



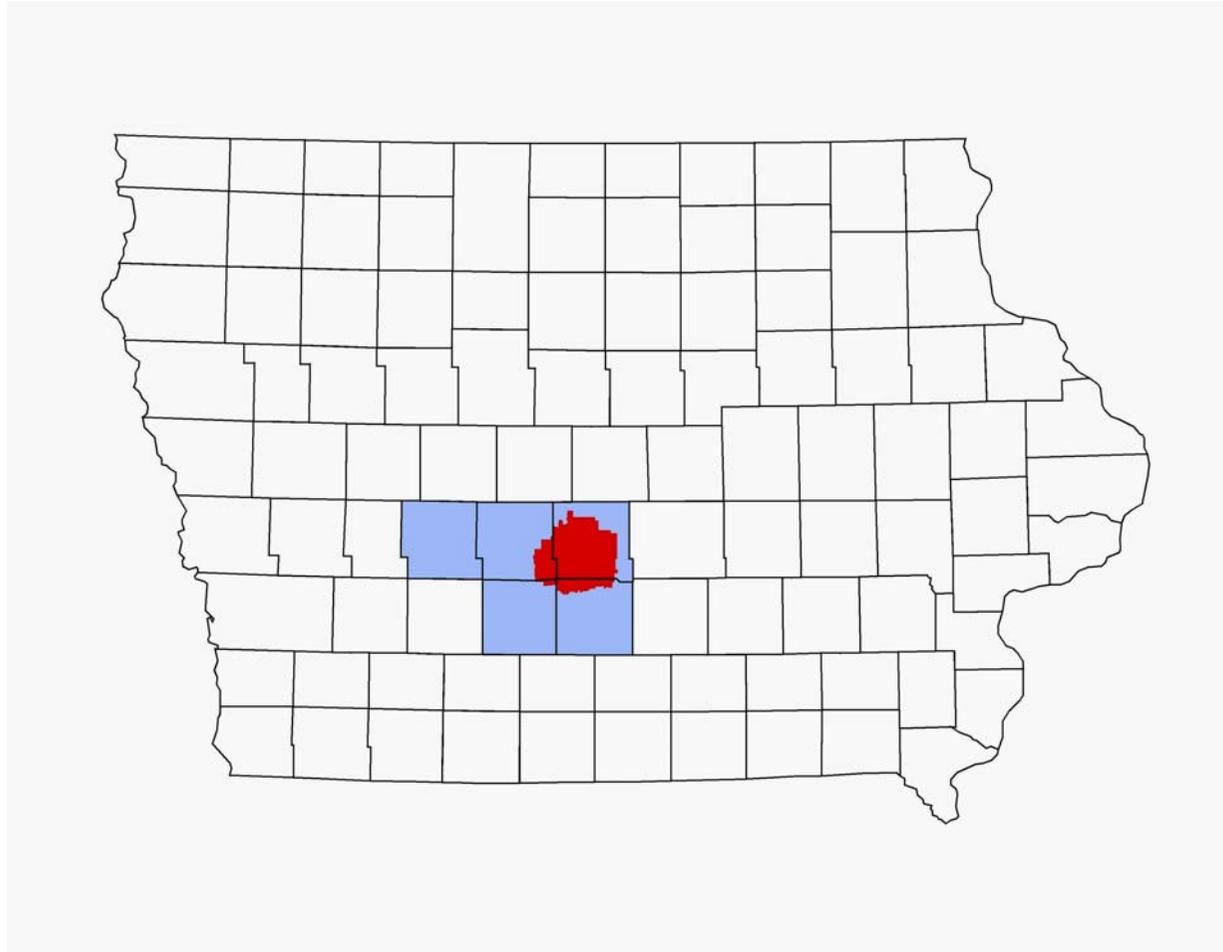
Tom Kane

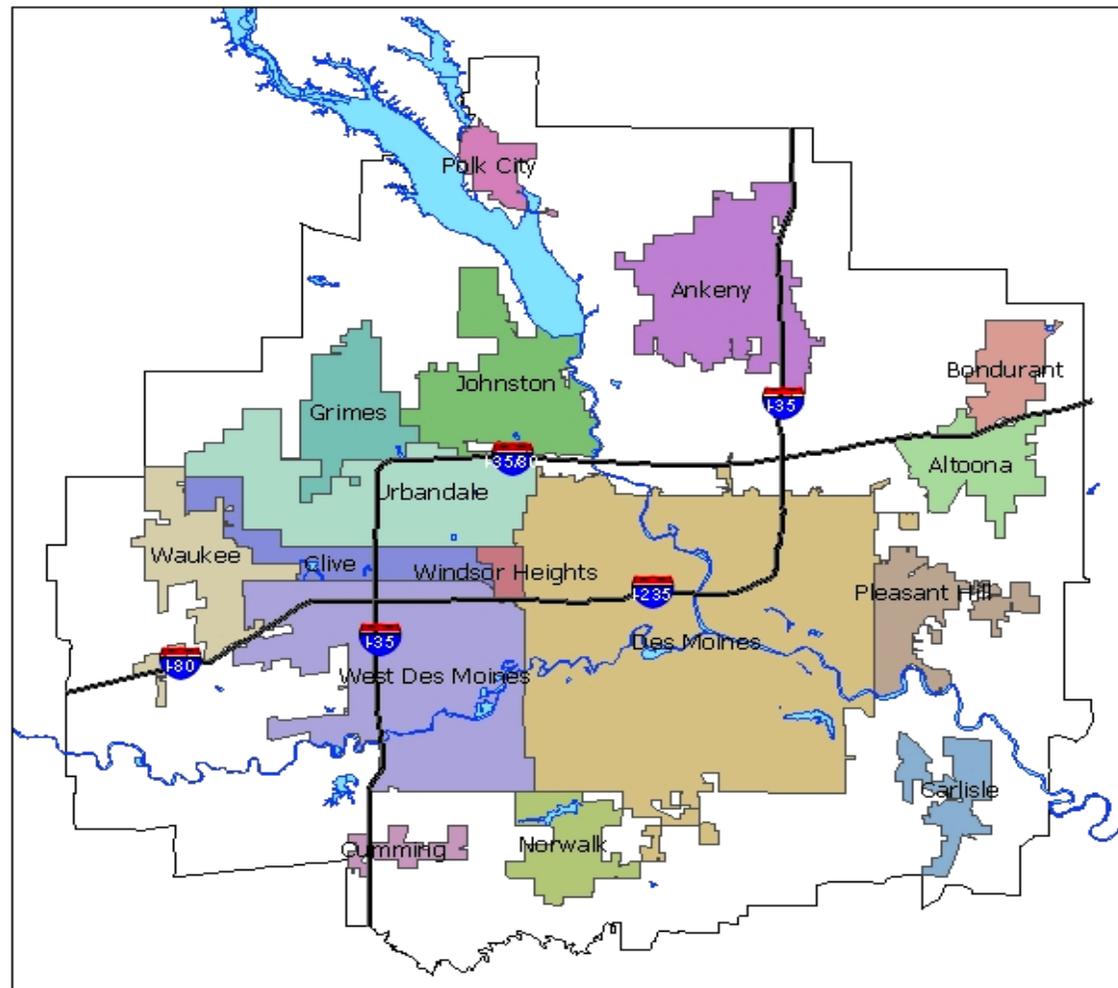


Mit Jha

Making decisions For traffic models Workshop

March 20-21, 2007
Sacramento, CA
DoubleTree Hotel







background

- **Metropolitan Planning Organizations use Four-Step travel demand Models for Planning and Policy Decisions**
- **Four-Step Models aggregate traffic, providing no detailed analysis**



Background – Cont'd

- **Microscopic simulation models perform detailed operational analysis**
- **But, microscopic models have intensive data needs and are time-consuming to develop**



I - 235 and I-80/I-35

Des Moines Area Freeway System Study

REPORT 2 - LONG RANGE PLANNING AND
ALTERNATIVES DEVELOPMENT



State of Iowa
Department of Transportation

Jack E. Leisch & Associates
Transportation Engineers
Evanston, Illinois

Brice, Petrides-Donohue & Co.
Kirkham, Michael & Associates
Wells Engineers, Inc.



A **tyco** International Ltd. Company

I-235
ALTERNATIVES ANALYSIS
AND
ENVIRONMENTAL IMPACT STATEMENT
Federal Aid Project No. IR-235-2(216)73-12-77
Polk County, Iowa

PREPARED FOR: Iowa Department of Transportation

PREPARED BY: Wilbur Smith Associates
Engineers • Planners • Economists

in association with

The Dunbar/Jones Partnership and Snyder & Associates

Ramp Metering	Traffic Signals	LRT
HOV Lanes & Ramps	On Street Parking	Monorail
Incident Management	Reversible Lanes	Auto Restrictions
Bus Systems	Route Extensions	Bicycles
Ridesharing	Growth Management	Ramp Closures
Truck Restrictions	Parking Strategies	Modernization
One Way Streets	Work Reschedules	Full Build
Intersection Improvements		

INTERSTATE
235



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Scope of Work
Proposal for

**Traffic Engineering and
Intelligent Transportation
System (ITS) Services**

 **Iowa Department
of Transportation**
Des Moines, Iowa

Sverdrup Civil, Inc.
A Jacobs Company



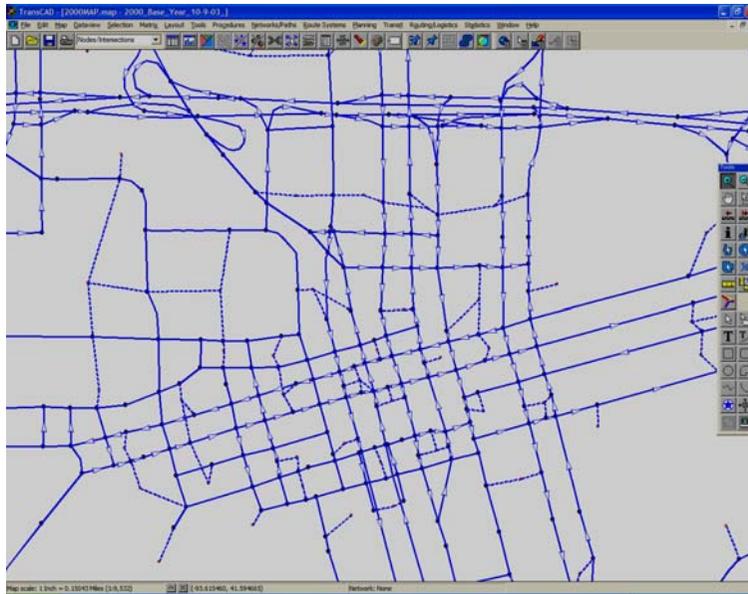
CHOOSING MITSIM

- **Jointly decided by the Des Moines Area MPO and the Iowa DOT**
- **For the entire Des Moines metropolitan area**



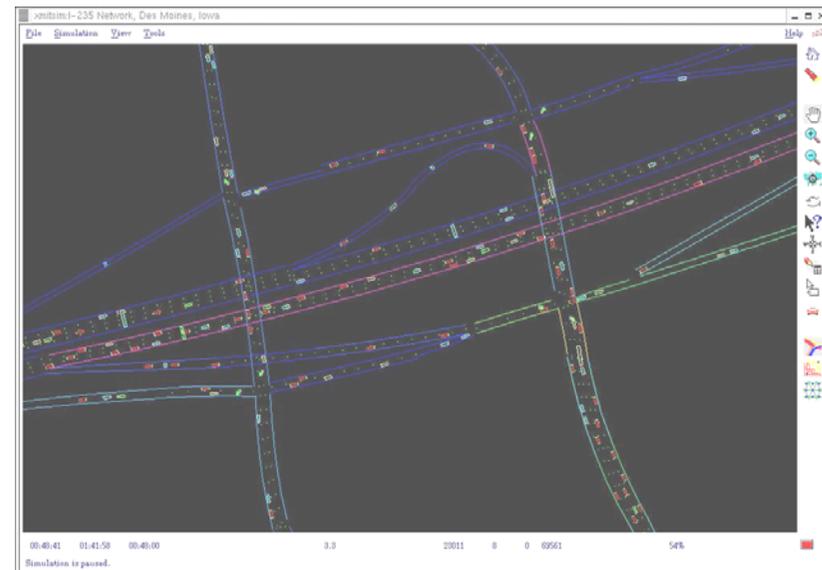
CHOOSING MITSIM

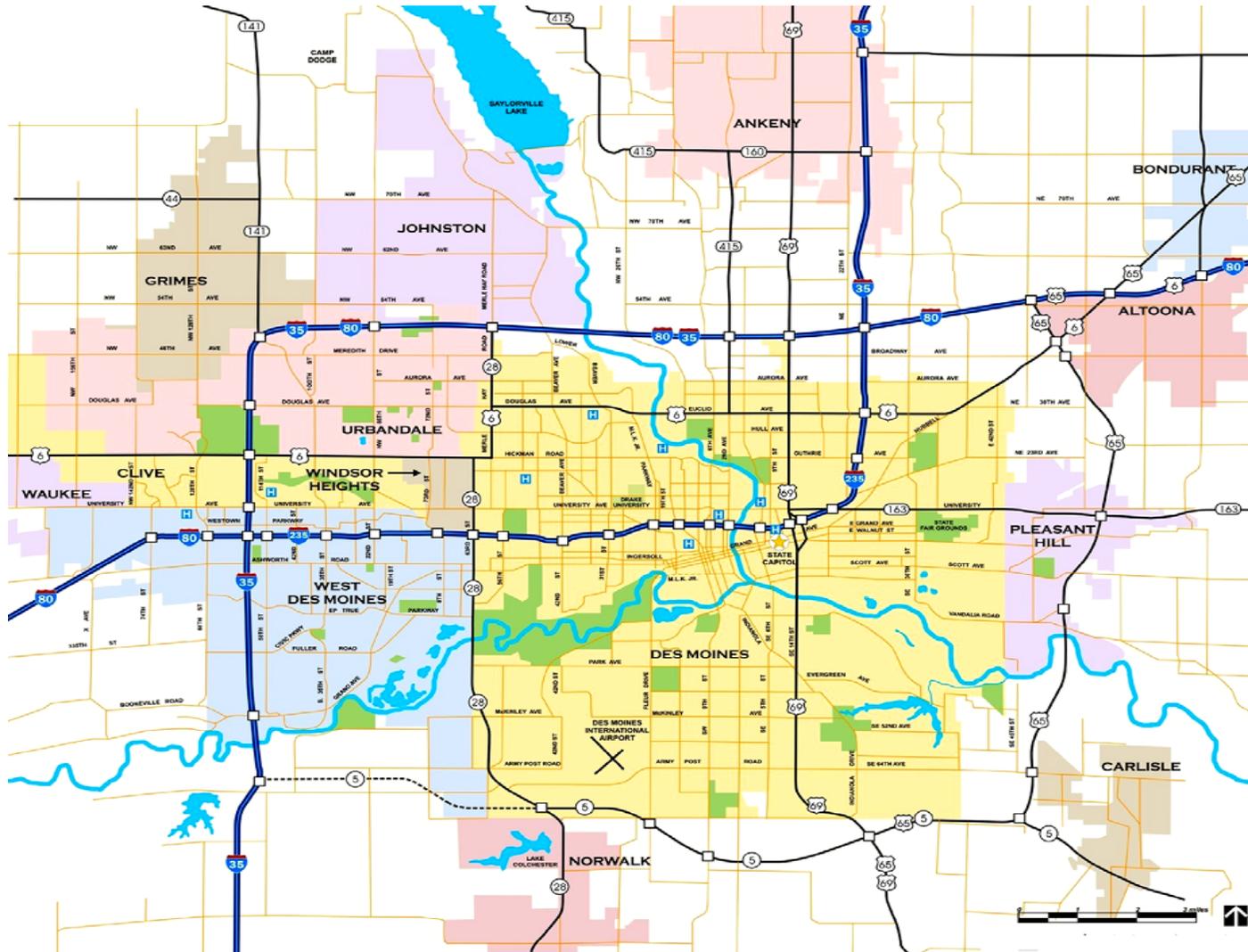
- **Immediate application -**
 - **Evaluate the network level impact of various construction staging scenarios**
 - **Devise work zone traffic management system for the I-235 reconstruction project (Flak, et al 2002)**

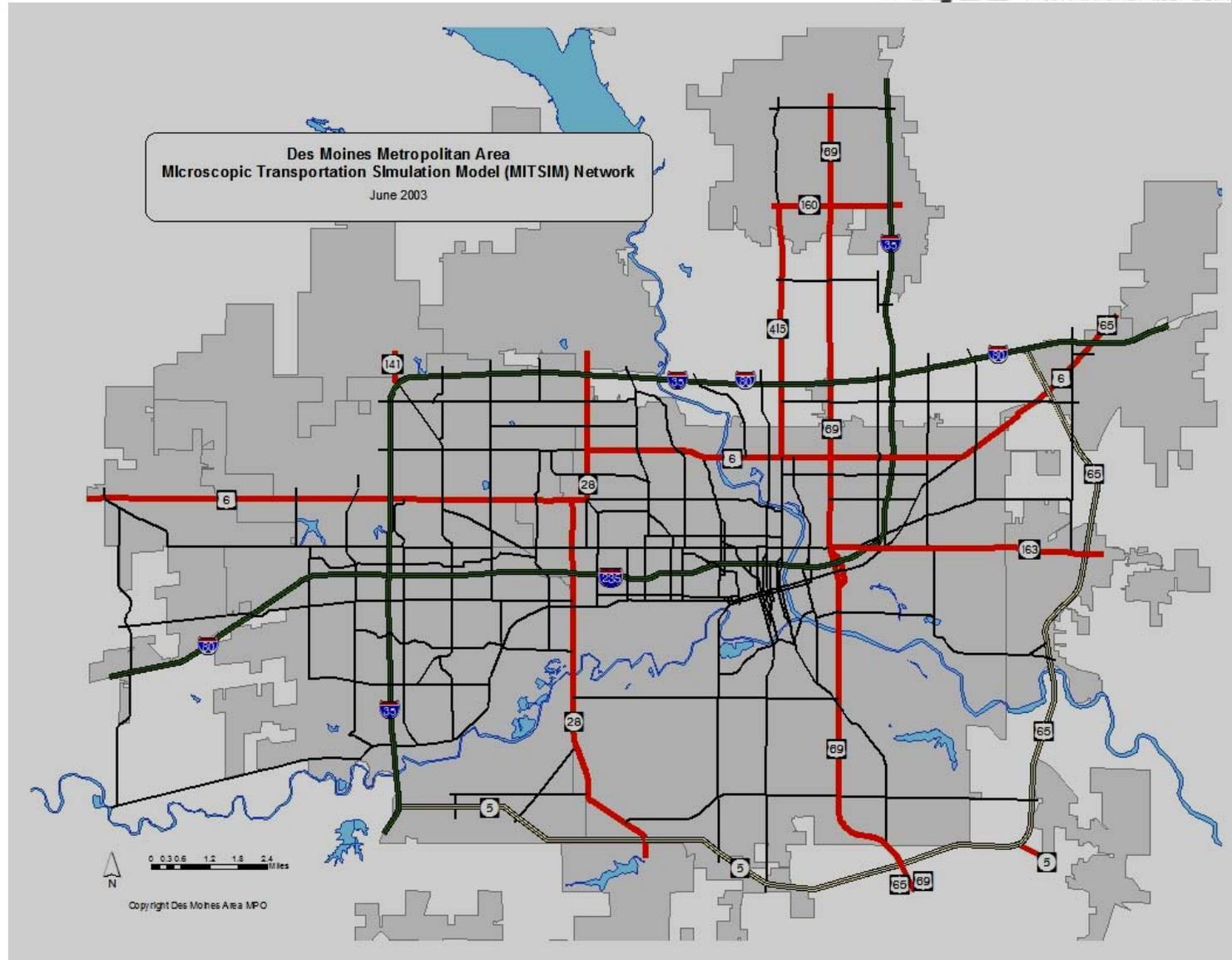


TransCAD®

MITSIM









- **Peak Hour Model**
- **Covers majority of Des Moines Area**
 - **200 square miles**
- **One of the largest microscopic simulation model networks**



- **One of the largest microscopic simulation model networks**
 - **1,479 Nodes**
 - **3,756 links**
 - **5,479 segments**
 - **10,657 lanes**
 - **1,979 sensors**
 - **791 traffic signals**
 - **Approximately 200 intersections**
 - **2,500 Lane Miles**

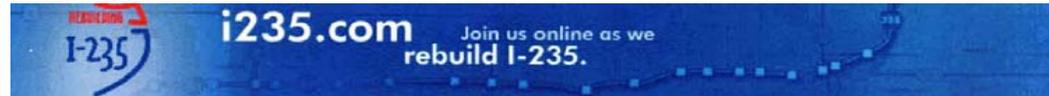


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Construction Zone Overview

For detailed maps of construction areas along I-235 - highlight the area, then click for more information.





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 Des Moines
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I-235 Construction Alert - Short-term temporary closure

(For long-term closures, go to *What's Closed.*)

Bookmark this page!
 (Ctrl+D)



UPDATE:
March 16, 2007
4:30 p.m.

WB - westbound
 EB - eastbound
 SB - southbound
 NB - northbound

Affected
 42nd St - 56th St
 31st St-42nd St
 28th St. to Keo Way
 MLK
 E. University - 3rd St.
 Northeast Mixmaster

SIGN UP
 Receive I-235 Alerts via e-mail

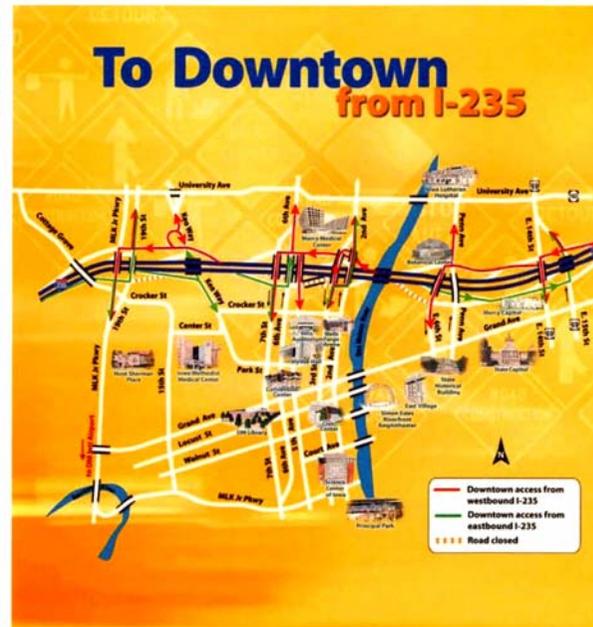
NOTE: **MIXMASTER CLOSURE - There will be total closures of WB I-80 overnight Friday-Sunday, March 16-March 18. See below for more information.**

56th St. - 42nd St. **Friday, March 9 - Friday, March 30**
 ■ 9 a.m.- 4 p.m.- Weekdays - Weather permitting, the EB auxiliary lane of I-235 will be closed for noise wall work as needed.



Routes to Downtown during eastbound roadway rebuilding

This traffic shift will take place the week of March 19, 2007



[Click here to view larger PDF map](#)

Driving Directions to downtown:

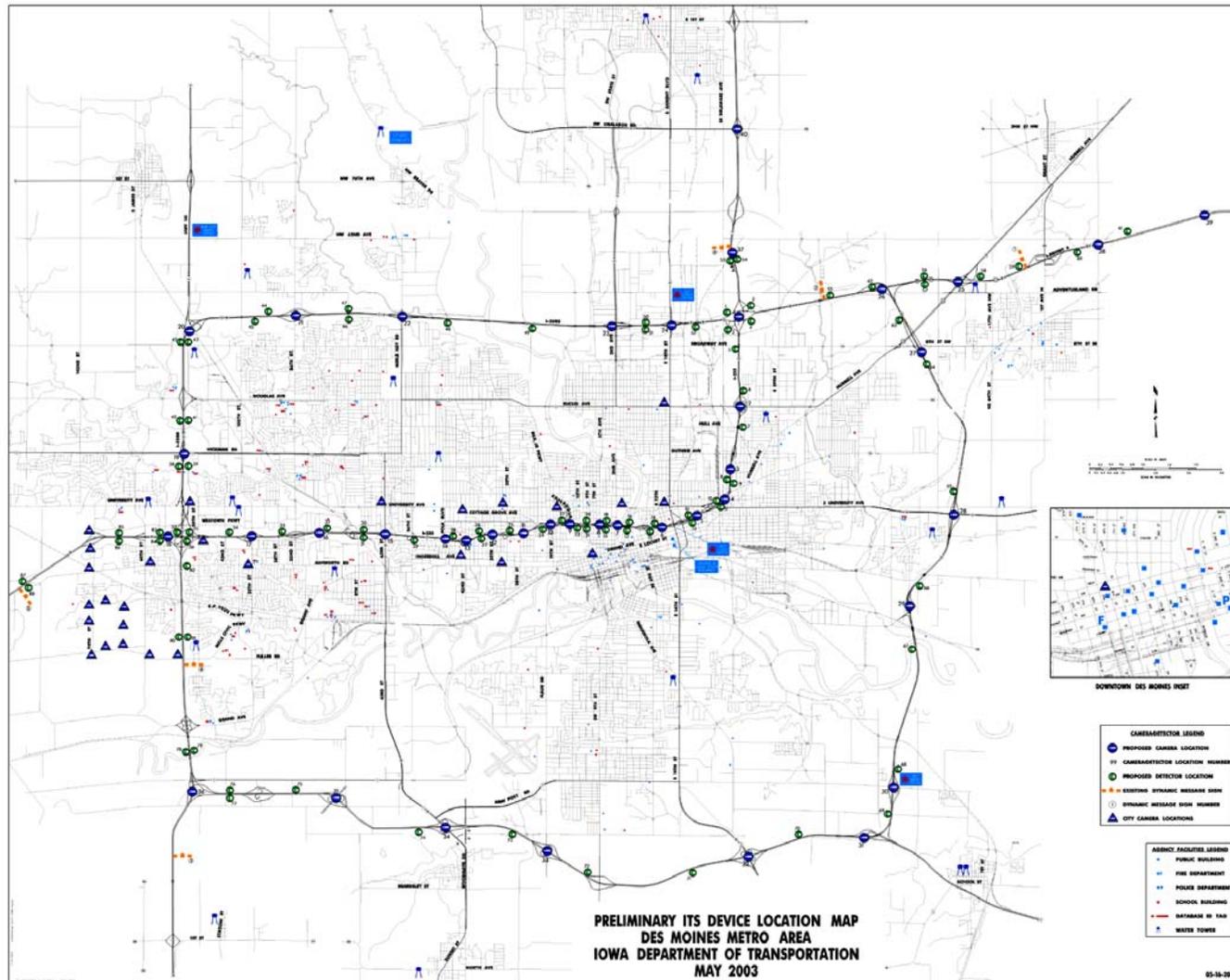
Westbound: Motorists traveling westbound can exit at E. 15th St.; Penn Ave., 3rd/5th/7th street to downtown; Keo Way and 19th St./MLK Jr. Pkwy.

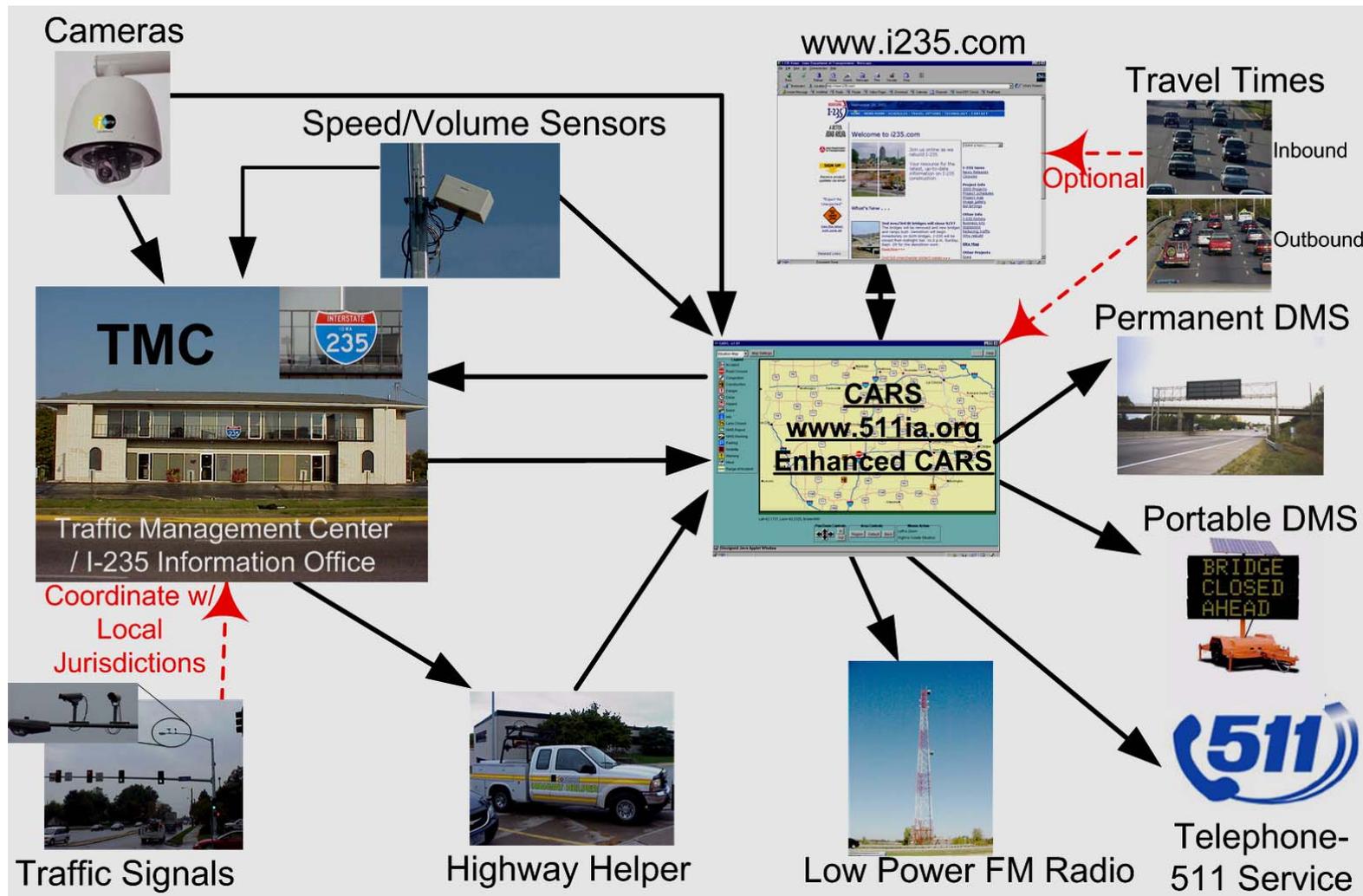
Eastbound: Motorists traveling eastbound can exit I-235 at MLK Jr. Pkwy, Keo Way, 7th St., and E. 14th St.



Des Moines Area MPO recognizes –

- **the traditional travel demand model projects future O-Ds and link volumes**
- **MITSIM's strength lies in being able to perform operational analyses for a large range of scenarios, including ITS applications**







DES MOINES AREA MPO BELIEVES –

- **MITSIM becomes more important as transportation planning moves from new construction to operations and maintenance**
- **MITSIM will provide for better analysis of alternatives to adding capacity for improving the transportation system**



Des Moines Area MPO Believes -

- **MITSIM will be useful in evaluating alternatives in the planning mode**
 - **Geometric Design and Alternative Improvements**
 - **Route Diversion (construction planning)**
 - **ITS and Incident Management**
 - **Evacuation Planning**



Des Moines Area MPO Believes –

- **MITSIM becomes more important as transportation planning moves from new construction to operations and maintenance**
- **MITSIM will provide for better analysis of alternatives to adding capacity for improving the transportation system**



Des Moines Area MPO Believes -

- **MITSIM, as a micro simulation model, is an additional tool**
- **MITSIM does not replace the traditional travel demand model**
- **Having both tools offers a very powerful modeling system**