Intelligent Transportation Systems

The application of Intelligent Transportation Systems (ITS) in Tysons has the potential to decrease congestion, increase safety, make trip making more convenient, reduce emissions and improve trip-making decisions. More specifically the following are examples of goals for the application of ITS in Tysons:

- Electronic information infrastructure that works in concert with physical infrastructure to maximize the efficiency and utility of the system (e.g. E-ZPass electronic toll collection systems, and SmarTrip rechargeable transit payment cards and other technology), encouraging modal integration and consumer choice.

- Real-time information for operators and users of the transportation system to help contain congestion and increase the effective capacity of the system while reducing the need for new construction.

- Facilities, technology and information that help reduce energy consumption and negative environmental impact.

ITS can be used to not only monitor and mitigate traffic congestion, but also to enhance emergency services in Tysons. Through the use of street sensors, signal control transmitters, and video surveillance cameras, real-time traffic management can take place. GPS and other technologies can also help public safety personnel respond to incidents in a timely manner. Intelligent transportation systems (ITS) should be applied to the fullest extent possible. Main components of ITS include:

- Traffic management systems. These systems make use of information collected by traffic surveillance devices to smooth the flow of traffic along travel corridors. They also disseminate important information about travel conditions to travelers.

- Crash prevention and safety systems detect unsafe conditions and provide warnings to travelers to take action to avoid crashes.

- Roadway operations and maintenance focus on integrated management of maintenance fleets, specialized service vehicles, hazardous road conditions remediation, and work zone mobility and safety.

- Transit ITS services include surveillance and communications, such as automated vehicle location (AVL) systems, computer-aided dispatch (CAD) systems, and remote vehicle and facility surveillance cameras, which enable increases in operational efficiency, safety, and security.

- Emergency management applications include hazardous materials management, the deployment of emergency medical services, and large and small-scale emergency response and evacuation operations.

- Electronic payment and pricing systems employ various communication and electronic technologies to facilitate commerce between travelers and transportation agencies.

- Traveler information applications uses a variety of technologies to allow users to make more informed decisions regarding trip departures, routes, and mode of travel.

New developments should contain the necessary information and communication technology (ICT) infrastructure to enhance the following activities to the fullest extent:

- Telework, teleconferencing, and related strategies to reduce vehicular trips.

- Advanced traveler information to increase the efficiency and effectiveness of decisions on when to travel, how to travel, where to travel, and whether to travel at all.

Fairfax County should continue to monitor the advancement of technologicaly infrastructure as it relates to the development inof Tysons. The county should also develop methods of community outreach to area users of Tysons to bring awareness of these potentially useful applications and services.

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MAINTAINING A BALANCE BETWEEN LAND USE AND TRANSPORTATION

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Table 7 and 7B provide the required transportation infrastructure, programs, and services as Tysons grows over time. Table 7 was based on the initial transportation analysis of Tysons conducted prior to the adoption of the Tysons Comprehensive Plan Amendment in June 2010. Subsequently, a more detailed analysis, the Consolidated Traffic Impact Analysis (CTIAs), was conducted in 2013. In addition, the future land-use allocation in the Tysons station areas was adjusted based on preliminary information obtained from zoning applications. This resulted in additional projects listed in Table 7B. These projects were not added to Table 7 since the current funding plan for transportation improvements is based on Table 7. Projects recently completed, including the construction of Phase I of the Metrorail Silver Line, the construction of the Express lanes on I-495, as well as associated ramps, represent a significant investment in transportation. Periodic re-evaluations of the monitoring and implementation of Tables 7 and 7B should be conducted to reflect when and where development has occurred within the Tysons Urban Center.