CHAPTER 8

INTELLIGENT TRANSPORTATION SYSTEMS

REVISED NOVEMBER 2020

TABLE OF CONTENTS

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INTELLIGENT TRANSPORTATION SYSTEMS

1. GENERAL.

a. Intelligent Transportation Systems (ITS) are defined by the federal government as “Any project that (in whole or in part) involves the application of electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.”

(1) Applications include automatic crash detection, incident and corridor management, electronic toll collection and open road tolling, navigational devices, real-time traffic advisory devices, smart call boxes (advanced weather warning, traffic detection, etc.), commercial weigh-in-motion systems, energy efficiency and use–electric vehicles, automated/autonomous vehicles, and interagency coordination–data exchange and interoperability.

(2) The ITS planning process helps planners from different agencies coordinate technology deployments, anticipate future needs, and encourage interoperable technologies.

(3) While ITS technologies cannot solve all transportation issues, they often provide efficient, cost-effective options that allow transportation planners to further examine approaches to issues and potential solutions.

(4) When ITS technologies are integrated and deployed, benefits can include significant improvements to safety, mobility, accessibility, productivity, and more efficient use of infrastructure and energy resources.

b. Implementation of ITS technology often requires cooperation.

(1) Typical partners include the transportation industry, research firms, academia, and government agencies (e.g., metropolitan planning organizations and federal agencies).

(2) Since most roadways and public transit agencies are owned or operated by state or local governments, these entities often lead the selection, installation, operation, and maintenance of an ITS infrastructure.

c. The ITS developed into an important national and state program after Congress passed the 1991 Intermodal Surface Transportation Efficiency Act

(ISTEA). Since the passing of the ISTEA, the ITS has gained significant support from all levels of government and the private sector.

(1) The ISTEA included the Intelligent Vehicle Highway Systems (IVHS) program that established specific goals and objectives for a nationwide effort.

(a) The IVHS program provides the legislative foundation for a comprehensive, national program to advance and utilize ITS.

d. The Intelligent Transportation Society of America (ITS America) was incorporated in August 1990 as a nonprofit educational and scientific association.

(1) The ITS America fulfills several purposes including the following:

(a) Assisting the United States Department of Transportation regarding ITS programs.

(b) Developing ITS national plans, architecture, and programs.

(c) Fostering ITS research and development.

(d) Minimizing state and local jurisdictional conflicts.

(e) Coordinating international cooperation with other countries.

(2) The ITS America is a public/private partnership comprised of industry, academia, national laboratories, and government agencies.

e. The California Alliance for Advanced Transportation Systems (CAATS) was jointly launched by the California Council on Science and Technology and the California Department of Transportation (Caltrans) in 1993 to address the deployment and commercialization of advanced transportation systems in California.

(1) The CAATS is a nonprofit corporation and is comprised of a broadly based coalition of business, labor, colleges and universities, public agencies, professional organizations, and individuals.

(2) The CAATS was designated as the California chapter of ITS America in November 1994.

f. The California Highway Patrol and Caltrans participate in several ITS-related projects and programs.

(1) These projects and programs include Innovative Technology Deployment (ITD), Southern California ITS Priority Corridor, various field operational tests, and numerous transportation operations system projects.

(2) The Department's primary involvement in ITS is through Enforcement and Planning Division (EPD), Special Projects Section (SPS), Information Management Division (IMD), and field Divisions.

(3) The Caltrans' primary involvement in ITS is through its Caltrans Division of Research, Innovation and System Information (DRISI) which manages a comprehensive program to research, develop, test, and evaluate transportation innovations sought by its customers. The Caltrans DRISI serves as the state clearinghouse for the majority of federal ITS funding.

2. POLICY. The Department shall actively participate in all planning and development aspects of ITS, that may potentially impact its mission, including traffic safety, enforcement, and other operational responsibilities. It is the Department's policy to work closely with Caltrans and other entities to maximize ITS benefits consistent with the departmental mission.

3. RESPONSIBILITIES.

a. Enforcement and Planning Division. The EPD shall be responsible for ITS Commercial Vehicle Operations (CVO) projects and programs. This responsibility includes project management of the California ITD project, participation in the PrePass Safety Alliance, and other ITS CVO projects and programs that may impact the Department.

b. Special Projects Section. The SPS shall be responsible for overall departmental coordination of ITS programs and projects. The SPS shall coordinate multi-Division ITS projects and serve on technical and advisory committees as appropriate. The SPS shall also provide ITS assistance to other headquarters Divisions and field commands when requested.

c. Information Management Division. The IMD shall provide technical support and participation in ITS projects that may impact the Department's information management systems.

d. Field Commands. Departmental field commands are responsible for representing the Department on ITS committees, projects, and programs that will impact the Department within the command's jurisdictional area.

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