



Florida Department of Transportation

JEB BUSH
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

DENVER J. STUTLER, JR.
SECRETARY

January 13, 2006

Mr. Donald Davis
Program Operations Engineer
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: Office of Design, Specifications
Section 780
Proposed Specification: 7800000D01

Dear Mr. Davis:

We are submitting, for your approval, two copies of a proposed Supplemental Specification for Intelligent Transportation Systems – General Requirements.

This change was proposed by Gene Glotzbach of the Traffic Operations Office to develop Standard Specifications for the Intelligent Transportation System components.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via Email to SP965DB or duane.brautigam@dot.state.fl.us.

If you have any questions relating to this specification change, please call Duane F. Brautigam, State Specifications Engineer at 414-4110.

Sincerely,

Signature on File

Duane F. Brautigam, P.E.
State Specifications Engineer

DFB/ft

Attachment

cc: General Counsel
Florida Transportation Builders' Assoc.
State Construction Engineer

**INTELLIGENT TRANSPORTATION SYSTEMS – GENERAL
REQUIREMENTS
(REV 10-7-05)**

Page 766. The following new Section is added after Section 715:

**SECTION 780
INTELLIGENT TRANSPORTATION SYSTEMS
GENERAL REQUIREMENTS**

780-1 Description.

The provisions contained in this Section include general requirements for all intelligent transportation system (ITS) devices and equipment used on Florida’s limited-access and non-limited-access corridors and in transportation management centers (TMCs).

780-2 Equipment and Materials.

Use only ITS equipment and components that meet the requirements of these specifications, and which are listed on the Department’s Approved Product List (APL). Use only new equipment and materials, except as specified in the Contract Documents. Ensure that firmware and software furnished and installed as part of an ITS project are the most current and approved releases or versions. Firmware and software updates released during Contractor and manufacturer warranty periods shall be made available at no cost to the Department.

Meet the following requirements:

General Requirements for the Installation and Evaluation of Traffic

Control Signal Equipment Evaluation of Traffic Control Signal Equipment and Materials Section 603

Guaranties.....Section 608

Acceptance Procedures.....Section 611

ITS Motorist Information SystemsSection 781

ITS Video EquipmentSection 782

ITS Fiber Optic Cable and InterconnectionSection 783

ITS Network Devices.....Section 784

ITS Infrastructure.....Section 785

~~Meet requirements in Section sections 603, -~~

~~Meet requirements in Section 608, -~~

~~Meet requirements in Section 611, .781, 782, 783, 784 and 785.~~

780-3 Installation Requirements.

Install ITS equipment as detailed in the plans *and according to, following* the manufacturer’s recommendations, and with the review and approval of the Engineer.

Furnish all tools, equipment, materials, supplies, and manufactured hardware necessary for a complete installation. Perform all operations and equipment integration necessary to ensure that the finished ITS equipment functions as depicted in the plans.

780-4 Grounding and Transient Voltage Surge Suppression.

Properly ground all ITS equipment and materials to provide personnel and equipment protection against faults, surge currents, and lightning transients. Ensure that the grounding system used meets the grounding requirements defined in Section 620 and in Section 785-1.

Install all ITS components with surge suppressors and lightning arrestors as shown in the plans and according to the ITS device manufacturer's recommendations. Ensure that the surge suppressors and lightning arrestors are capable of meeting or exceeding the device protection requirements as contained in Section 785-1 and that they are listed on the Department's APL. Consider multiple devices installed in the same field cabinet to be a single installation for the purpose of providing grounding and surge suppression under this paragraph. ~~On devices having both electric power and data or video communication connections, protect both lines.~~ *Protect all power, video, and data lines.*

780-5 Testing.

Perform the required tests for the ITS equipment installed. Notify the Engineer of ITS installation testing at least 14 days in advance.

Provide the test ~~procedures plan~~ to the Engineer *at least 14 days in advance* for *review and* approval prior to commencement of testing. Ensure that the test plan demonstrates each and every functional requirement specified for the device or system under test.

Furnish all equipment, software, and supplies necessary for conducting the tests. Include in the test documentation the last calibration date of all test equipment, along with the test parameters as set on the equipment.

All test results shall be compared with their corresponding specifications. Failure to conform to the specifications of any test shall be considered a defect and the equipment shall be subject to rejection by the Engineer. Rejected equipment may be offered again for a retest, provided that all deficiencies have been corrected and evidence thereof has been submitted to the Engineer.

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Use only ITS equipment and components that meet the requirements of these specifications, and which are listed on the Department's Approved Product List (APL). Use only new equipment and materials, except as specified in the Contract Documents. Ensure that firmware and software furnished and installed as part of an ITS project are the most current and approved releases or versions. Firmware and software updates released during Contractor and manufacturer warranty periods shall be made available at no cost to the Department.

Meet the following requirements:

General Requirements for the Installation and Evaluation of Traffic Control Signal Equipment	Section 603
Guaranties	Section 608
Acceptance Procedures	Section 611
ITS Motorist Information Systems	Section 781
ITS Video Equipment	Section 782
ITS Fiber Optic Cable and Interconnection	Section 783
ITS Network Devices.....	Section 784
ITS Infrastructure.....	Section 785

780-3 Installation Requirements.

Install ITS equipment as detailed in the plans and according to the manufacturer's recommendations, and with the review and approval of the Engineer.

Furnish all tools, equipment, materials, supplies, and manufactured hardware necessary for a complete installation. Perform all operations and equipment integration necessary to ensure that the finished ITS equipment functions as depicted in the plans.

780-4 Grounding and Transient Voltage Surge Suppression.

Properly ground all ITS equipment and materials to provide personnel and equipment protection against faults, surge currents, and lightning transients. Ensure that

the grounding system used meets the grounding requirements defined in Section 620 and in Section 785-1.

Install all ITS components with surge suppressors and lightning arrestors as shown in the plans and according to the ITS device manufacturer's recommendations. Ensure that the surge suppressors and lightning arrestors are capable of meeting or exceeding the device protection requirements as contained in Section 785-1 and that they are listed on the Department's APL. Consider multiple devices installed in the same field cabinet to be a single installation for the purpose of providing grounding and surge suppression under this paragraph. Protect all power, video, and data lines.

780-5 Testing.

Perform the required tests for the ITS equipment installed. Notify the Engineer of ITS installation testing at least 14 days in advance.

Provide the test plan to the Engineer at least 14 days in advance for review and approval prior to commencement of testing. Ensure that the test plan demonstrates each and every functional requirement specified for the device or system under test.

Furnish all equipment, software, and supplies necessary for conducting the tests. Include in the test documentation the last calibration date of all test equipment, along with the test parameters as set on the equipment.

All test results shall be compared with their corresponding specifications. Failure to conform to the specifications of any test shall be considered a defect and the equipment shall be subject to rejection by the Engineer. Rejected equipment may be offered again for a retest, provided that all deficiencies have been corrected and evidence thereof has been submitted to the Engineer.