

# **Wiscasset Route 1 Corridor Study**

## **Traveler Information Systems – Phase II Proposal**

### **May 06, 2009**

Congestion relief for Midcoast Route 1 in the Wiscasset-Edgecomb area has been discussed for the last several decades. More recently, MaineDOT undertook the Wiscasset Route 1 Corridor Study in 1999 to determine how best to address traffic congestion in this area. As a result of this study, a Draft Environmental Impact Statement was prepared and released for public comments in October, 2007. The comments received included requests for MaineDOT to identify and implement ways to reduce congestion by informing travelers of real-time traffic delays so they could (1) seek alternate modes of transportation, (2) seek alternate routes or (3) delay their travel through the area until peak traffic conditions ease. MaineDOT determined that Intelligent Transportation Systems (ITS) should be developed and implemented to address these comments and elected to take a two-phased approach. The Phase I pilot project would use human detection of significant traffic delays, while Phase II would provide an automated notification process. Phase I of the Pilot Project was implemented in the late summer of 2008 and has been completed. It was conducted as noted below. The Phase II approach follows that review.

#### **Phase I: Manual Observations**

- MaineDOT met with and entered into a Memorandum of Understanding with representatives from the Town of Wiscasset and Lincoln County law enforcement and emergency services. It was agreed that law enforcement officials would contact the Lincoln County Communications Center (LCCC) when Route 1 northbound traffic backed up from the Wiscasset Village area to Birch Point Road, located about one mile south of Route 27, and again when the traffic back-up had reduced to Holbrook Pond, located about 0.5 miles south of Route 27. Upon notification from the LCCC, MaineDOT posted a message (WISCASSET-EXPECT-DELAYS) at a Variable Message Sign (VMS) located at I-295 mile marker 25 located about 3 miles south of the Brunswick Route 1 northbound exit and also to its <http://www.511maine.gov/> travel conditions internet web site. Upon second notification from the LCCC, MaineDOT deactivated the messages.
- MaineDOT also met or communicated with the Boothbay Harbor Region, Damariscotta Region and Southern Midcoast Regional Chambers of Commerce to obtain their input and for them to inform their members.
- A news release explaining the system was issued, and a web page located at [www.mainedot.gov](http://www.mainedot.gov) was established to explain the system and to receive comments.
- The pilot project ran from August 28 through October 15, 2008. The system was activated three times:
  - August 28 – about 2 hours
  - August 29 – 3.15 hours
  - September 16 – 1.67 hours
- Only one complaint was received during Phase I pilot project operations. It was later determined to be a one-hour delay for Route 1 southbound traffic in Edgecomb due to a 5-vehicle collision. Note that the system was not monitoring southbound traffic in Edgecomb.

#### **Phase II: Automated System**

This phase of the Traveler Information System pilot project will provide real-time travel delay and emergency information to both northbound and southbound travelers of Route 1 in Wiscasset and Edgecomb. Phase II consists of three interlinked systems (see attached maps):

1. Two radar speed detection installations with web cameras (to verify northbound and / or southbound travel delays), linked to the MaineDOT Radio Room.
2. One permanent vehicle counting and classification station with radar speed detection.
3. A safety project in Edgecomb to alert Route 1 southbound travelers of stopped traffic ahead.

## Phase II Traveler Information System Details

1. Speed Detection Installations
  - Route 1 Northbound Traveler Information System - Located about 1.0 mile south of Route 27 in Wiscasset at the intersection of Birch Point Road and Route 1. The installation is solar-powered and consists of a radar detector to monitor northbound average vehicle speeds, two stationary web cameras (one camera in each direction of travel to view traffic conditions and confirm travel delays), and a cell phone modem connected to the MaineDOT Radio Room.
  - Route 1 Southbound Traveler Information System - Located at the intersection of Route 27 and Route 1 in Edgecomb. The installation is solar-powered and consists of a radar detector to monitor average southbound vehicle speeds, one stationary web camera viewing southbound traffic to visually check travel conditions and confirm travel delays, and a cell phone modem connected to the MaineDOT Radio Room.
2. Edgecomb Safety Project - A presence-detection camera installed along Route 1 southbound in the vicinity of Cross Road, just north of the Route 27 intersection with Route 1. A cell phone modem will contact the MaineDOT Radio Room when a vehicle stays in the camera viewing “window” for more than 1.25 seconds, indicative of stopped traffic.
3. Permanent Counting Station – this installation is located on Route 1 in Wiscasset just north of Wiscasset Ford and consists of traffic sensors for both travel directions that record vehicle classification (e.g., car, truck by class, etc.) by adjustable speed ranges.

## Phase II Traveler Information System Operations

- Speed Detection Installations calculate average vehicle speed every 15 minutes
  - US 1 Northbound, Wiscasset
    - Activate System if speed trend is dropping and average speed goes below 25 MPH
    - Deactivate System if speed trend is increasing and average speed goes over 20 MPH (After 5:30 PM)
    - Deactivate System if speed trend is increasing and average speed goes over 15 MPH
  - US Southbound, Edgecomb
    - Activate System if speed trend is dropping and average speed goes below 35 MPH
    - Deactivate System if speed trend is increasing and average speed goes over 30 MPH (After 5:30 PM)
    - Deactivate System if speed trend is increasing and average speed goes over 15 MPH
- Upon reaching pre-determined average vehicle speeds, each Speed Detection Installation modem will call the MaineDOT Radio Room. The LCCC could also be informed through RSS Feed if they so desire.
- Radio Room staff will log all calls received and will view the web cams and / or communicate with LCCC to confirm that a significant delay is occurring.
- Upon confirmation of a significant travel delay, Radio Room staff will:
  - If the Route 1 Northbound System is activated
    - Post a notice to <http://www.511maine.gov/> for Route 1 Northbound in Wiscasset
    - Activate the VMS located at I-295 NB mile point 18.33, immediately south of the Desert Road Exit in Freeport to read: ROUTE 1 WISCASSET / EXPECT DELAYS.
  - If the Route 1 Southbound System is activated
    - Post a notice to <http://www.511maine.gov/> for Route 1 Southbound in Edgecomb
    - Activate the VMS located on Route 1 SB in Edgecomb located south of Cross Road to read SLOW TRAFFIC AHEAD.
    - If the Edgecomb Safety Project modem is activated, the Route 1 Southbound System VMS and <http://www.511maine.gov/> messages will be revised to read STOPPED TRAFFIC AHEAD
- The Radio Room will receive another modem alert when average vehicle speeds increase as described above, at which time the VMS and 5-1-1 postings will be de-activated.
- The web cameras use a lot of power and are solar-powered, so they will be off at night, but they will activate when the system activation speeds are triggered.

Project web pages will be established at the [www.mainedot.gov](http://www.mainedot.gov) web site and will include:

- Web cam photos, posted and updated every 5 to 10 minutes
- Statement of project purpose and brief history
- How the system operates
- Frequently Asked Questions
- Comments section

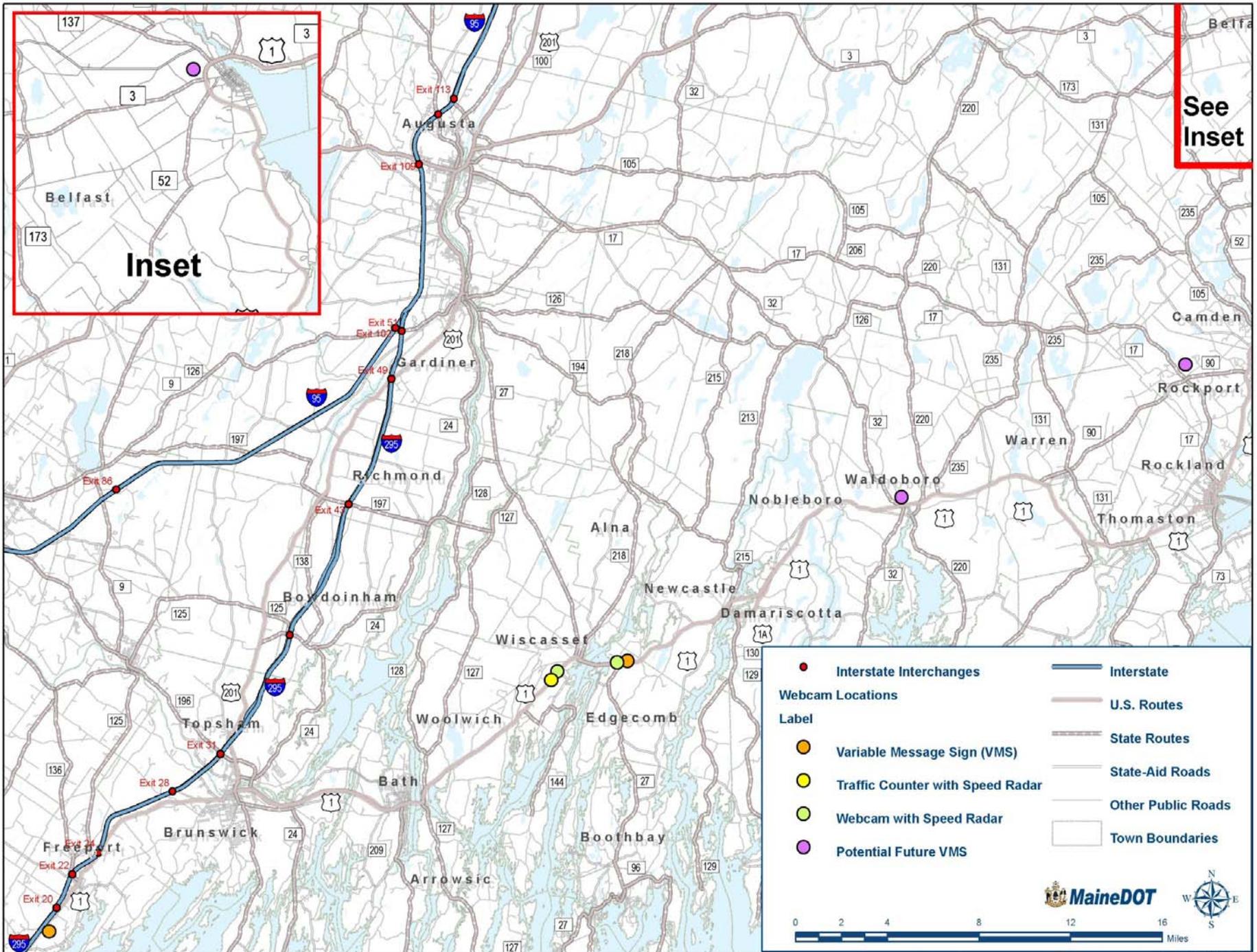
The system will be operational from Memorial Day through October 15, 2009. A final report will be issued by the December, 2009.

**Attachments:**

Map 1: Area Map

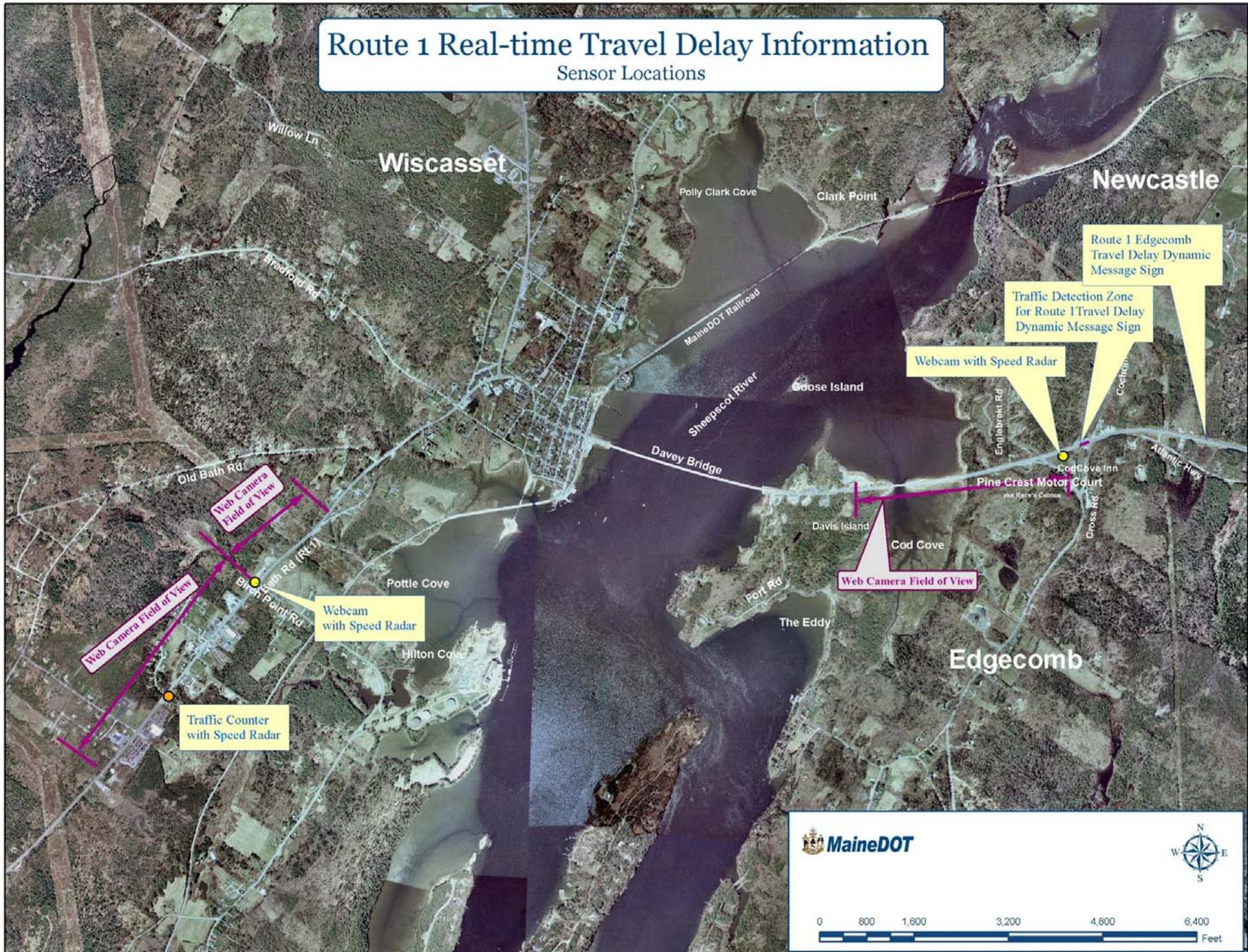
Map 2: Route 1 Real-Time Travel Delay Information Sensor Locations

Photo 1: Web Cam Image – Route 1 at Birch Point Road, Wiscasset, Looking West (South)



# Route 1 Real-time Travel Delay Information

## Sensor Locations



webcams02.mxd

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