<th>3.178</th>
<th>1.005</th>
<th>1.133</th>
<th>1.084</th>
<th>3.06</th>
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</thead>
<tbody>
<tr>
<td><strong>Composite VOC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Composite CO</strong></td>
<td>13.37</td>
<td>15.06</td>
<td>18.16</td>
<td>15.88</td>
<td>36.59</td>
<td>2.641</td>
<td>2.025</td>
<td>6.563</td>
<td>24.94</td>
</tr>
<tr>
<td><strong>Composite NOX</strong></td>
<td>1.092</td>
<td>1.207</td>
<td>1.524</td>
<td>1.291</td>
<td>3.738</td>
<td>1.766</td>
<td>1.573</td>
<td>12.147</td>
<td>0.96</td>
</tr>
</tbody>
</table>

---

**2009**

***************************************************************************

**M603 Comment:**

User has disabled the calculation of REFUELING emissions.

---

**M 49 Warning:**

1.00     MYR sum not = 1. (will normalize)

---

**M515 Warning:**

The combined freeway and ramp average speed entered cannot be greater than 60.7 miles per hour.
The average speed will be reset to this value.

**M582 Warning:**

The user supplied freeway average speed of 60.7 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

**M 48 Warning:**

there are no sales for vehicle class HDGV8b

NO HDDV DEFEAT DEVICE REBUILD PROGRAM IN EFFECT.

Calendar Year: 2009
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

### Vehicle Type: LDGV, LDGT12, LDGT34, LDGT, HDGV, LDDV, LDDT, HDDV, MC, All

<table>
<thead>
<tr>
<th>Veh</th>
<th>GVWR:</th>
<th>&lt;6000</th>
<th>&gt;6000</th>
<th>(All)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-----</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>VMT Distribution:</td>
<td>0.3465</td>
<td>0.3824</td>
<td>0.1392</td>
<td>0.0366</td>
</tr>
</tbody>
</table>

**Composite Emission Factors (g/mi):**

<table>
<thead>
<tr>
<th></th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite VOC</td>
<td>0.837</td>
<td>0.672</td>
<td>0.883</td>
<td>0.728</td>
<td>0.644</td>
<td>0.236</td>
<td>0.346</td>
<td>0.276</td>
<td>2.38</td>
<td></td>
</tr>
<tr>
<td>Composite CO</td>
<td>13.93</td>
<td>14.20</td>
<td>16.39</td>
<td>14.79</td>
<td>10.15</td>
<td>1.140</td>
<td>0.758</td>
<td>1.683</td>
<td>21.32</td>
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</tr>
<tr>
<td>Composite NOX</td>
<td>0.773</td>
<td>0.898</td>
<td>1.255</td>
<td>0.994</td>
<td>3.062</td>
<td>1.030</td>
<td>1.280</td>
<td>13.029</td>
<td>1.70</td>
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</tr>
</tbody>
</table>

* Scenario Title: 2009 Other Rural Principal Arterial

* File 1, Run 1, Scenario 2.

* # # # # # # # # # # # # # # # # # # # # #

**M581 Warning:**

The user supplied freeway average speed of 38.8 will be used for all hours of the day. 100% of VMT has been assigned to the freeway roadway type for all hours of the day and all vehicle types.

**M 48 Warning:**

there are no sales for vehicle class HDGV8b

Calendar Year: 2009
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

### Vehicle Type: LDGV, LDGT12, LDGT34, LDGT, HDGV, LDDV, LDDT, HDDV, MC, All

<table>
<thead>
<tr>
<th>Veh</th>
<th>GVWR:</th>
<th>&lt;6000</th>
<th>&gt;6000</th>
<th>(All)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-----</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>VMT Distribution:</td>
<td>0.3465</td>
<td>0.3824</td>
<td>0.1392</td>
<td>0.0366</td>
</tr>
</tbody>
</table>
Composite Emission Factors (g/mi):

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<thead>
<tr>
<th></th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
<th>Value 4</th>
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<th>Value 8</th>
<th>Value 9</th>
<th>Value 10</th>
<th>Value 11</th>
<th>Value 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite VOC</td>
<td>0.945</td>
<td>0.744</td>
<td>0.987</td>
<td>0.809</td>
<td>0.769</td>
<td>0.265</td>
<td>0.395</td>
<td>0.341</td>
<td>1.91</td>
<td>0.819</td>
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<td></td>
</tr>
<tr>
<td>Composite CO</td>
<td>11.06</td>
<td>11.50</td>
<td>13.41</td>
<td>12.01</td>
<td>6.83</td>
<td>1.049</td>
<td>0.691</td>
<td>1.434</td>
<td>9.97</td>
<td>10.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composite NOX</td>
<td>0.711</td>
<td>0.817</td>
<td>1.159</td>
<td>0.908</td>
<td>2.598</td>
<td>0.563</td>
<td>0.695</td>
<td>7.881</td>
<td>1.22</td>
<td>1.512</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Scenario Title: 2009 Minor Rural Arterial

The user supplied arterial average speed of 44.8 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2009
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All

Veh GVWR: <6000 >6000 (All)
------ ------ ------ ------ ------ ------ ------ ------ ------ ------

VMT Distribution: 0.3465 0.3824 0.1392 0.0366 0.0003 0.0020 0.0873 0.0056 1.0000

---

Composite Emission Factors (g/mi):

<table>
<thead>
<tr>
<th></th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
<th>Value 4</th>
<th>Value 5</th>
<th>Value 6</th>
<th>Value 7</th>
<th>Value 8</th>
<th>Value 9</th>
<th>Value 10</th>
<th>Value 11</th>
<th>Value 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite VOC</td>
<td>0.911</td>
<td>0.722</td>
<td>0.956</td>
<td>0.784</td>
<td>0.712</td>
<td>0.249</td>
<td>0.369</td>
<td>0.306</td>
<td>1.85</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Composite CO</td>
<td>11.69</td>
<td>12.11</td>
<td>14.08</td>
<td>12.63</td>
<td>6.57</td>
<td>1.012</td>
<td>0.664</td>
<td>1.332</td>
<td>9.10</td>
<td>11.048</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composite NOX</td>
<td>0.722</td>
<td>0.833</td>
<td>1.176</td>
<td>0.925</td>
<td>2.714</td>
<td>0.599</td>
<td>0.740</td>
<td>7.091</td>
<td>1.25</td>
<td>1.460</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Scenario Title: 2009 Major Rural Collector

The user supplied arterial average speed of 34.2 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2009
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm
### Composite Emission Factors (g/mi):

**Composite VOC**: 0.979, 0.766, 1.017, 0.833, 0.830, 0.281, 0.424, 0.379, 2.00

**Composite CO**: 10.64, 11.09, 12.96, 11.59, 7.40, 1.103, 0.731, 1.581, 11.01

**Composite NOx**: 0.709, 0.811, 1.153, 0.903, 2.508, 0.553, 0.682, 6.567, 1.19

### Vehicle Type Distribution:

<table>
<thead>
<tr>
<th>Veh</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMT Distribution</td>
<td>0.3465</td>
<td>0.3824</td>
<td>0.1392</td>
<td>0.0366</td>
<td>0.0003</td>
<td>0.0020</td>
<td>0.0873</td>
<td>0.0056</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Scenario Title: 2009 Minor Rural Collector

**M583 Warning:**
The user supplied arterial average speed of 35.1 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

**M 48 Warning:**
there are no sales for vehicle class HDGV8b

### Calendar Year: 2009

**Month:** July

**Altitude:** Low

**Minimum Temperature:** 62.8 (°F)

**Maximum Temperature:** 83.7 (°F)

**Absolute Humidity:** 75. grains/lb

**Nominal Fuel RVP:** 9.0 psi

**Weathered RVP:** 8.8 psi

**Fuel Sulfur Content:** 30. ppm

### Exhaust I/M Program: No

**Evap I/M Program: No**

**ATP Program: No**

**Reformulated Gas: No**

### Vehicle Type Distribution:

<table>
<thead>
<tr>
<th>Veh</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
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<tbody>
<tr>
<td>VMT Distribution</td>
<td>0.3465</td>
<td>0.3824</td>
<td>0.1392</td>
<td>0.0366</td>
<td>0.0003</td>
<td>0.0020</td>
<td>0.0873</td>
<td>0.0056</td>
<td></td>
<td></td>
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</tbody>
</table>

### Composite Emission Factors (g/mi):

**Composite VOC**: 0.971, 0.761, 1.009, 0.827, 0.816, 0.277, 0.418, 0.371, 1.98

**Composite CO**: 10.66, 11.12, 12.98, 11.62, 7.24, 1.089, 0.721, 1.544, 10.77

**Composite NOx**: 0.707, 0.810, 1.151, 0.901, 2.524, 0.553, 0.682, 6.563, 1.19

### Scenario Title: 2009 Rural Local Road

**M585 Warning:**
100% of VMT has been assigned to the local roadway type for all hours of the day for all vehicle types with an average speed of 12.9 mph.
there are no sales for vehicle class HDGV8b

Calendar Year: 2009  
Month: July  
Altitude: Low  
Minimum Temperature: 62.8 (F)  
Maximum Temperature: 83.7 (F)  
Absolute Humidity: 75. grains/lb  
Nominal Fuel RVP: 9.0 psi  
Weathered RVP: 8.8 psi  
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No  
Evap I/M Program: No  
ATP Program: No  
Reformulated Gas: No

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<thead>
<tr>
<th>Vehicle Type:</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
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<th>LDDV</th>
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<tr>
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<td>&gt;6000</td>
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VMT Distribution: 0.3465 0.3824 0.1392 0.0366 0.0003 0.0020 0.0873 0.0056

M 48 Warning:  
there are no sales for vehicle class HDGV8b

Calendar Year: 2009  
Month: July  
Altitude: Low  
Minimum Temperature: 62.8 (F)  
Maximum Temperature: 83.7 (F)  
Absolute Humidity: 75. grains/lb  
Nominal Fuel RVP: 9.0 psi  
Weathered RVP: 8.8 psi  
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No  
Evap I/M Program: No  
ATP Program: No  
Reformulated Gas: No

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<th>LDGT</th>
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<td>&gt;6000</td>
<td>(All)</td>
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</table>

VMT Distribution: 0.3465 0.3824 0.1392 0.0366 0.0003 0.0020 0.0873 0.0056

Composite Emission Factors (g/mi):

- Composite VOC: 1.472 1.169 1.532 1.266 1.742 0.459 0.730 0.786 3.03 1.321
- Composite CO: 10.29 11.21 13.23 11.75 19.74 2.035 1.416 4.130 24.94 10.921
- Composite NOX: 0.719 0.808 1.152 0.900 2.088 0.742 0.919 7.904 0.96 1.493

* Scenario Title: 2009 Urban Interstate  
* File 1, Run 1, Scenario 7.
### Composite VOC

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<th>0.672</th>
<th>0.883</th>
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### Scenario Title: 2009 Other Urban Freeways and Expressways

**File 1, Run 1, Scenario 8.**

#### M582 Warning:

The user supplied freeway average speed of 43.2 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

#### M 48 Warning:

There are no sales for vehicle class HDGV8b.

### Calendar Year: 2009

- **Month:** July
- **Altitude:** Low
- **Minimum Temperature:** 62.8 (F)
- **Maximum Temperature:** 83.7 (F)
- **Absolute Humidity:** 75. grains/lb
- **Nominal Fuel RVP:** 9.0 psi
- **Weathered RVP:** 8.8 psi
- **Fuel Sulfur Content:** 30. ppm
- **Exhaust I/M Program:** No
- **Evap I/M Program:** No
- **ATP Program:** No
- **Reformulated Gas:** No

### Vehicle Type Distribution

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<th>Veh</th>
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<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
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<th>LDDT</th>
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<tr>
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### Composite Emission Factors (g/mi)

#### Composite VOC

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#### Composite CO

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#### Composite NOX

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</table>

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### Scenario Title: 2009 Other Urban Principal Arterial

**File 1, Run 1, Scenario 9.**

#### M583 Warning:

The user supplied arterial average speed of 30.9 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

#### M 48 Warning:

There are no sales for vehicle class HDGV8b.

### Calendar Year: 2009

- **Month:** July
- **Altitude:** Low
- **Minimum Temperature:** 62.8 (F)
- **Maximum Temperature:** 83.7 (F)
- **Absolute Humidity:** 75. grains/lb
- **Nominal Fuel RVP:** 9.0 psi
- **Weathered RVP:** 8.8 psi
- **Fuel Sulfur Content:** 30. ppm
- **Exhaust I/M Program:** No

---

`E-27`
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

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<th>Vehicle Type:</th>
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<th>HDDV</th>
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<tr>
<td>VMT Distribution:</td>
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<td>0.1392</td>
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Composite Emission Factors (g/mi):

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<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
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<th>LDGT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
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</thead>
<tbody>
<tr>
<td>Composite VOC</td>
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<td>Composite NOX</td>
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---

* Scenario Title: 2009 Other Urban Minor Arterial
* File 1, Run 1, Scenario 10.

M 583 Warning:
The user supplied arterial average speed of 30.6 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:
there are no sales for vehicle class HDGV8b

Calendar Year: 2009
Month: July
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm
Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

---

* Scenario Title: 2009 Urban Collector
* File 1, Run 1, Scenario 11.

M 583 Warning:
The user supplied arterial average speed of 30.4 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:
there are no sales for vehicle class HDGV8b

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</tr>
<tr>
<td>Absolute Humidity:</td>
<td>75. grains/lb</td>
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<tr>
<td>Nominal Fuel RVP:</td>
<td>9.0 psi</td>
</tr>
<tr>
<td>Weathered RVP:</td>
<td>8.8 psi</td>
</tr>
<tr>
<td>Fuel Sulfur Content:</td>
<td>30. ppm</td>
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| Exhaust I/M Program: | No |
| Evap I/M Program:    | No |
| ATP Program:         | No |
| Reformulated Gas:    | No |

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<thead>
<tr>
<th>Vehicle Type:</th>
<th>LDGV</th>
<th>LDGT12</th>
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<td>Composite VOC:</td>
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<tr>
<td>Composite CO:</td>
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<tr>
<td>Composite NOX:</td>
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* Scenario Title: 2009 Urban Local Road
* File 1, Run 1, Scenario 12.
* M585 Warning: 100% of VMT has been assigned to the local roadway type for all hours of the day for all vehicle types with an average speed of 12.9 mph.
* M48 Warning: there are no sales for vehicle class HDGV8b

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<td>Weathered RVP:</td>
<td>8.8 psi</td>
</tr>
<tr>
<td>Fuel Sulfur Content:</td>
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| Exhaust I/M Program: | No |
| Evap I/M Program:    | No |
| ATP Program:         | No |
| Reformulated Gas:    | No |

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<tr>
<th>Vehicle Type:</th>
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<td>Composite VOC:</td>
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<td>Composite CO:</td>
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<td>Composite NOX:</td>
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**E-29**
2020

***********************************************************************
* MOBILE6.2.01 (31-Oct-2002)                                           *
* Input file: H8R2020.IN (file 1, run 1).                              *
***********************************************************************

M603 Comment:
  User has disabled the calculation of REFUELING emissions.

* Reading Registration Distributions from the following external
  data file: REGDATA.D
M 49 Warning:
  1.00 MYR sum not = 1. (will normalize)
M 49 Warning:
  1.00 MYR sum not = 1. (will normalize)

* Scenario Title: 2020 Rural Interstate
* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # # # #
M515 Warning:
  The combined freeway and ramp average speed entered
cannot be greater than 60.7 miles per hour.
The average speed will be reset to this value.
M582 Warning:
  The user supplied freeway average speed of 60.7
will be used for all hours of the day. 100% of VMT
has been assigned to a fixed combination of freeways
and freeway ramps for all hours of the day and all
vehicle types.
M 48 Warning:
  there are no sales for vehicle class HDGV8b
M 48 Warning:
  there are no sales for vehicle class LDDT12
NO HDDV DEFEAT DEVICE REBUILD PROGRAM IN EFFECT.

Calendar Year: 2020
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All

GVWR: <6000 >6000 (All)

VMT Distribution: 0.2673 0.4395 0.1600 0.0369 0.0002 0.0024 0.0885 0.0052

---------------------------------------------------------------------------------------------------------------------

Composite Emission Factors (g/mi):

0.356
  Composite VOC : 0.353 0.337 0.474 0.374 0.259 0.057 0.127 0.175 2.38
9.454
  Composite CO : 9.42 10.39 12.09 10.84 7.83 0.731 0.467 0.386 21.32
0.634
  Composite NOX : 0.327 0.392 0.577 0.441 0.698 0.118 0.316 2.788 1.70

---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario Title: 2020 Other Rural Principal Arterial
* File 1, Run 1, Scenario 2.
* # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # #
M581 Warning:
The user supplied freeway average speed of 40.7 will be used for all hours of the day. 100% of VMT has been assigned to the freeway roadway type for all hours of the day and all vehicle types.

M 48 Warning: there are no sales for vehicle class HDGV8b

M 48 Warning: there are no sales for vehicle class LDDT12

Calendar Year: 2020
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh GVWR: <6000 >6000 (All) ------ ------ ------ ------ ------ ------ ----- -

VMT Distribution: 0.2673 0.4395 0.1600 0.0369 0.0002 0.0024 0.0885 0.0052 1.0000

Composite Emission Factors (g/mi):

<table>
<thead>
<tr>
<th></th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.389</td>
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<td>0.512</td>
<td>0.402</td>
<td>0.304</td>
<td>0.063</td>
<td>0.141</td>
<td>0.208</td>
<td>1.89</td>
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</tr>
<tr>
<td>7.74</td>
<td>8.60</td>
<td>10.04</td>
<td>8.98</td>
<td>5.16</td>
<td>0.660</td>
<td>0.418</td>
<td>0.319</td>
<td>9.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.303</td>
<td>0.356</td>
<td>0.531</td>
<td>0.403</td>
<td>0.601</td>
<td>0.066</td>
<td>0.175</td>
<td>1.668</td>
<td>1.23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Scenario Title: 2020 Minor Rural Arterial
* File 1, Run 1, Scenario 3.
* M583 Warning: the user supplied arterial average speed of 46.1 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning: there are no sales for vehicle class HDGV8b

M 48 Warning: there are no sales for vehicle class LDDT12

Calendar Year: 2020
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh GVWR: <6000 >6000 (All) ------ ------ ------ ------ ------ ------ ----- -

VMT Distribution: 0.2673 0.4395 0.1600 0.0369 0.0002 0.0024 0.0885 0.0052 1.0000
Composite Emission Factors (g/mi):

<table>
<thead>
<tr>
<th></th>
<th>0.376</th>
<th>0.353</th>
<th>0.499</th>
<th>0.392</th>
<th>0.283</th>
<th>0.060</th>
<th>0.134</th>
<th>0.190</th>
<th>1.84</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite VOC</td>
<td>0.376</td>
<td>0.353</td>
<td>0.499</td>
<td>0.392</td>
<td>0.283</td>
<td>0.060</td>
<td>0.134</td>
<td>0.190</td>
<td>1.84</td>
</tr>
<tr>
<td>Composite CO</td>
<td>8.11</td>
<td>8.99</td>
<td>10.50</td>
<td>9.40</td>
<td>5.10</td>
<td>0.645</td>
<td>0.407</td>
<td>0.305</td>
<td>9.01</td>
</tr>
<tr>
<td>Composite NOX</td>
<td>0.307</td>
<td>0.364</td>
<td>0.539</td>
<td>0.411</td>
<td>0.625</td>
<td>0.071</td>
<td>0.188</td>
<td>1.560</td>
<td>1.26</td>
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Scenario Title: 2020 Major Rural Collector
File 1, Run 1, Scenario 4.

M583 Warning:
The user supplied arterial average speed of 34.1
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

M48 Warning:
there are no sales for vehicle class HDGV8b
there are no sales for vehicle class LDDT12

Calendar Year: 2020
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
GVWR: <6000 >6000 (All)
VMT Distribution: 0.2673 0.4395 0.1600 0.0369 0.0002 0.0024 0.0085 0.0052 1.0000

Composite Emission Factors (g/mi):

<table>
<thead>
<tr>
<th></th>
<th>0.409</th>
<th>0.375</th>
<th>0.530</th>
<th>0.417</th>
<th>0.339</th>
<th>0.069</th>
<th>0.154</th>
<th>0.240</th>
<th>2.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite VOC</td>
<td>0.409</td>
<td>0.375</td>
<td>0.530</td>
<td>0.417</td>
<td>0.339</td>
<td>0.069</td>
<td>0.154</td>
<td>0.240</td>
<td>2.00</td>
</tr>
<tr>
<td>Composite CO</td>
<td>7.35</td>
<td>8.17</td>
<td>9.55</td>
<td>8.54</td>
<td>5.72</td>
<td>0.707</td>
<td>0.451</td>
<td>0.364</td>
<td>11.03</td>
</tr>
<tr>
<td>Composite NOX</td>
<td>0.300</td>
<td>0.351</td>
<td>0.525</td>
<td>0.398</td>
<td>0.571</td>
<td>0.064</td>
<td>0.169</td>
<td>1.407</td>
<td>1.19</td>
</tr>
</tbody>
</table>

Scenario Title: 2020 Minor Rural Collector
File 1, Run 1, Scenario 5.

M583 Warning:
The user supplied arterial average speed of 34.9
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.

M48 Warning:
there are no sales for vehicle class HDGV8b
there are no sales for vehicle class LDDT12

Calendar Year: 2020
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All

GVWR: <6000 >6000 (All)

VMT Distribution: 0.2673 0.4395 0.1600 0.0369 0.0002 0.0024 0.0085 0.0052

Composite Emission Factors (g/mi):
Composite VOC: 0.405 0.373 0.527 0.414 0.334 0.069 0.152 0.236 1.98
Composite CO: 7.35 8.17 9.56 8.54 5.61 0.699 0.445 0.356 10.82
Composite NOX: 0.299 0.351 0.524 0.397 0.574 0.064 0.169 1.406 1.19

* Scenario Title: 2020 Urban Interstate
* File 1, Run 1, Scenario 7.
M515 Warning: The combined freeway and ramp average speed entered cannot be greater than 60.7 miles per hour. The average speed will be reset to this value.

M582 Warning: The user supplied freeway average speed of 60.7 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

M 48 Warning: there are no sales for vehicle class HDGV8b

M 48 Warning: there are no sales for vehicle class LDDT12

Calendar Year: 2020
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All

Veh VMT Distribution: 0.2673 0.4395 0.1600 0.0369 0.0002 0.0024 0.0885 0.0052 1.0000

---------------------------------------------------------------------------------------------------------------------

Composite Emission Factors (g/mi):

0.356 Composite VOC : 0.353 0.337 0.474 0.374 0.259 0.057 0.127 0.175 2.38

9.454 Composite CO : 9.42 10.39 12.09 10.84 7.83 0.731 0.467 0.386 21.32

0.634 Composite NOX : 0.327 0.392 0.577 0.441 0.698 0.118 0.316 2.788 1.70

---------------------------------------------------------------------------------------------------------------------

* Scenario Title: 2020 Other Urban Freeways and Expressways
* File 1, Run 1, Scenario 8.

M582 Warning: The user supplied freeway average speed of 43.0 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

M 48 Warning: there are no sales for vehicle class HDGV8b

M 48 Warning: there are no sales for vehicle class LDDT12

Calendar Year: 2020
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No
<table>
<thead>
<tr>
<th>Vehicle Type:</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVWR:</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
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<td>------</td>
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<td>------</td>
</tr>
<tr>
<td>VMT Distribution:</td>
<td>0.2673</td>
<td>0.4395</td>
<td>0.1600</td>
<td>0.0369</td>
<td>0.0002</td>
<td>0.0024</td>
<td>0.0885</td>
<td>0.0052</td>
<td>------</td>
<td>------</td>
</tr>
</tbody>
</table>

---

**Composite Emission Factors (g/mi):**

- **Composite VOC:**
  - 0.385
  - 0.360
  - 0.509
  - 0.400
  - 0.294
  - 0.062
  - 0.138
  - 0.200
  - 1.86

- **Composite CO:**
  - 8.10
  - 8.95
  - 10.44
  - 9.35
  - 5.13
  - 0.653
  - 0.413
  - 0.313
  - 9.33

- **Composite NOX:**
  - 0.309
  - 0.364
  - 0.543
  - 0.412
  - 0.612
  - 0.068
  - 0.181
  - 1.690
  - 1.24

---

* Scenario Title: 2020 Other Urban Principal Arterial
* File 1, Run 1, Scenario 9.

---

### E-35 Warning:
The user supplied arterial average speed of 31.5 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

### M 48 Warning:
- there are no sales for vehicle class HDGV8b
- there are no sales for vehicle class LDDT12

---

### Calendar Year: 2020
### Month: July
### Altitude: Low
### Minimum Temperature: 62.8°F
### Maximum Temperature: 83.7°F
### Absolute Humidity: 75. grains/lb
### Nominal Fuel RVP: 9.0 psi
### Weathered RVP: 8.8 psi
### Fuel Sulfur Content: 30. ppm

---

<table>
<thead>
<tr>
<th>Vehicle Type:</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVWR:</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>VMT Distribution:</td>
<td>0.2673</td>
<td>0.4395</td>
<td>0.1600</td>
<td>0.0369</td>
<td>0.0002</td>
<td>0.0024</td>
<td>0.0885</td>
<td>0.0052</td>
<td>------</td>
<td>------</td>
</tr>
</tbody>
</table>

---

**Composite Emission Factors (g/mi):**

- **Composite VOC:**
  - 0.420
  - 0.385
  - 0.543
  - 0.427
  - 0.358
  - 0.072
  - 0.161
  - 0.257
  - 2.06

- **Composite CO:**
  - 7.34
  - 8.14
  - 9.52
  - 8.51
  - 6.12
  - 0.737
  - 0.471
  - 0.392
  - 11.81

- **Composite NOX:**
  - 0.304
  - 0.354
  - 0.529
  - 0.401
  - 0.560
  - 0.064
  - 0.170
  - 1.414
  - 1.16

---

* Scenario Title: 2020 Other Urban Minor Arterial
* File 1, Run 1, Scenario 10.

---

### E-35 Warning:
The user supplied arterial average speed of 30.9 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

### M 48 Warning:
- there are no sales for vehicle class HDGV8b

---

E-35
### Composite Emission Factors (g/mi):

<table>
<thead>
<tr>
<th>Veh</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVWR:</td>
<td>0.2673</td>
<td>0.4395</td>
<td>0.1600</td>
<td>0.0369</td>
<td>0.0002</td>
<td>0.0024</td>
<td>0.0085</td>
<td>0.0052</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Scenario Title: 2020 Urban Collector

* File 1, Run 1, Scenario 11.

#### Composite Emission Factors (g/mi):

- **Composite VOC:**
  - 0.423
  - 0.387
  - 0.546
  - 0.430
  - 0.362
  - 0.073
  - 0.163
  - 0.262
  - 2.07

- **Composite CO:**
  - 7.33
  - 8.14
  - 9.51
  - 8.51
  - 6.23
  - 0.744
  - 0.476
  - 0.399
  - 12.00

- **Composite NOX:**
  - 0.305
  - 0.355
  - 0.530
  - 0.402
  - 0.557
  - 0.064
  - 0.170
  - 1.415
  - 1.16

#### M 48 Warning:

- There are no sales for vehicle class LDDT12

#### Calendar Year: 2020

- Month: July
- Altitude: Low
- Minimum Temperature: 62.8 (F)
- Maximum Temperature: 83.7 (F)
- Absolute Humidity: 75. grains/lb
- Nominal Fuel RVP: 9.0 psi
- Weathered RVP: 8.8 psi
- Fuel Sulfur Content: 30. ppm

- Exhaust I/M Program: No
- Evap I/M Program: No
- ATP Program: No
- Reformulated Gas: No

#### Vehicle Type: LDGV | LDGT12 | LDGT34 | LDGT | HDGV | LDDV | LDDT | HDDV | MC | All
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
GVWR: | <6000 | >6000 | (All) |
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
VMT Distribution: | 0.2673 | 0.4395 | 0.1600 | 0.0369 | 0.0002 | 0.0024 | 0.0085 | 0.0052 |

#### E-36
**Scenario Title: 2020 Urban Local Road**

* File 1, Run 1, Scenario 12.

**M585 Warning:**

100% of VMT has been assigned to the local roadway type for all hours of the day for all vehicle types with an average speed of 12.9 mph.

**M 48 Warning:**

- there are no sales for vehicle class HDGV8b
- there are no sales for vehicle class LDDT12

**Calendar Year:** 2020

**Month:** July

**Altitude:** Low

**Minimum Temperature:** 62.8°F

**Maximum Temperature:** 83.7°F

**Absolute Humidity:** 75. grains/lb

**Nominal Fuel RVP:** 9.0 psi

**Weathered RVP:** 8.8 psi

**Fuel Sulfur Content:** 30. ppm

**Exhaust 1/M Program:** No

**Evap 1/M Program:** No

**ATP Program:** No

**Reformulated Gas:** No

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMT GVWR</td>
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<td>&gt;6000</td>
<td>(All)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>VMT Distribution</td>
<td>0.2673</td>
<td>0.4395</td>
<td>0.1600</td>
<td>0.0369</td>
<td>0.0002</td>
<td>0.0024</td>
<td>0.0885</td>
<td>0.0052</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Composite Emission Factors (g/mi):**

| Composite VOC | 0.640 | 0.608 | 0.815 | 0.663 | 0.719 | 0.116 | 0.260 | 0.498 | 3.03 |
| Composite CO  | 7.87  | 8.73  | 10.21 | 9.13  | 15.23 | 1.320 | 0.877 | 0.948 | 24.94 |
| Composite NOX | 0.317 | 0.356 | 0.518 | 0.399 | 0.476 | 0.085 | 0.227 | 1.748 | 0.96 |

---

**2020 No Build**

***************************************************************************

* MOBILE6.2.01 (31-Oct-2002)

* Input file: 2020NB.IN (file 1, run 1).

***************************************************************************

**M603 Comment:**

User has disabled the calculation of REFUELING emissions.

**Reading Registration Distributions from the following external data file: REGDATA.D**

M 49 Warning: 1.00 MYR sum not = 1. (will normalize)

---

**Scenario Title: 2020 Rural Interstate**

* File 1, Run 1, Scenario 1.

**M515 Warning:**

The combined freeway and ramp average speed entered cannot be greater than 60.7 miles per hour.

The average speed will be reset to this value.

**M582 Warning:**
The user supplied freeway average speed of 60.7 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

M 48 Warning:
there are no sales for vehicle class HDGV8b

M 48 Warning:
there are no sales for vehicle class LDDT12

NO HDDV DEFEAT DEVICE REBUILD PROGRAM IN EFFECT.

Calendar Year: 2020
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

<table>
<thead>
<tr>
<th>Vehicle Type:</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veh GVWR:</td>
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<td>&gt;6000</td>
<td>(All)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>VMT Distribution:</td>
<td>0.2673</td>
<td>0.4395</td>
<td>0.1600</td>
<td>0.0369</td>
<td>0.0002</td>
<td>0.0024</td>
<td>0.0885</td>
<td>0.0052</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Composite Emission Factors (g/mi):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite VOC : 0.353 0.337 0.474 0.374 0.259 0.057 0.127 0.175 2.38</td>
</tr>
<tr>
<td>Composite CO : 9.42 10.39 12.09 10.84 7.83 0.731 0.467 0.386 21.32</td>
</tr>
<tr>
<td>Composite NOX : 0.327 0.392 0.577 0.441 0.698 0.118 0.316 2.788 1.70</td>
</tr>
</tbody>
</table>

M581 Warning:
The user supplied freeway average speed of 37.5 will be used for all hours of the day. 100% of VMT has been assigned to the freeway roadway type for all hours of the day and all vehicle types.

M 48 Warning:
there are no sales for vehicle class HDGV8b

M 48 Warning:
there are no sales for vehicle class LDDT12

Calendar Year: 2020
Month: July
Altitude: Low
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

<table>
<thead>
<tr>
<th>Vehicle Type:</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veh GVWR:</td>
<td>(&lt;6000</td>
<td>&gt;6000</td>
<td>(All)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
VMT Distribution: 0.2673 0.4395 0.1600 0.0369 0.0002 0.0024 0.0885 0.0052
1.0000

Composite Emission Factors (g/mi):  
  Composite VOC : 0.397 0.368 0.519 0.408 0.319 0.066 0.147 0.222 1.93
  Composite CO : 7.53 8.37 9.78 8.75 5.37 0.679 0.431 0.338 10.23
  Composite NOX : 0.301 0.353 0.527 0.399 0.587 0.064 0.171 1.639 1.21

* Scenario Title: 2020 Minor Rural Arterial  
* File 1, Run 1, Scenario 3.  

M583 Warning:  
The user supplied arterial average speed of 43.5 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types. 
M 48 Warning:  
there are no sales for vehicle class HDGV8b  
M 48 Warning:  
there are no sales for vehicle class LDDT12

Calendar Year: 2020  
Month: July  
Altitude: Low  
Minimum Temperature: 62.8 (F)  
Maximum Temperature: 83.7 (F)  
Absolute Humidity: 75. grains/lb  
Nominal Fuel RVP: 9.0 psi  
Weathered RVP: 8.8 psi  
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No  
Evap I/M Program: No  
ATP Program: No  
Reformulated Gas: No

Vehicle Type: LGDV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All  
Veh GVWR: ------ <6000 >6000 (All) ------ ------ ------ ------ ------ ------ ------ ------ ------

VMT Distribution: 0.2673 0.4395 0.1600 0.0369 0.0002 0.0024 0.0885 0.0052
1.0000

Composite Emission Factors (g/mi):  
  Composite VOC : 0.382 0.357 0.505 0.397 0.292 0.062 0.137 0.198 1.86
  Composite CO : 7.94 8.81 10.28 9.20 5.10 0.650 0.411 0.310 9.26
  Composite NOX : 0.305 0.360 0.535 0.407 0.613 0.068 0.181 1.502 1.24

* Scenario Title: 2020 Major Rural Collector  
* File 1, Run 1, Scenario 4.  

M583 Warning:  
The user supplied arterial average speed of 33.6 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types. 
M 48 Warning:  
there are no sales for vehicle class HDGV8b  
M 48 Warning:  
there are no sales for vehicle class LDDT12

Calendar Year: 2020  
Month: July  
Altitude: Low

---

E-39
Minimum Temperature: 62.8°F
Maximum Temperature: 83.7°F
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Vehicle GVWR: <6000 >6000 (All)

VMT Distribution: 0.2673 0.4395 0.1600 0.0369 0.0002 0.0024 0.0885 0.0052 1.0000

Composite Emission Factors (g/mi):
- Composite VOC : 0.411 0.377 0.533 0.419 0.343 0.070 0.156 0.243 2.01
- Composite CO : 7.35 8.16 9.54 8.53 5.79 0.713 0.454 0.369 11.17
- Composite NOX : 0.301 0.352 0.526 0.398 0.569 0.064 0.169 1.409 1.18

Scenario Title: 2020 Minor Rural Collector
File 1, Run 1, Scenario 5.

M583 Warning: The user supplied arterial average speed of 34.9
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.
M 48 Warning: there are no sales for vehicle class HDGV8b
M 48 Warning: there are no sales for vehicle class LDDT12

Calendar Year: 2020
Month: July
Minimum Temperature: 62.8°F
Maximum Temperature: 83.7°F
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

Veh GVWR: <6000 >6000 (All)

VMT Distribution: 0.2673 0.4395 0.1600 0.0369 0.0002 0.0024 0.0885 0.0052 1.0000

Composite Emission Factors (g/mi):
- Composite VOC : 0.405 0.373 0.527 0.414 0.334 0.069 0.152 0.236 1.98
- Composite CO : 7.35 8.17 9.56 8.54 5.61 0.699 0.445 0.356 10.82
- Composite NOX : 0.299 0.351 0.524 0.397 0.574 0.064 0.169 1.406 1.19

-
Scenario Title: 2020 Rural Local Road  
File 1, Run 1, Scenario 6.

M585 Warning:  
100% of VMT has been assigned to the local roadway type for all hours of the day for all vehicle types with an average speed of 12.9 mph.

M 48 Warning:  
there are no sales for vehicle class HDGV8b
M 48 Warning:  
there are no sales for vehicle class LDDT12

Calendar Year: 2020  
Month: July  
Altitude: Low  
Minimum Temperature: 62.8 (F)  
Maximum Temperature: 83.7 (F)  
Absolute Humidity: 75. grains/lb  
Nominal Fuel RVP: 9.0 psi  
Weathered RVP: 8.8 psi  
Fuel Sulfur Content: 30. ppm  

Exhaust I/M Program: No  
Evap I/M Program: No  
ATP Program: No  
Reformulated Gas: No

Vehicle Type:  
LGV  LDGV  LDGT12  LDGT34  LDGT  HDGV  LDDV  LDDT  HDDV  MC  All  
GVWR: <6000 >6000 (All)

VMT Distribution:  
0.2673  0.4395  0.1600  0.0369  0.0002  0.0024  0.0885  0.0052

Composite Emission Factors (g/mi):

<table>
<thead>
<tr>
<th></th>
<th>0.640</th>
<th>0.608</th>
<th>0.815</th>
<th>0.663</th>
<th>0.719</th>
<th>0.116</th>
<th>0.260</th>
<th>0.498</th>
<th>3.03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite VOC</td>
<td>0.640</td>
<td>0.608</td>
<td>0.815</td>
<td>0.663</td>
<td>0.719</td>
<td>0.116</td>
<td>0.260</td>
<td>0.498</td>
<td>3.03</td>
</tr>
<tr>
<td>Composite CO</td>
<td>7.87</td>
<td>8.73</td>
<td>10.21</td>
<td>9.13</td>
<td>15.23</td>
<td>1.320</td>
<td>0.877</td>
<td>0.948</td>
<td>24.94</td>
</tr>
<tr>
<td>Composite NOX</td>
<td>0.317</td>
<td>0.356</td>
<td>0.518</td>
<td>0.399</td>
<td>0.476</td>
<td>0.085</td>
<td>0.227</td>
<td>1.748</td>
<td>0.96</td>
</tr>
</tbody>
</table>

Scenario Title: 2020 Urban Interstate  
File 1, Run 1, Scenario 7.

M515 Warning:  
The combined freeway and ramp average speed entered cannot be greater than 60.7 miles per hour. The average speed will be reset to this value.

M582 Warning:  
The user supplied freeway average speed of 60.7 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

M 48 Warning:  
there are no sales for vehicle class HDGV8b
M 48 Warning:  
there are no sales for vehicle class LDDT12

Calendar Year: 2020  
Month: July  
Altitude: Low  
Minimum Temperature: 62.8 (F)  
Maximum Temperature: 83.7 (F)  
Absolute Humidity: 75. grains/lb  
Nominal Fuel RVP: 9.0 psi  
Weathered RVP: 8.8 psi  
Fuel Sulfur Content: 30. ppm  

Exhaust I/M Program: No  
Evap I/M Program: No  
ATP Program: No
Reformulated Gas: No

<table>
<thead>
<tr>
<th>Veh</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>GWR</td>
<td>&lt;6000</td>
<td>&gt;6000</td>
<td>(All)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VMT Distribution:

- 0.2673
- 0.4395
- 0.1600
- 0.0369
- 0.0002
- 0.0024
- 0.0885
- 0.0052
- 1.0000

Composite Emission Factors (g/mi):

- Composite VOC: 0.353
- Composite CO: 9.42
- Composite NOX: 0.327

---

Scenario Title: 2020 Other Urban Freeways and Expressways
File 1, Run 1, Scenario 8.

M582 Warning:
The user supplied freeway average speed of 42.2
will be used for all hours of the day. 100% of VMT
has been assigned to a fixed combination of freeways
and freeway ramps for all hours of the day and all
vehicle types.

M 48 Warning:
there are no sales for vehicle class HDGV8b

Calendar Year: 2020
Month: July
Minimum Temperature: 62.8 (F)
Maximum Temperature: 83.7 (F)
Absolute Humidity: 75. grains/lb
Nominal Fuel RVP: 9.0 psi
Weathered RVP: 8.8 psi
Fuel Sulfur Content: 30. ppm
Exhaust I/M Program: No
Evap I/M Program: No
ATP Program: No
Reformulated Gas: No

<table>
<thead>
<tr>
<th>Veh</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>GWR</td>
<td>&lt;6000</td>
<td>&gt;6000</td>
<td>(All)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VMT Distribution:

- 0.2673
- 0.4395
- 0.1600
- 0.0369
- 0.0002
- 0.0024
- 0.0885
- 0.0052
- 1.0000

Composite Emission Factors (g/mi):

- Composite VOC: 0.387
- Composite CO: 8.05
- Composite NOX: 0.308

---

Scenario Title: 2020 Other Urban Principal Arterial
File 1, Run 1, Scenario 9.

M583 Warning:
The user supplied arterial average speed of 29.6
will be used for all hours of the day. 100% of VMT
has been assigned to the arterial/collector roadway
type for all hours of the day and all vehicle types.
<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
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</thead>
<tbody>
<tr>
<td>Veh GVWR:</td>
<td></td>
<td>&lt;6000</td>
<td>&gt;6000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMT Distribution:</td>
<td>0.2673</td>
<td>0.4395</td>
<td>0.1600</td>
<td>0.0369</td>
<td>0.0002</td>
<td>0.0024</td>
<td>0.0885</td>
<td>0.0052</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Composite Emission Factors (g/mi):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite VOC: 0.430 0.393 0.554 0.436 0.373 0.075 0.167 0.271 2.11</td>
</tr>
<tr>
<td>Composite CO: 7.34 8.14 9.51 8.51 6.48 0.762 0.489 0.416 12.45</td>
</tr>
<tr>
<td>Composite NOx: 0.307 0.357 0.533 0.404 0.551 0.064 0.171 1.422 1.14</td>
</tr>
</tbody>
</table>

---

* Scenario Title: 2020 Other Urban Minor Arterial
* File 1, Run 1, Scenario 10.

M 48 Warning:
- The user supplied arterial average speed of 29.7
  will be used for all hours of the day. 100% of VMT
  has been assigned to the arterial/collector roadway
  type for all hours of the day and all vehicle types.

M 48 Warning:
- there are no sales for vehicle class HDGV8b
- there are no sales for vehicle class LDDT12
### 2020 Urban Collector

**Scenario Title:** 2020 Urban Collector  
**File 1, Run 1, Scenario 11.**

#### M583 Warning:
The user supplied arterial average speed of 29.9 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

#### M48 Warning:
- There are no sales for vehicle class HDGV8b
- There are no sales for vehicle class LDDT12

**Calendar Year:** 2020  
**Month:** July  
**Altitude:** Low  
**Minimum Temperature:** 62.8°F  
**Maximum Temperature:** 83.7°F  
**Absolute Humidity:** 75 grains/lb  
**Nominal Fuel RVP:** 9.0 psi  
**Weathered RVP:** 8.8 psi  
**Fuel Sulfur Content:** 30. ppm

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMT Distribution</td>
<td>0.2673</td>
<td>0.4395</td>
<td>0.1600</td>
<td>0.0369</td>
<td>0.0002</td>
<td>0.0024</td>
<td>0.0885</td>
<td>0.0052</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Composite Emission Factors (g/mi):

#### Composite VOC:
- 0.428
- 0.391
- 0.552
- 0.434
- 0.370
- 0.075
- 0.166
- 0.269
- 2.10

<table>
<thead>
<tr>
<th>Composite CO</th>
<th>7.33</th>
<th>8.14</th>
<th>9.51</th>
<th>8.50</th>
<th>6.46</th>
<th>0.761</th>
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<th>0.415</th>
<th>12.41</th>
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</thead>
<tbody>
<tr>
<td>Composite NOX</td>
<td>0.307</td>
<td>0.357</td>
<td>0.533</td>
<td>0.404</td>
<td>0.551</td>
<td>0.064</td>
<td>0.171</td>
<td>1.421</td>
<td>1.14</td>
<td></td>
</tr>
</tbody>
</table>

---

### 2020 Urban Local Road

**Scenario Title:** 2020 Urban Local Road  
**File 1, Run 1, Scenario 12.**

#### M585 Warning:
100% of VMT has been assigned to the local roadway type for all hours of the day for all vehicle types with an average speed of 12.9 mph.

#### M48 Warning:
- There are no sales for vehicle class HDGV8b
- There are no sales for vehicle class LDDT12

**Calendar Year:** 2020  
**Month:** July  
**Altitude:** Low  
**Minimum Temperature:** 62.8°F  
**Maximum Temperature:** 83.7°F  
**Absolute Humidity:** 75 grains/lb  
**Nominal Fuel RVP:** 9.0 psi  
**Weathered RVP:** 8.8 psi  
**Fuel Sulfur Content:** 30. ppm
<table>
<thead>
<tr>
<th>Vehicle Type:</th>
<th>LDGV</th>
<th>LDGT12</th>
<th>LDGT34</th>
<th>LDGT</th>
<th>HDGV</th>
<th>LDDV</th>
<th>LDDT</th>
<th>HDDV</th>
<th>MC</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVWR:</td>
<td></td>
<td>&lt;6000</td>
<td>&gt;6000</td>
<td>(All)</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>VMT Distribution:</td>
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<td>0.4395</td>
<td>0.1600</td>
<td>0.0369</td>
<td>0.0002</td>
<td>0.0024</td>
<td>0.0885</td>
<td>0.0052</td>
<td></td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Composite Emission Factors (g/mi):

- Composite VOC : 0.640 0.608 0.815 0.663 0.719 0.116 0.260 0.498 3.03
- Composite CO : 7.87 8.73 10.21 9.13 15.23 1.320 0.877 0.948 24.94
- Composite NOX : 0.317 0.356 0.518 0.399 0.476 0.085 0.227 1.748 0.96