

## Document Control

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2/23/99	Draft		
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12/30/99	Created for I-20 East and West		
2/3/00	Project: CM-056-1(57) Fulton County P.I. No. 721950		
3/22/00	Revise General Description to delete reference to "existing" hub buildings	940.1	1
5/31/00	Project: STP-7713(650) Fulton County P.I. No. 771365		
6/9/00	Gwinnett County Project SR141 – Spalding Dr. to Chattahoochee River		
10/12/00	Project: NH-75-2(215) Clayton and Henry Counties P.I. No. 714075		
11/28/00	Project: CM-75-2(214) Clayton County P.I. NO. 714070		
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**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**SPECIAL PROVISION**

**PROJECT: [INSERT PROJECT NUMBER(S)]  
[INSERT COUNTY NAME(S)] COUNTIES  
P.I. NO. [INSERT P.I. NUMBER(S)]**

**SECTION 940 – NAVIGATOR ADVANCED TRANSPORTATION  
MANAGEMENT SYSTEM INTEGRATION**

**Section 940 - NaviGator Advanced Transportation Management  
System Integration**

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The text included herein is written in the imperative mood (sentences often begin with commands). All commands and references in, or in connection with, the text in this document are written to imply Contractor responsibility for action unless otherwise specified.

**940.1 General Description**

This work includes coordination and integration of the project into the Department’s NaviGator advanced transportation management system to provide a complete and fully operational expansion of the Department’s NaviGator system as shown in the Contract Documents.

An example project follows:

Project scope includes installation of communications and field equipment that will provide information to the Transportation Management Center (TMC) and other facilities. The backbone of the communication system is a fiber optic cable infrastructure utilizing IP protocols over Ethernet technology. Ethernet switching equipment is used to transport the data from field devices to hub buildings. Routing equipment at the hub-building routes the data to the TMC and other facilities as needed. Cameras will provide video for traffic surveillance and vehicle detection. Changeable message signs and surveillance cameras will be controlled from the TMC.

Each hub-building and assigned field devices are configured as an IP subnet within the GDOT overall network. Each field device (VDS processor, CMS controller, video encoder and decoder) incorporates its own IP address. Each field device will connect to a field switch at the equipment cabinet. The field switches (located in the equipment cabinets) will be daisy-chained using GBIC optical links to form a string. The ends of the daisy-chained switches are terminated at different hub buildings.

Make communications between the surveillance cameras and the network by means of Ethernet video encoders as shown on the Plans. Make communications from the VDS sites by means of Ethernet compatible video detection system processor(s) at each VDS site. Make communications between the CMS and the network by means of DMS controllers incorporating Ethernet ports.

At the hubs buildings, data communication arrives through the field switches using Layer 2 protocols. At the hub building routers will disseminate the data as needed across the backbone network.

Video decoders will be used for decoding of the video images at specific locations as shown on Project Plans.

**940.1.01 Related References**

**A. Georgia Specifications**

Section 631 – Changeable Message Signs

Section 797 – Fiber Optic Hub Building

Section 935 – Fiber Optic Cable

Section 936 – Closed Circuit Television System

Section 937 – Video Detection System

Section 938 – Detection

Section 939 – Communication and Electronic Equipment

**B. Referenced Documents**

Not applicable

**940.1.02 Submittals**

[Use only when using Integration pay item] Submit six copies of the Integration Plan to the Engineer within 15 days of Contract Notice to Proceed. Submit six copies of the Acceptance Test Plan to the Engineer within 45 days of Contract Notice to Proceed.

**940.2 Materials**

Not applicable

**940.3 Construction Requirements**

Not applicable

**940.3.01 Personnel**

Not applicable

**940.3.02 Equipment**

Not applicable

**940.3.03 Preparation**

Not applicable

**940.3.04 Fabrication**

Not applicable

**940.3.05 Construction**

Not applicable

**940.3.06 Quality Acceptance**

If, in the Department’s judgement, the Contractor is not demonstrating progress in solving any technical problem, the Contractor may be directed to supply Factory technical representation and diagnostic equipment at no cost to the Department until satisfactory resolution of those defined problems.

The Engineer may direct any completed or partially completed portions of the project placed in service. Such action cannot be deemed an acceptance of the project in whole or in part, nor shall such action be construed as a waiver by the Engineer of any provision of the specifications. Assume no right to additional compensation or extension of time for completion of the work. Fully maintain all equipment until final acceptance, which includes but is not limited to equipment configuration and communication systems that are being integrated.

Perform all acceptance testing in the presence of the Engineer. Notify the Engineer of a desired acceptance test no less than fourteen calendar days prior to beginning the testing except for testing using the NaviGator software and existing NaviGator control center and communications equipment. For acceptance testing using the NaviGator software and existing NaviGator control center and communications equipment, coordinate the testing schedule with the Engineer no less than 30 days prior to the start of this testing. Do not conduct any testing during any State or Federal holiday.

**940.3.07 Contractor Warranty and Maintenance**

Not applicable

**940.3.08 Training**

Not applicable

**940.4 Measurement**

The Department will pay all costs of coordination with and integration of the project into NaviGator under the integration pay item. Integration is measured as a lump sum for all supplies, materials and subsistence it requires.

**940.4.01 Limits**

Not applicable

**940.5 Payment**

The Department will pay for integration that is complete, in place and accepted by the Department. Payment is full compensation for the work.

Payment for Section 940 is made under:

Item No. 940	Integration	Lump Sum
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– or –

Not applicable [when Integration is not the only pay item on the job.]

**940.5.01 Adjustments**

Not applicable

OFFICE OF TRAFFIC OPERATIONS