

OFFICE OF THE CITY MANAGER  
DES MOINES, IOWA

CITY COUNCIL COMMUNICATION 96-325  
AUGUST 5, 1996 AGENDA

SUBJECT:	TYPE:	SUBMITTED BY:
CONGESTION MITIGATION & AIR QUALITY IMPROVEMENT FUND APPLICATION—TRAFFIC SIGNAL INTERCONNECTION UPGRADING	◆ RESOLUTION ORDINANCE RECEIVE/FILE	JIM THOMPSON TRAFFIC & TRANSPORTATION DIRECTOR

**SYNOPSIS —**

Twenty-five signalized locations along Grand Avenue, Ingersoll Avenue, and University Avenue (parallel to the I-235 corridor) have been identified for interconnection upgrading to reduce vehicle emissions and qualify the City for funding under the Clean Air Attainment Program (CAAP). (See attached map.)

**FISCAL IMPACT —**

Total project costs are estimated at \$1,000,000, with the City's maximum share in the amount of \$180,000. If the project is approved, the City's share is proposed to be funded from future Capital Improvements Program, Citywide Traffic Signal Interconnection Projects.

**RECOMMENDATION —**

Approval.

**BACKGROUND —**

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) established a Congestion Mitigation and Air Quality Improvement (CMAQ) program which directs federal transportation funds toward projects to reduce congestion and pollution. Iowa's share of the funding is \$4.7 million annually.

The Iowa Department of Transportation (IDOT) has established a CAAP, including guidelines on how to prioritize the disbursement of these funds. Their program will be implemented through a statewide competitive application procedure which will evaluate each proposed project, based on reducing congestion and pollution, and thereby maintaining the clean air quality that Iowa now enjoys.

Types of projects that are eligible for this funding include Traffic Flow Improvements, Shared-Ride Services, Transit Improvements, Pedestrian and Bicycle Programs, and others.

This year's project applications are required to be submitted through the Metropolitan Planning Organization (MPO) to IDOT no later than August 19, 1996.

The City has previously received funding for four projects through this program: the Downtown Traffic Signal System (\$3,000,000); the East 14th Street Signal System (\$800,000); the East Side Traffic Signal Interconnection (\$580,000); and the Northwest Side Traffic Signal Interconnection (\$400,000). These projects were all approved with 80 percent funding from IDOT.

It is proposed that the City submit a project for consideration to IDOT. On the August 5, 1996 agenda there will be a roll call directing the City Manager to submit an application through the MPO to IDOT for CMAQ funds for the following project:

**Traffic Signal Interconnection Upgrading  
Grand / Ingersoll / University Avenue Corridors**

This project consists of signal interconnection along Grand Avenue, Ingersoll Avenue, and University Avenue west of the Downtown Area, and parallel to the I-235 corridor. The project will upgrade the interconnection of 25 traffic signals into a "closed-loop" system, which will be capable of monitoring the traffic flows and modifying traffic signal timing plans to adjust to changing conditions.

Two major reasons for proposing this project involve the relationship between Grand Avenue/Ingersoll Avenue/University Avenue and the I-235 Freeway corridor. First, the signal system will be capable of assisting staff to implement various traffic demand management strategies during incidents that will occur along I-235. These strategies include both planned maintenance activities, as well as freeway restrictions or closures caused by major accidents, rerouting traffic to these parallel surface streets. Second, the proposed project will provide significant ability to improve the traffic-carrying capability of these streets during reconstruction of I-235, when significant additional traffic is expected along these parallel streets.

The traffic signals along the three proposed corridors are currently interconnected as part of the City's "Monotrol" signal system, which was installed in the early 1970s. Although the existing signals are tied together into a system, it does not have the capability of monitoring traffic flows or making "real-time" changes in the signals to adjust to increased or decreased flows.

The total project cost is estimated to be \$1,000,000. Additional information for each corridor is as follows:

**Grand Avenue:** Traffic volumes on Grand Avenue average approximately 17,500 vehicles per day through the 1.6 mile length from 42nd Street to 19th Street. Five traffic signals would be included along this corridor.

**Ingersoll Avenue:** Traffic volumes on Ingersoll Avenue average approximately 14,000 vehicles per day through the 1.7 mile length from 42nd Street to 18th Street. Five traffic signals would be included along this corridor.

**University Avenue:** Traffic volumes on University Avenue average approximately 14,000 vehicles per day through the 4.3-mile length from 63rd Street to 2nd Avenue. Fifteen traffic signals would be included along this corridor.

**FUNDING AND SCHEDULE:**

The total construction cost of this project is estimated to be \$1,000,000. CMAQ funding of 80 percent (\$800,000) is requested. Because of this project's connection to I-235 reconstruction and incident management, IDOT will be requested to participate in 10 percent of these costs. The City's share of construction costs would be \$100,000, and \$80,000 for design/construction engineering. The City's total share of \$180,000 is proposed from the Capital Improvements Program, Citywide Traffic Signal Interconnection Projects. If approved, the project would be scheduled for construction in 1999.

Attachment

# TRAFFIC SIGNAL INTERCONNECTION UPGRADING

## Grand, Ingersoll, and University Avenue Corridors

Exhibit "B"

