

TECHNICAL MEMORANDUM AIR QUALITY SCREENING TEST

Date: February 9, 2010

Subject: FDOT WPI Segment Number: 416361 4
THEA Project Number: 52.20.02
Selmon Expressway (SR 618) Downtown Viaduct Improvements PD&E Study
Hillsborough County, FL

The referenced proposed project is located in Hillsborough County, FL, an area currently designated as being attainment for the following criteria air pollutants: nitrogen dioxide, particulate matter (2.5 microns in size and 10 microns in size), sulfur dioxide, carbon monoxide, lead and ozone.

The ETDM Programming Screen (ETDM #11840) performed in 2009 for this project concluded that Air Quality be identified with a measure of effect of Minimal.

The preferred alternative was subjected to a carbon monoxide (CO) screening model that makes various conservative worst-case assumptions related to site conditions, meteorology and traffic. The Florida Department of Transportation's (FDOT's) screening model, CO Florida 2004 (released September 7, 2004) uses the latest United States Environmental Protection Agency (USEPA) approved software (**MOBILE6 and CAL3QHC**) to produce estimates of one-hour and eight-hour CO levels at default air quality receptor locations. The one-hour and eight-hour estimates can be directly compared to the one and eight hour **National Ambient Air Quality Standards (NAAQS)** for CO that are 35 parts per million (ppm) and 9 ppm, respectively.

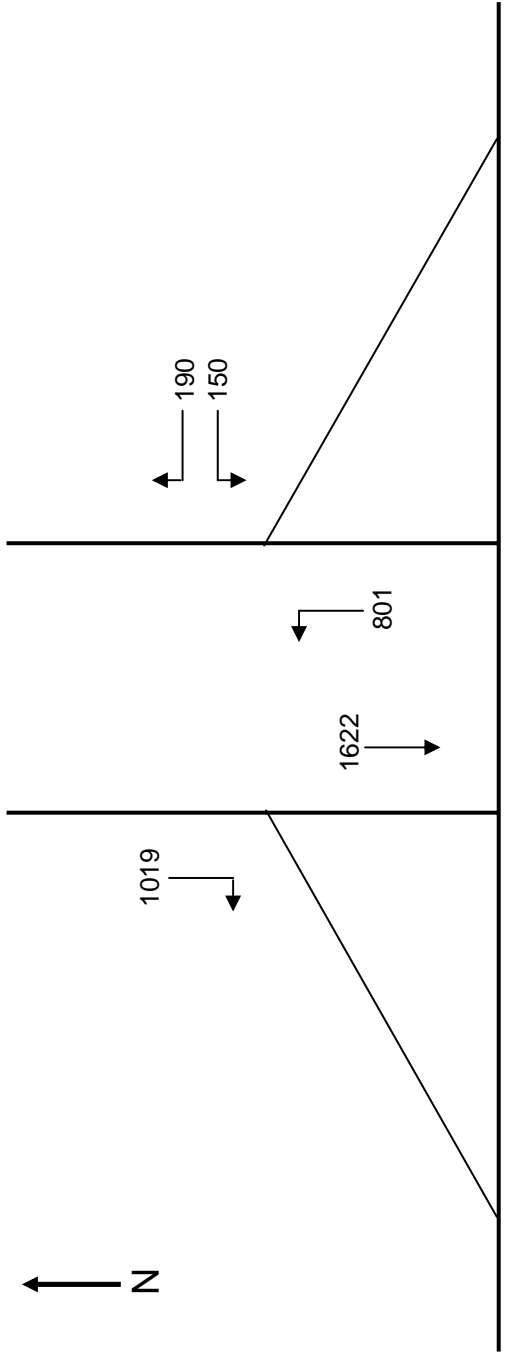
The roadway segments forecast to have the highest total approach traffic volume located within the project limits was from 22nd Street to Kennedy Boulevard. For purposes of this screening the Selmon Expressway and 22nd Street interchange was subjected to a CO Screening assuming a Diamond Interchange within CO Florida 2004. The Build and No-Build scenarios for the design year (2035) were evaluated using peak design hour volumes adjusted for the PM peak hour.

Estimates of CO were predicted for the default receptors which are located 10 feet to 150 feet from the edge of roadway. Based on the results from the screening model, the highest project-related CO one and eight hour levels are not predicted to meet or exceed the one or eight hour **National Ambient Air Quality Standards (NAAQS)** for this pollutant with either the Build or No-Build alternatives. As such, the project "passes" the screening model test. The results of the screening model test are attached to this memorandum.

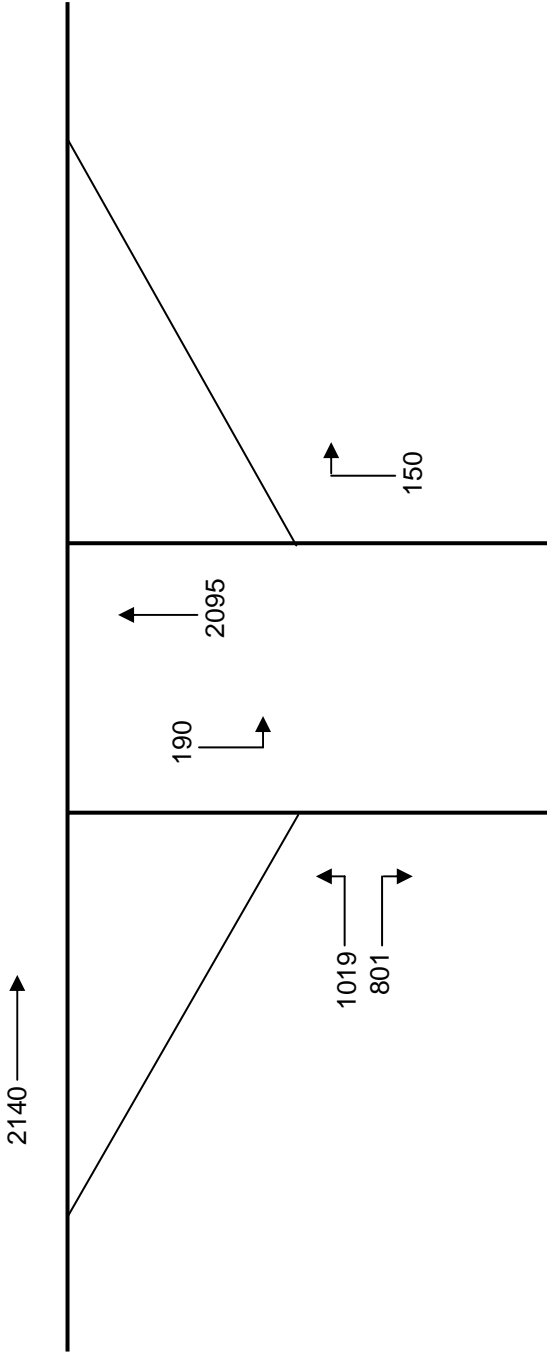
"The project is located in an area which is designated attainment for all of the **National Ambient Air Quality Standards** under the criteria provided in the **Clean Air Act**. Therefore, the **Clean Air Act** conformity requirements do not apply to the project."

Year 2035 PM Peak Build Traffic Data for Air Quality Screening - DDHV Volumes as Obtained from the Design Traffic Technical Memorandum

22nd Street

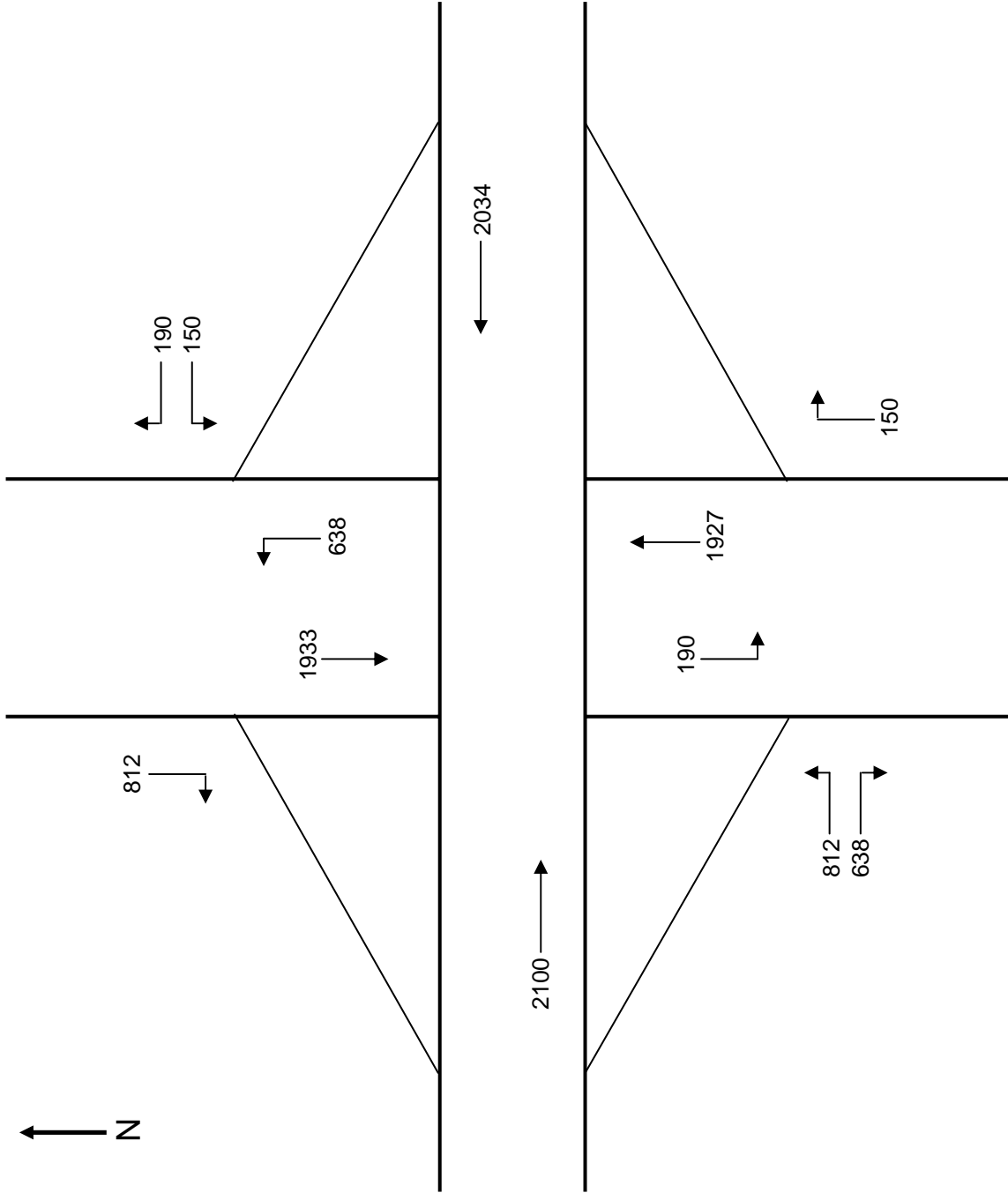


Selmon Expressway



Year 2035 PM Peak No-Build Traffic Data for Air Quality Screening - DDHV Volumes as Obtained from the Design Traffic Technical Memorandum

22nd Street



Selmon Expressway

CO Florida 2004

Project: Selmon Expressway (SR 618) Downtown Viaduct Improvements PD&E Study
 Facility: Selmon Expressway - NO BUILD 2035
 Analyst: Corey Carter

Environmental Data:

Temperature: 50 F
 Reid Vapor Pressure: 11.5 psi
 Land Use: Urban
 Stability Class: D
 Surface Roughness: 175
 Background Concentration: 1-hr = 5.0 ppm 8-hr = 3.0 ppm

Project Data:

Region: 4: Hillsborough / Pinellas
 Year: 2035
 Intersection Type: Diamond Interchange
 Max Freeway Traffic: 3550 veh/hour
 Max Arterial Traffic: 2745 veh/hour
 Freeway Speed: 55
 Arterial Speed: 45

Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	1020	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	10	-1020	6
Default Rec 6	10	-50	6
Default Rec 7	50	-10	6
Default Rec 8	150	-10	6
Default Rec 9	-10	-1020	6
Default Rec 10	-10	-50	6
Default Rec 11	-50	-10	6
Default Rec 12	-150	-10	6
Default Rec 13	-10	1020	6
Default Rec 14	-10	50	6
Default Rec 15	-50	10	6
Default Rec 16	-150	10	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	8.6	5.2
Default Rec 2	8.6	5.2
Default Rec 3	9.4	5.6
Default Rec 4	9.5	5.7
Default Rec 5	9.5	5.7
Default Rec 6	8.8	5.3
Default Rec 7	9.4	5.6
Default Rec 8	8.8	5.3
Default Rec 9	8.6	5.2
Default Rec 10	8.6	5.2
Default Rec 11	9.4	5.6
Default Rec 12	9.5	5.7
Default Rec 13	9.5	5.7
Default Rec 14	8.8	5.3
Default Rec 15	9.4	5.6
Default Rec 16	8.8	5.3

PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED

CO Florida 2004

Project: Selmon Expressway (SR 618) Downtown Viaduct Improvements PD&E Study
 Facility: Selmon Expressway - BUILD 2035
 Analyst: Corey Carter

Environmental Data:

Temperature: 50 F
 Reid Vapor Pressure: 11.5 psi
 Land Use: Urban
 Stability Class: D
 Surface Roughness: 175
 Background Concentration: 1-hr = 5.0 ppm 8-hr = 3.0 ppm

Project Data:

Region: 4: Hillsborough / Pinellas
 Year: 2035
 Intersection Type: Diamond Interchange
 Max Freeway Traffic: 3960 veh/hour
 Max Arterial Traffic: 2641 veh/hour
 Freeway Speed: 55
 Arterial Speed: 45

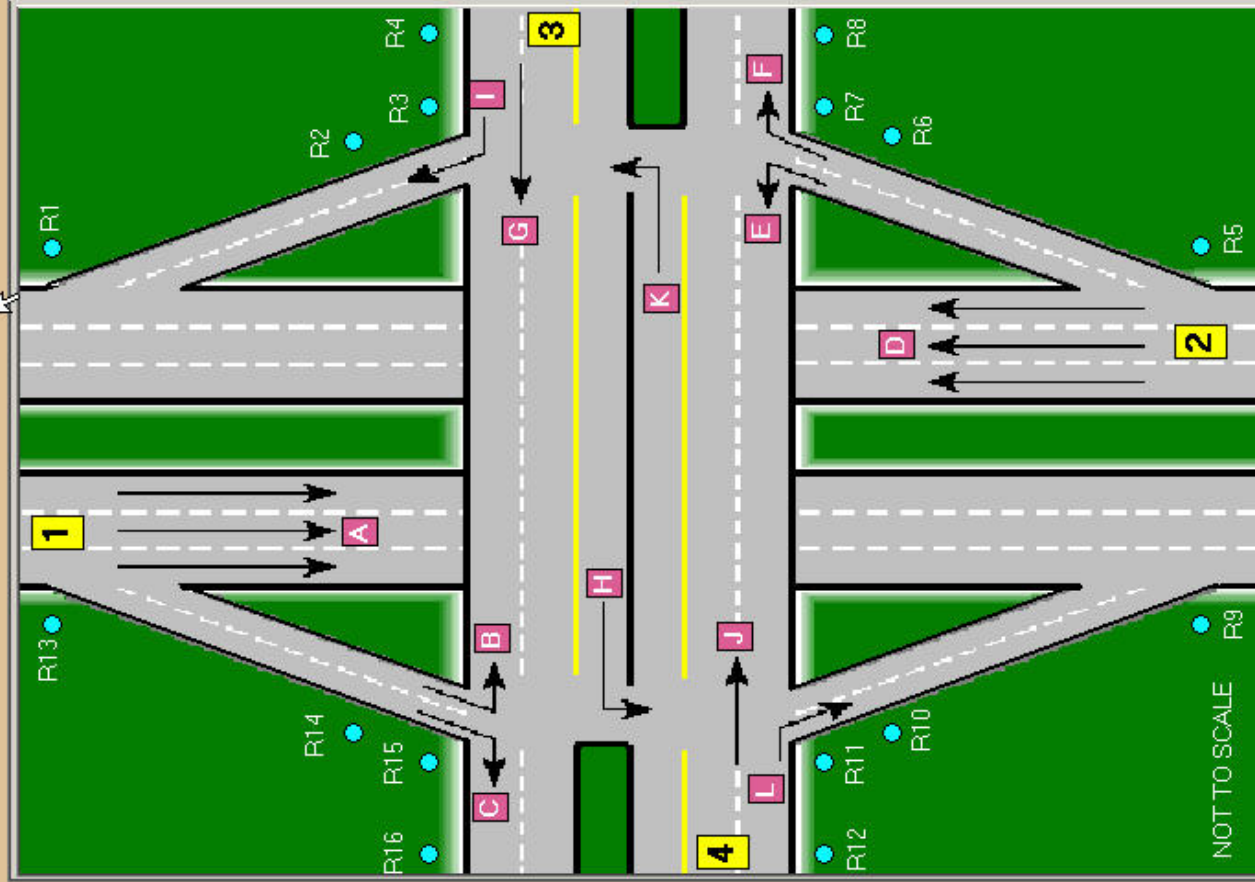
Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	1020	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	10	-1020	6
Default Rec 6	10	-50	6
Default Rec 7	50	-10	6
Default Rec 8	150	-10	6
Default Rec 9	-10	-1020	6
Default Rec 10	-10	-50	6
Default Rec 11	-50	-10	6
Default Rec 12	-150	-10	6
Default Rec 13	-10	1020	6
Default Rec 14	-10	50	6
Default Rec 15	-50	10	6
Default Rec 16	-150	10	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	8.9	5.3
Default Rec 2	8.9	5.3
Default Rec 3	9.4	5.6
Default Rec 4	9.6	5.8
Default Rec 5	9.8	5.9
Default Rec 6	9.0	5.4
Default Rec 7	9.4	5.6
Default Rec 8	9.2	5.5
Default Rec 9	8.9	5.3
Default Rec 10	8.9	5.3
Default Rec 11	9.4	5.6
Default Rec 12	9.6	5.8
Default Rec 13	9.8	5.9
Default Rec 14	9.0	5.4
Default Rec 15	9.4	5.6
Default Rec 16	9.2	5.5

PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED



INPUTS:

FREEWAY SPEED, mph **55**

1 *SOUTHBOUND* FREEWAY:

A THROUGH Traffic, veh/hr **2034**
 B EXIT RAMP LEFT, veh/hr **150**
 C EXIT RAMP RIGHT, veh/hr **190**

2 *NORTHBOUND* FREEWAY:

D THROUGH Traffic, veh/hr **2100**
 E EXIT RAMP LEFT, veh/hr **812**
 F EXIT RAMP RIGHT, veh/hr **638**

NOTE:
 THROUGH TRAFFIC is volume of NON-TURNING traffic approaching the intersection for the peak hour on that leg.
 Enter value between 1000 and 9999 vehicles per hour.

ARTERIAL SPEED, mph **45**

3 *WESTBOUND* ARTERIAL:

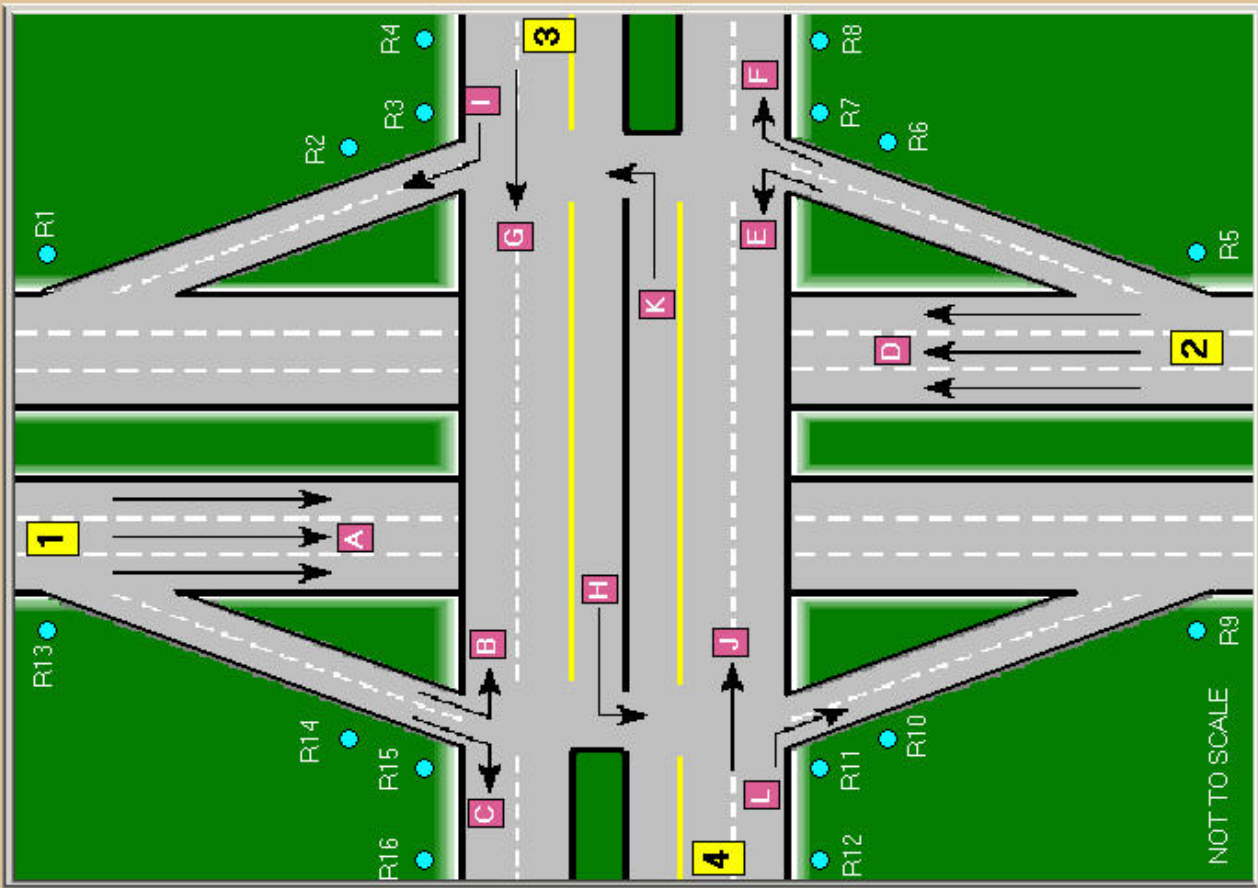
G THROUGH Traffic, veh/hr **1289**
 H LEFT Traffic, veh/hr **638**
 I RIGHT Traffic, veh/hr **150**

NOTE:
 SPEED is cruise speed as vehicles approach the intersection before entering the queue - sometimes referred to as mid-block speed. If cruise speed is unknown, use the speed limit.
 Enter value between 15 and 65 mph.

4 *EASTBOUND* ARTERIAL:

J THROUGH Traffic, veh/hr **1743**
 K LEFT Traffic, veh/hr **190**
 L RIGHT Traffic, veh/hr **812**





INPUTS:

FREEWAY SPEED, mph **55**

1 *SOUTHBOUND* FREEWAY:

A	THROUGH Traffic, veh/hr	2120
B	EXIT RAMP LEFT, veh/hr	150
C	EXIT RAMP RIGHT, veh/hr	190

2 *NORTHBOUND* FREEWAY:

D	THROUGH Traffic, veh/hr	2140
E	EXIT RAMP LEFT, veh/hr	1019
F	EXIT RAMP RIGHT, veh/hr	801

ARTERIAL SPEED, mph **45**

3 *WESTBOUND* ARTERIAL:

G	THROUGH Traffic, veh/hr	1294
H	LEFT Traffic, veh/hr	801
I	RIGHT Traffic, veh/hr	150

4 *EASTBOUND* ARTERIAL:

J	THROUGH Traffic, veh/hr	1432
K	LEFT Traffic, veh/hr	190
L	RIGHT Traffic, veh/hr	1019

NOTE:
THROUGH TRAFFIC is volume of NON-TURNING traffic approaching the intersection for the peak hour on that leg.
Enter value between 1000 and 9999 vehicles per hour.

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