City of Madison: Earns international award on transportation systems management and operations

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The City of Madison's Traffic Engineering team recently received international distinction and the **2021 Transportation Systems Management & Operations Council Organization Award** by the Institute of Transportation Engineers (ITE). ITE is a professional association of more than 16,000 members working in 78 countries, including transportation engineers, planners, consultants, educators, technologists and researchers. The ITE international award program honors outstanding achievement in transportation, bestows international recognition upon the recipients, and increases the public's awareness of the role and responsibilities of the transportation professionals. The specific award Madison received seeks to recognize organizations that demonstrate the successful use of Intelligent Transportation System (ITS) technologies to improve the efficiency of surface transportation facilities with significant societal mobility.

The greater Madison area has a population of over 500,000 and ranks as the State of Wisconsin's fastest growing region. Although fast growing, significant portions of Madison's transportation system have limited ability for expansion, due to its geography and land use patterns. The community's values also call for a more sustainable transportation system. Madison's Transportation Systems Management and Operations (TSMO) Program combines' robust communication networks with innovative software applications to manage traffic operation using physical and virtual user interfaces. These tools allow for remote monitoring and response to traffic conditions in real time. Traffic engineers are able to apply state-of-the-art tools and technologies to reduce congestion and delay, enhance safety and improve the overall utility of Madison's transportation network to support cost-effective economic growth in the region in a more sustainable manner.

Key components that comprise the City of Madison's Transportation Systems Management and Operations (TSMO) Program include:

1. Low-cost Physical and Virtual Traffic Management Center, an area located in the City's downtown Traffic Engineering office, featuring a video wall and management tools for engineers and operators to remotely monitor traffic and make changes to devices in the field.
2. Fiber Network Communication, City-owned infrastructure by which information transmits to devices and facilities around the City.
3. Traffic Condition Monitoring, visual verification of operations and traffic incidents provided by online congestion mapping and strategically placed traffic cameras throughout the City's transportation network.

4. Advanced Traffic Signal Management Software, an application that allows engineers the ability to respond and adapt traffic signals to changing conditions.
5. Asset Management, the coordination of staffing resources and information related to traffic engineering infrastructure around the City.
6. Traveler Information, a Waze-based application that allows City staff to share real-time incident information with road users.

Madison is recognized for providing a relatively low cost solution for use of technology and active traffic management to reduce congestion, enhance safety, and improve the overall utility of Madison's transportation network to support continued growth of the area in a cost effective and more sustainable manner. Madison was also recognized for providing an example to other local agencies interested in advancing better transportation systems management and operations.

Recently, the program played a critical role in response to changing travel demands resulting from COVID-19. The program includes many Intelligent Transportation System (ITS) components and promotes a culture of effectively managing and operating the transportation system instead of constantly expanding the infrastructure. Not only does this program provide solutions to today's issues such as COVID-19 response, it also positions Madison to be better able to adapt to growth and technological challenges in the future.

City Traffic Engineering would like to extend appreciation to the industry partners providing the technologies and other city agencies involved in the project, including Information Technology, City Engineering, Finance and Attorney's Office. The City of Madison Traffic Engineering team, led by Dr. Yang Tao, received this award virtually at the ITE Annual Meeting & Exhibition conference held earlier this year.