



City of Virginia Beach ITS Program

Public Works Department
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Overview

- ITS Definition
- Initial situation
- Transportation Needs
- Developed an ITS Master Plan
- Successfully Competed for Regional Funds
- Progress Toward ITS Goals
- Program Expenditures to Date
- Items Remaining to be Accomplished
- Future Projects

Intelligent Transportation Systems (ITS)

- ITS:
 - a broad range of diverse technologies that provide the information necessary to enable people and goods to move more safely and efficiently through a state-of-the-art, intermodal transportation system.
 - Enable the rapid collection and dissemination of traffic incident and weather information to the First Responders

Benefits of ITS

- Enables motorists to make smarter travel choices
 - Through advanced accident/incident notification
- Increases Mobility
 - Reduces stops and delays (*5% - 42%)
 - Leads to a reduction in motorists frustration
- Improves the Environment and Saves Energy
 - Reduces fuel consumption (*2% - 13%)
 - Leads to improved air quality
- Improves safety
 - Save lives
 - Allows for efficient incident management
- Reduces construction cost
 - Allows for the optimization of existing infrastructure
 - Traffic Signal Retiming typically has a Benefit/Cost of 40:1*

*Sources: www.itsbenefits.its.dot.gov ; ITE journal

Examples of ITS Technologies

Video Imaging Vehicle Detection System (VIVDS)



Video Detection Device



VIVDS Installed

Examples of ITS Technologies

Vehicle Emergency Preemption

School Flasher System



- Enhances time-critical travel
- Available in the CBD and other corridors identified by the Fire/EMS Dept.



- Solar-powered
- Operated through a Paging System

ITS IMPROVEMENTS



Transportation Needs

- Develop an ITS Transportation Program
- Better Travel Information to Motorists
- Improvements to Air Quality
- Better Signal Timing & Coordination
- Construct a Traffic Management Center

Develop an ITS Master Plan

- Identified ITS program needs
- Developed an Implementation Plan
- Started August 2000
- Completed February 2002

Progress Towards ITS Goals

Dec 2003 : Replaced the traffic signal computer system



Progress Towards ITS Goals

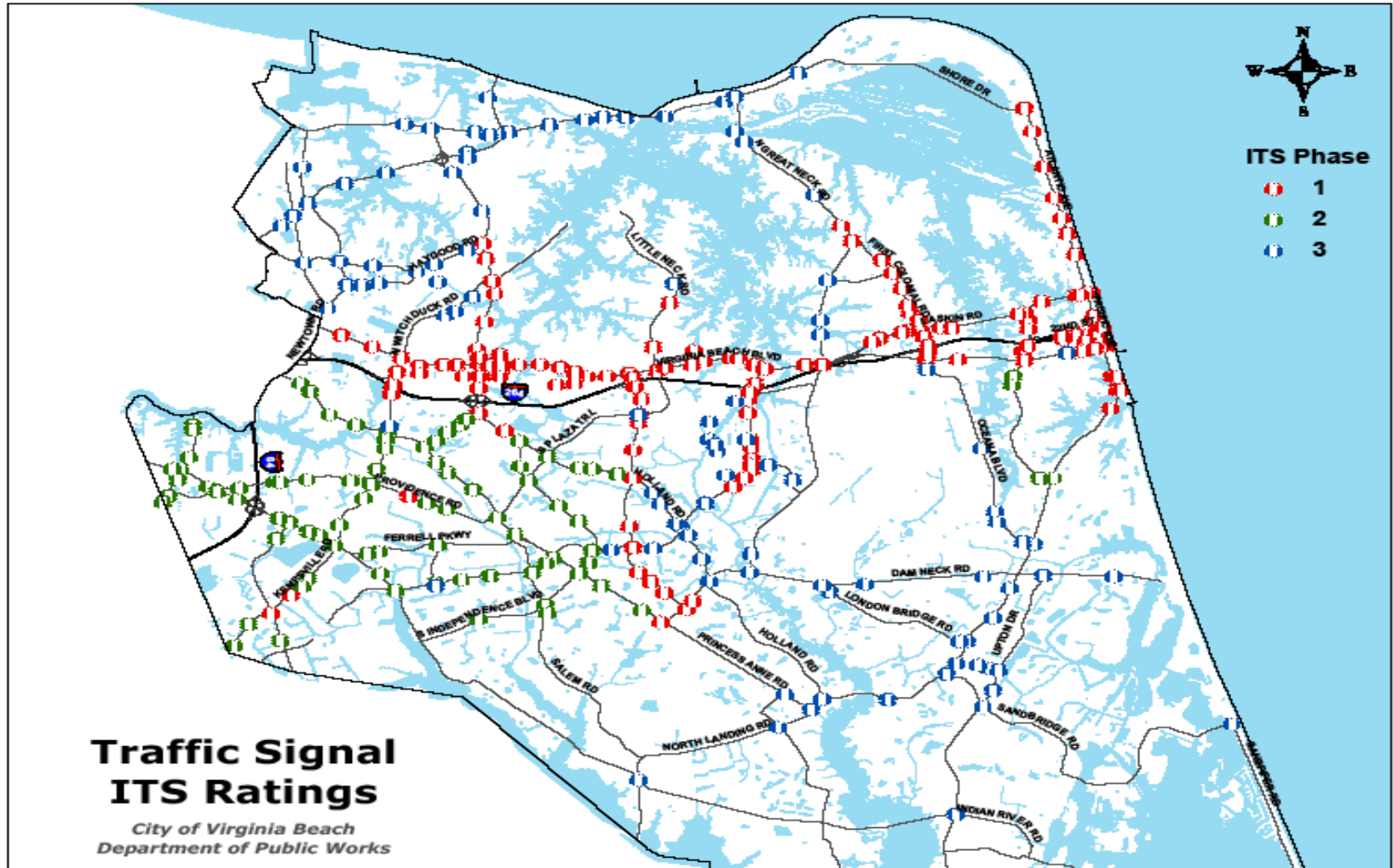
Dec 2003-Sept 2005: Replaced traffic signal controllers and cabinets



Progress Towards ITS Goals



Progress Towards ITS Goals



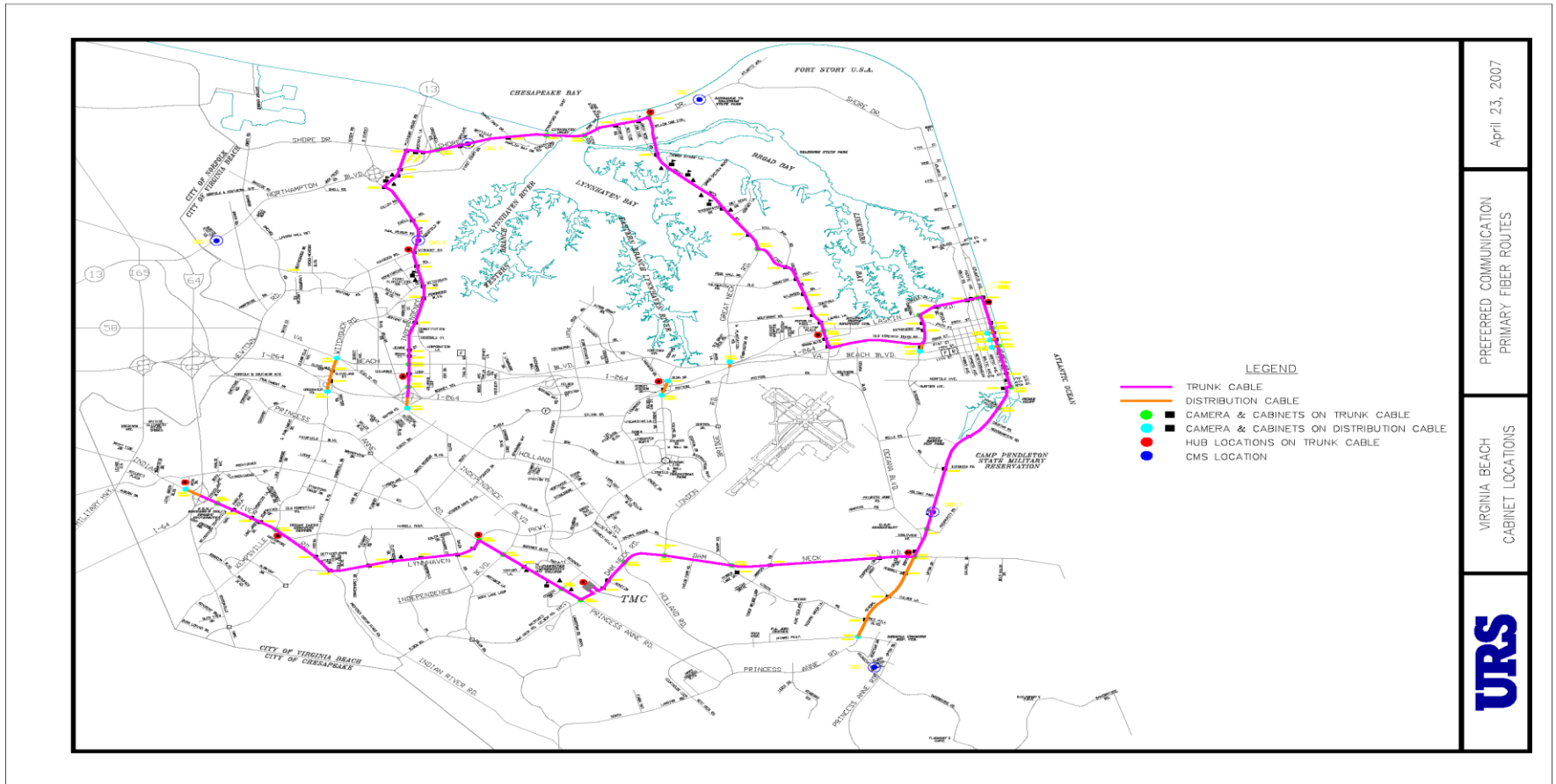
Progress Towards ITS Goals

- ❑ March 2004: Completed design of Traffic Management Center
- ❑ February 2006: Completed construction of the Traffic Management Center

Progress Towards ITS Goals

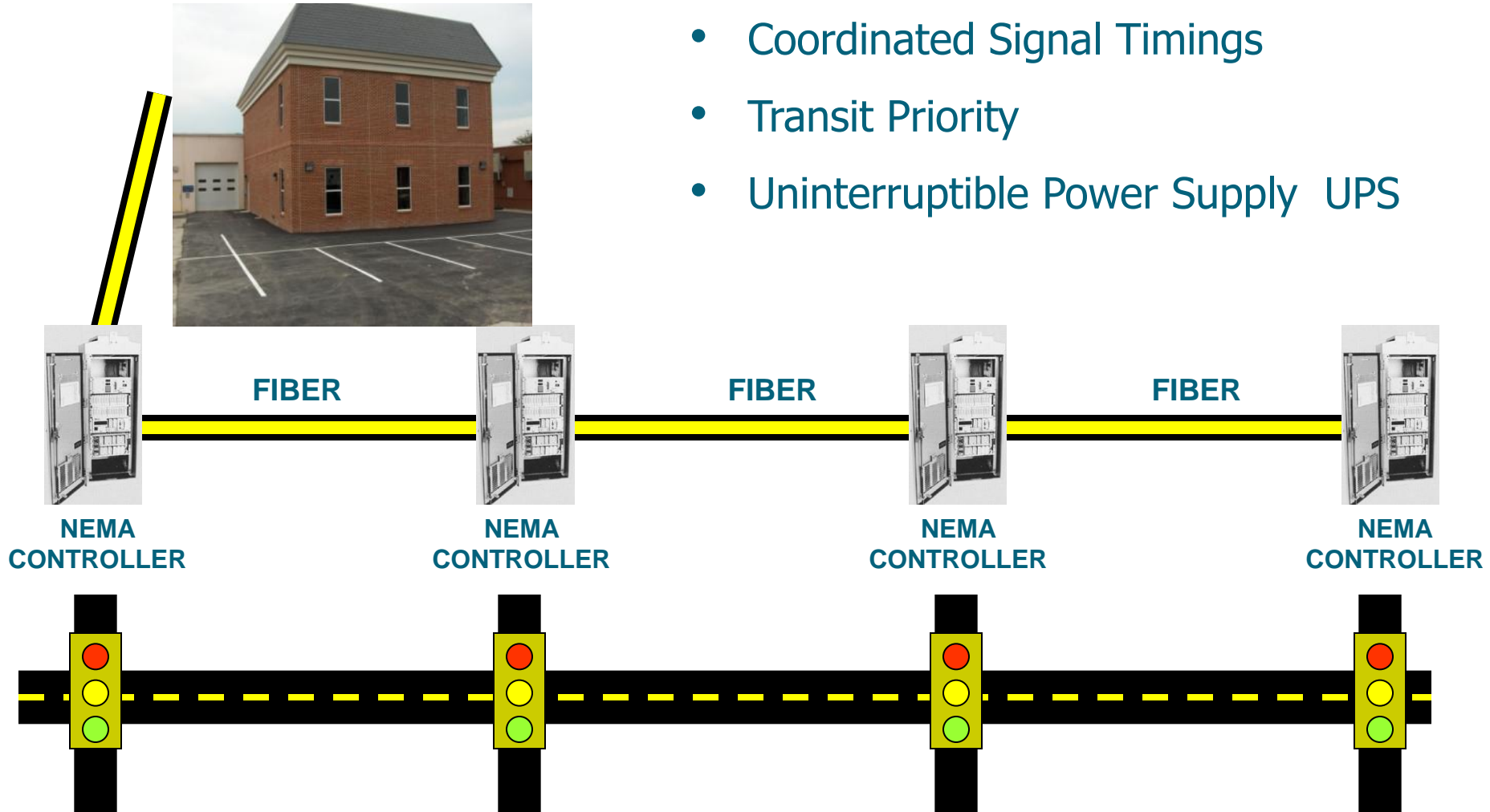
- July 2004-January 2008:
Designed transportation system network project
- February 2008: Bid transportation system management network project

Transportation Management Network



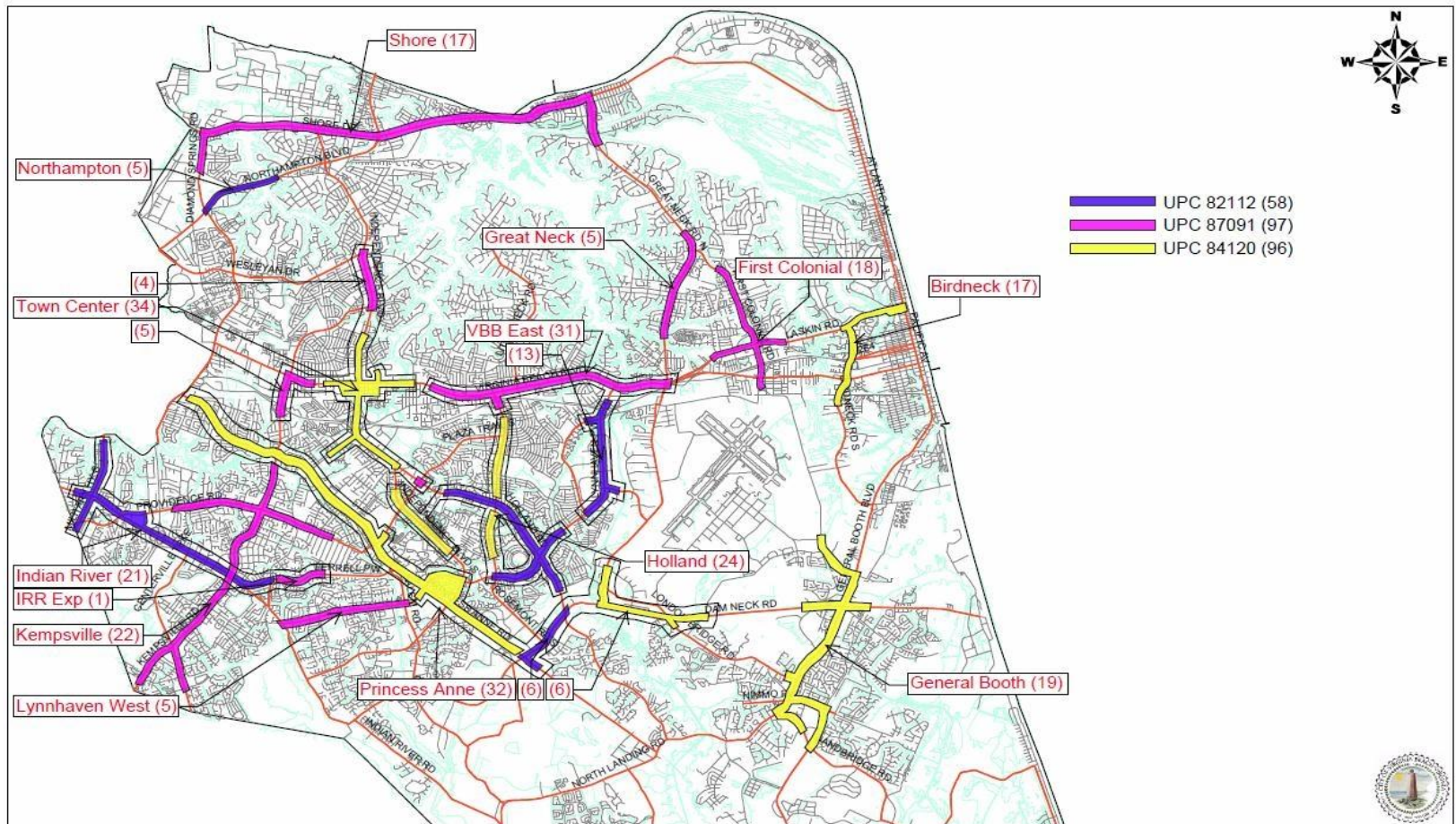
Future Traffic Signal System

- NEMA Controllers
- Coordinated Signal Timings
- Transit Priority
- Uninterruptible Power Supply UPS



Progress Towards ITS Goals

City Wide Signal Retiming





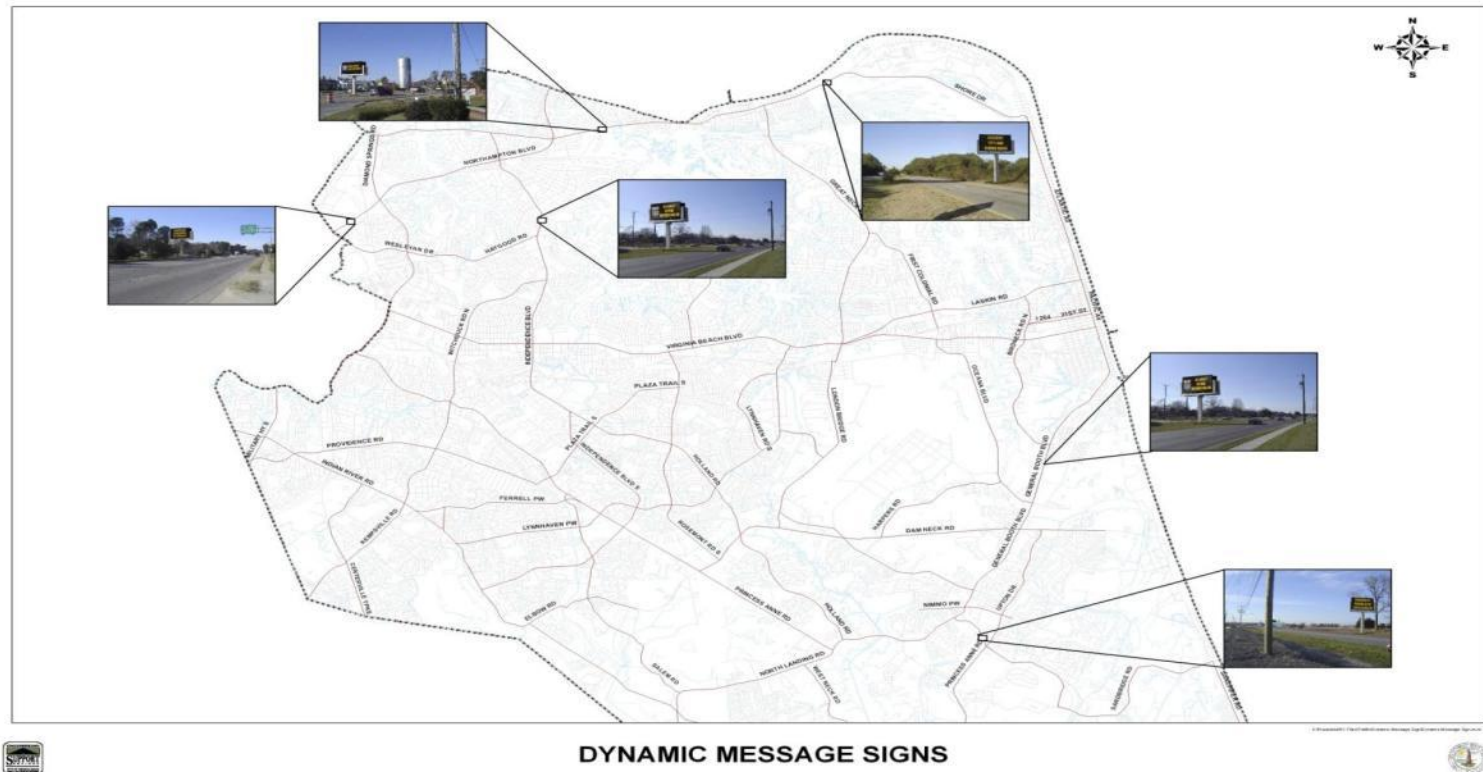
Aerial Imagery (c) 2002 Commonwealth of Virginia

Program Expenditures To Date

- Total Project Cost - \$21,165,833
 - Federal/CMAQ - \$19,969,000 allocated
 - City Funds - \$1,196,833 allocated

Items Remaining to be Accomplished

- Installation of Dynamic Message Panels
 - Six (6) panels/ major arterial locations
 - Estimated completion June 2010



Princess Anne Road DMP



Shore Drive/First Court Road DMP



Northampton Boulevard DMP



Shore Drive/First Landing DMP



Independence Blvd/Haygood Road DMP



Items Remaining to be Accomplished

Installation of Video Wall



Future Projects

- CCTV Cameras at 30 additional intersections



Future Projects

LP Generators at CCTV Locations



Future Projects

Resort Area Advanced Parking Management System

example

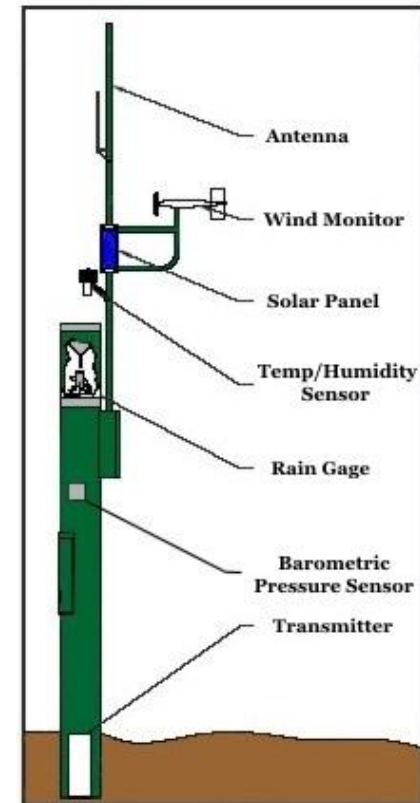


Future Projects

Icy Bridge Monitors



Flooded Road Monitors



Future Project

Additional Pre-emption

Working with
PD/Fire/EMS





QUESTIONS ?