Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 14(A)(9)

07-24-07

OFFICIAL FILE COPY
CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

RESOLUTION NO. R-898-07

RESOLUTION AUTHORIZING THE ADDITIONAL APPROPRIATION OF $6.5 MILLION INCLUDED UNDER THE CONTRACT AWARD RECOMMENDATION FOR THE PEOPLE'S TRANSPORTATION PLAN (PTP) PROJECT ENTITLED INSTALLATION AND IMPLEMENTATION OF A NEW ADVANCED TRAFFIC MANAGEMENT SYSTEM (ATMS) FOR MIAMI-DADE COUNTY (PROJECT NO. 20050189)

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board approves the additional appropriation of $6.5 million included under the Contract Award Recommendation for The People's Transportation Plan (PTP) Project entitled the installation and implementation of a new Advanced Traffic Management System (ATMS) for Miami-Dade County, in substantially the form attached hereto and made a part hereof.

MEMORANDUM

(Revised)

TO: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

DATE: July 24, 2007

FROM: R.A. Cuevas, Jr. Acting County Attorney

SUBJECT: Agenda Item No. 14(A)(9)

Please note any items checked.

✓ "4-Day Rule" ("3-Day Rule" for committees) applicable if raised

____ 6 weeks required between first reading and public hearing

____ 4 weeks notification to municipal officials required prior to public hearing

____ Decreases revenues or increases expenditures without balancing budget

____ Budget required

____ Statement of fiscal impact required

____ Bid waiver requiring County Manager's written recommendation

____ Ordinance creating a new board requires detailed County Manager's report for public hearing

____ Housekeeping item (no policy decision required)

____ No committee review

The foregoing resolution was offered by Commissioner Jose "Pepe" Diaz, who moved its adoption. The motion was seconded by Commissioner Rebeca Sosa and upon being put to a vote, the vote was as follows:

Bruno A. Barreiro, Chairman aye
Barbara J. Jordan, Vice-Chairwoman aye

Jose "Pepe" Diaz	aye	Audrey M. Edmonson	aye
Carlos A. Gimenez	aye	Sally A. Heyman	aye
Joe A. Martinez	absent	Dennis C. Moss	aye
Dorrin D. Rolle	aye	Natacha Seijas	aye
Katy Sorenson	aye	Rebeca Sosa	aye
Sen. Javier D. Souto	absent		

The Chairperson thereupon declared the resolution duly passed and adopted this 24th day of July, 2007. This resolution shall become effective as follows: (1) ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board, and (2) either i) the Citizens' Independent Transportation Trust (CITT) has approved same, or ii) in response to the CITT's disapproval, the County Commission re-affirms its award by two-thirds (2/3) vote of the Commission's membership and such reaffirmation becomes final.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF COUNTY
COMMISSIONERS

HARVEY RUVIN, CLERK

Approved by County Attorney as to form and legal sufficiency.

By: KAY SULLIVAN
Deputy Clerk

Bruce Libhaber

Memorandum

MIAMI-DADE COUNTY

Date: July 24, 2007

Agenda Item No. 14(A)(9)

To: Honorable Chairman Bruno A. Barreiro
and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Subject: Resolution Authorizing the Additional Appropriation of $6.5 Million Included Under the Contract Award Recommendation for the People's Transportation Plan (PTP) Project Entitled Installation and Implementation of a New Advanced Traffic Management System (ATMS) for Miami-Dade County (Project No. 20050189)

Recommendation

It is recommended that Board of County Commissioners (BCC) approve the attached resolution authorizing the additional appropriation of $6.5 million included under the Contract Award Recommendation for the People's Transportation Plan (PTP) project entitled Installation and Implementation of a New Advanced Traffic Management System (ATMS) for Miami-Dade County (Project no. 20050189). To ensure the BCC retains control of the expenditures on this project, the PWD was directed to spend no more than $2.5 million in the first year, and to bring requests for subsequent funding approvals to the BCC's attention upon the attainment of appropriate project milestones. The funding source for this project derives from the People's Transportation Plan (PTP); therefore, approval by the Citizen's Independent Transportation Trust (CITT) is required.

Scope

This item has a countywide impact.

Fiscal Impact/Funding Source

The funding source for this contract is the Charter County Transit Surtax. The fiscal impact of the additional appropriation of $6.5 million was included in the original $9 million award, as noted in the July 7, 2005 resolution authorizing the execution of this contract.

The maximum fiscal impact to the PTP is $8.5 Million. The contract with Kimley-Horn and Associates, Inc. (KHA) is written for a maximum value of $9 million which will fully cover KHA's Phase 1 and Phase 2 efforts. The proposed funding sources for the contract were originally identified as the Florida Department of Transportation (FDOT) and Federal funds as identified by the Miami-Dade County Metropolitan Planning Organization (MPO). However, FDOT indicated that they will not be able to approve funds for this contract because they were not involved in the search and selection of the firm. FDOT has also indicated that the funds originally programmed for the System Integrator will be available for the field deployment of the ATMS.

This contract is one of several contracts which will be presented to the BCC for approval with Charter County Transit Surtax as the primary source of funding. While the total estimated cost for the new ATMS is approximately $86 Million, the anticipated impact of the Charter County Transit Surtax is approximately $49 Million (inclusive of the $9 Million for this contract).

Track Record/Monitor

Public Works Department (PWD) has reviewed records concerning KHA's performance and found the consultant is performing work at a satisfactory level. Throughout all PTP projects, the responsible staff person in PWD will continue to be the PTP Coordinator, Mr. Frank Aira, P.E. following completion of the award process; this project has been assigned to Mr. Nelson Berthin as the Project Manager for day-to-day responsibilities

Background

On February 1, 2005, the BCC voted unanimously in favor of a resolution authorizing the PWD to enter into negotiations with the top-ranked firm, Kimley-Horn and Associates, Inc. to provide and integrate a new ATMS (Resolution Number R-172-05). After a successful scoping and negotiations effort with this firm, the BCC voted unanimously on July 7th, 2005, to make a contract award recommendation (Agenda Item Number 8(P)(1)(M). The effective contract start date was July 18th, 2005.

As previously stated, the PWD was directed to spend no more than $2.5 million in the first year, and to bring requests for subsequent funding approvals to the BCC's attention upon the attainment of appropriate project milestones.

Significant project milestones have been attained both during the first year ending July 2006 and the nine (9) months since the end of the first year. The following is a summary report of these milestones during the program's first 21 months ending April 30, 2007.

Phase 1: Field Alpha Test: Operational Proof of the New ATMS:

The first ATMS program objective was for the County to be assured that the selected firm brings to the table an operationally-proven, off-the-shelf, ATMS software package that is compatible with our existing installed base of signal controllers. Under contract terms, the proof of this capability was to be demonstrated through a field alpha test of the firm's new ATMS over sixteen (16) actual field controllers within six months of contract award.

By January '06, within the stipulated six (6) months, the fact that the new system could successfully and safely operate Miami-Dade's installed controllers was demonstrated. After three (3) months of a thorough verification and check-off process, in May 2006, PWD declared the Alpha Test to be successful and authorized the consultant to move forward to the second project phase of staged County-wide migration from the old system to the new ATMS.

Phase 2: Customization, Enhancement, and Countywide Deployment of ATMS

With the baseline off-the-shelf software of the new ATMS having been operationally proven over sixteen (16) controllers in Phase 1 as described above, starting in May 2006, PWD issued a series of software customizing and field deployment task orders authorizing the consultant to move forward on a Migration Plan aimed at extending the control of the new ATMS over all 2,650 of the County's controllers in a series of staged steps. This complex undertaking requires the real-time coordination of a host of inter-related activities such as

controller upgrade, re-configuration of timing parameters, upgrade of communications links through BellSouth, communications conduit repair, etc., all while assuring no interruption of service to the motoring public.

In the twelve (12) months since the beginning of the deployment effort, **351 controllers** have been converted to operate on the new system, enabling traffic to flow more efficiently through these intersections. Of these, **209** have active high-speed communications links enabling them to be operated online, enabling improved progression between these and adjacent signals. The project team has already resolved numerous initial deployment issues (related to FPL power supply, BellSouth communications, and third-party firmware) not uncommon in such retro-upgrade efforts. With those challenges having been overcome, the rate of deployment is expected to increase dramatically over the next twelve (12) months. The Department plans to integrate a total of 750 traffic signals this fiscal year.

Concurrent with the effort to extend the operational benefit of the new ATMS to as many intersections as possible, staff and consultant have also worked together as a team to customize the new system to include features and requirements unique to Miami-Dade.

Traffic Congestion Relieving Initiatives Made Possible by the New ATMS:

In order to fully leverage the ATMS' expanded capability, numerous additional initiatives have been commissioned to relieve congestion and improve safety along Miami-Dade's arterials. Some of these are as follows.

- A **Reversible Lane Control System** re-design has been completed for NW 199 Street between NW 2 & 27 Avenues serving Dolphin Stadium.
- In cooperation with ETSD, a **wireless communication field alpha test** has been initiated over four (4) intersections within the City of Doral. The successful completion of this test will open the door to a countywide deployment of wireless technology for traffic system use.
- In cooperation with the Metropolitan Planning Organization and Miami-Dade Transit Departments, a concept design and a technology proof of concept have been performed for a **Bus Rapid Transit / Transit Signal Priority** pilot project on 33 signals along Kendall Drive.
- An **emergency vehicle preemption system** feature to provide priority passage to Fire Department vehicles is nearing completion.

Challenges and Outlook:

A multi-faceted program such as the countywide deployment of a new ATMS is never without its share of attendant contingencies. With new computer servers and central software at the Traffic Control Center (TCC), new controller firmware, sophisticated communications and control technologies, it is inevitable that a few inter-operability challenges will arise. The staff/consultant team have worked together closely to successfully resolve these issues.

Although alpha test activities were impacted by Wilma within three (3) months of program inception, the team worked diligently to still meet the target completion date of January 2006.

Salient among challenges faced and met was the lack of readiness of a countywide wireless system that the new ATMS was to rely on for its higher speed of communications. Early in the deployment process, the team engineered an interim communications upgrade design with BellSouth under which the existing low-speed analog lines are being replaced by high-speed digital lines. This will be gradually extended to the entire network and result in better communications at a lower lease cost.

Other ongoing traffic system improvement efforts include the location and repair of damaged conduit and communications lines, training and integration of newly-hired timing engineers and technical staff, obtaining upgraded computer and testing equipment, and developing standard test and troubleshooting procedures.

In addition to continuing the ATMS deployment over the next several years, the team is planning the replacement of old National Electrical Manufacturers Association (NEMA) controller cabinets, interim expansion of office space at the TCC to house newly-hired staff, design and installation of traffic surveillance cameras at critical intersections, and establishment of center-to-center connections to other control centers to bring in video images from Florida Department of Transportation (FDOT) and Miami-Dade Expressway Authority (MDX) cameras already installed on expressways within Miami-Dade.

Request for Authorization to Complete Project:

Since the inception of the project to date, $2.450 million of the originally contracted $9 million has been spent for the ATMS system. Based on the project's past and projected accomplishments, the BCC's approval is hereby sought for the PWD to complete this essential project.

Assistant County Manager