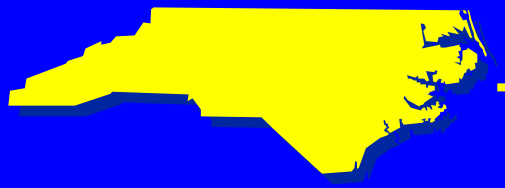
North Carolina Department of Transportation Traffic Signal Operations & Maintenance Program

July 23, 2009



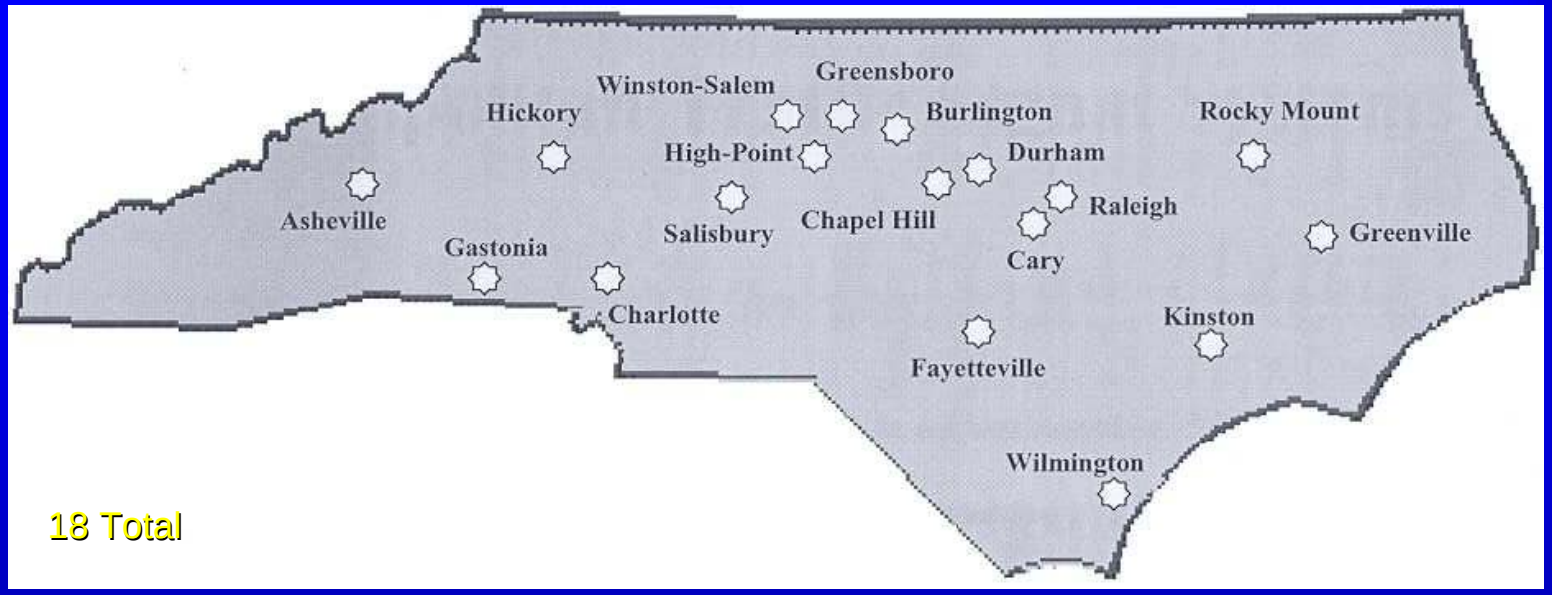
Scope of Network

- 100 Counties
- 14 NCDOT Highway Divisions
- 8900 Signalized Intersections
- 61% State Maintained
- 39% City Maintained

  (By Reimbursement)
- Growth: +200 Signals Per Year

Traffic Signal Maintenance

Metropolitan Traffic Signal Systems

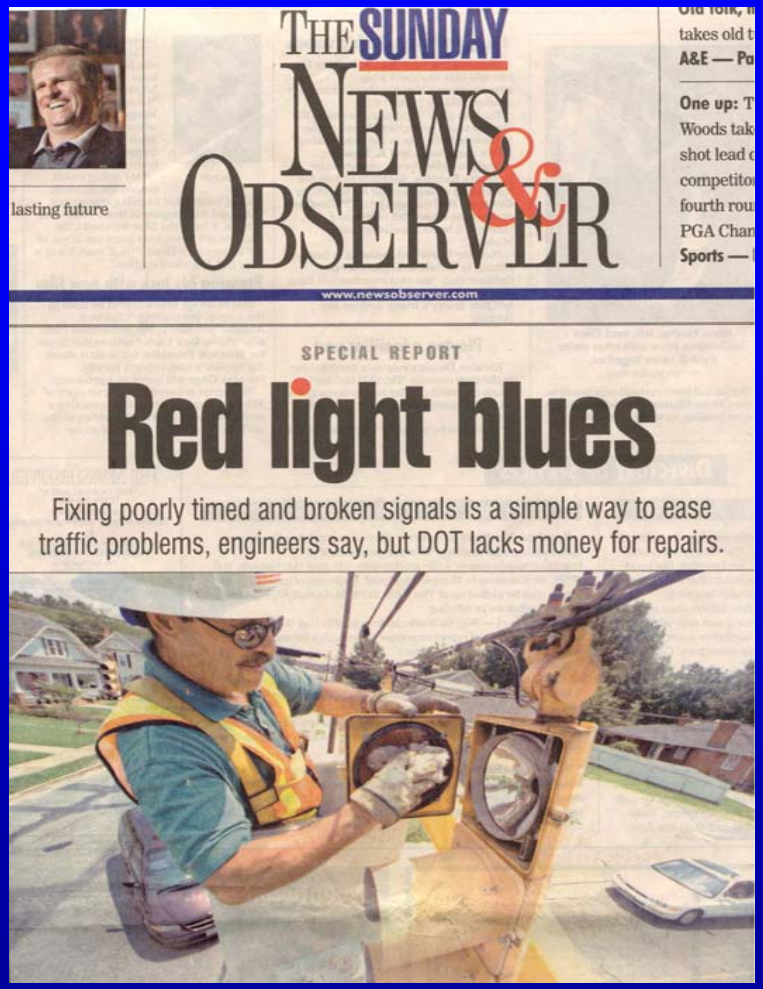


- Cost sharing based on pro rata signals in system

Traffic Signal Maintenance

Who Says There is a Problem?

- Traveling Public
- Traffic Engineers
- FHWA
- News Media
  - The News and Observer August 20, 2000



THE SUNDAY NEWS & OBSERVER

www.newsobserver.com

SPECIAL REPORT

Red light blues

Fixing poorly timed and broken signals is a simple way to ease traffic problems, engineers say, but DOT lacks money for repairs.

Traffic Signal Maintenance

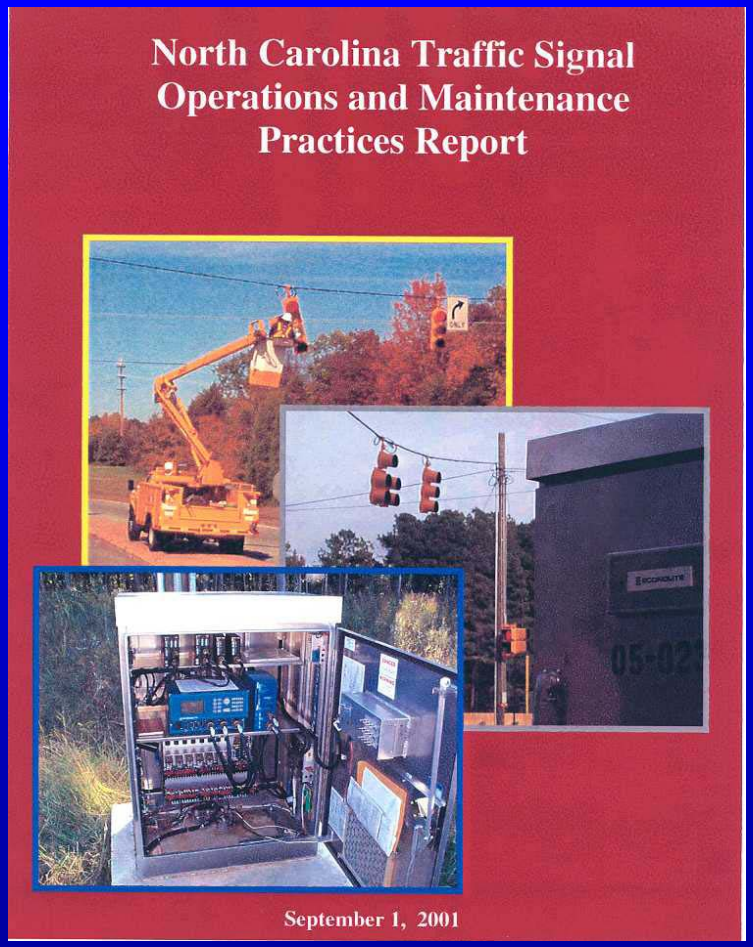
Problems/Challenges

- Increased Congestion & Delay
- Equipment Failures & Limitations
- Signal Timing
- Safe Operations
- No Standard Statewide Operations & Maintenance Program
- LACK OF RESOURCES

Traffic Signal Maintenance

North Carolina Traffic Signal and Maintenance Practices Report . . .

- NCDOT/North Carolina Section ITE Collaboration
- NCDOT staff and 6 Municipalities
- Review maintenance activities and costs
- Define maintenance standards for both NCDOT and Municipalities
- Update Municipal Maintenance Agreements



Traffic Signal Maintenance

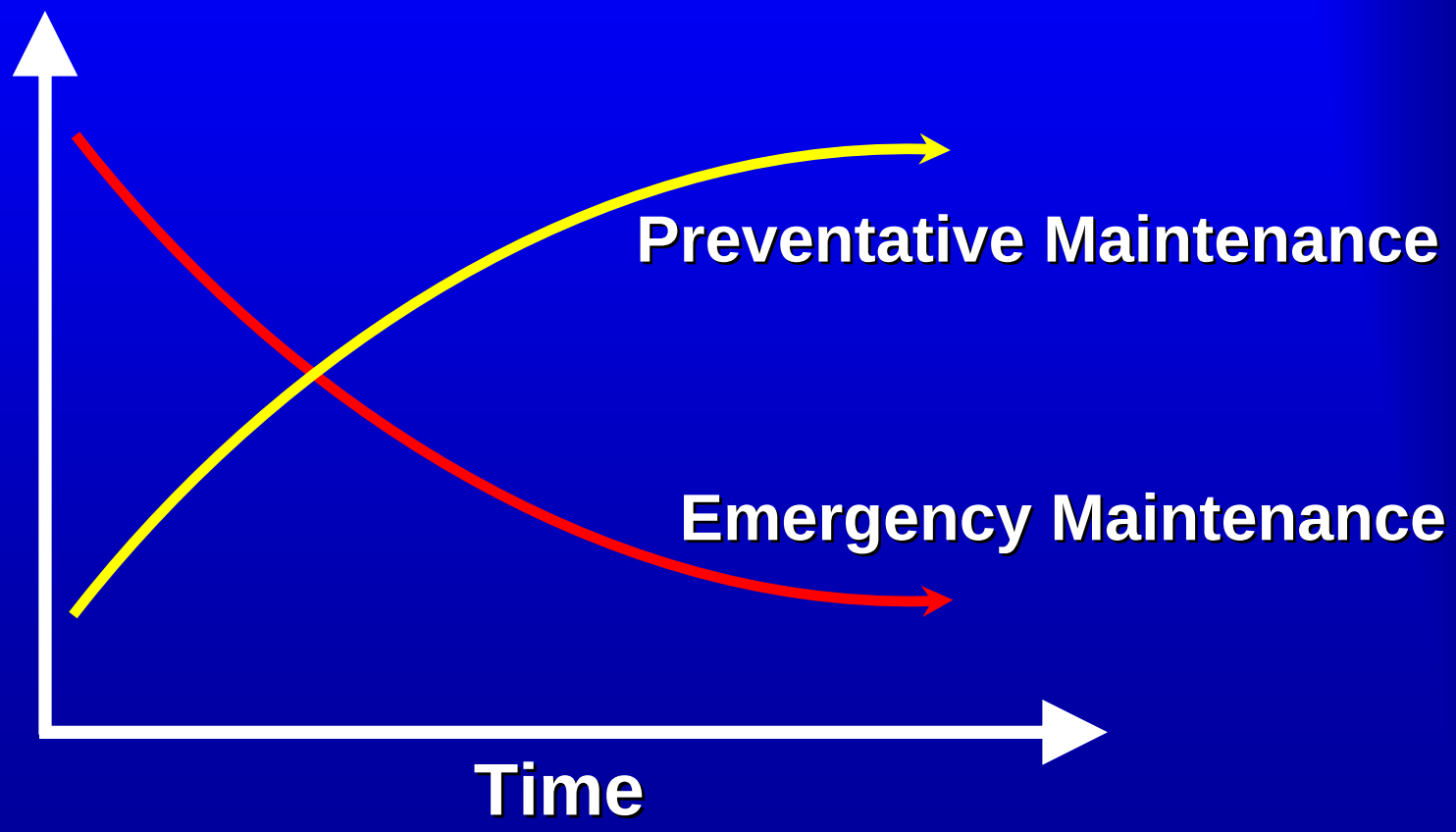
Traffic Signal Systems Management Program Will . . .

- Reduce Delay - 15% to 30%
- Reduce Fuel Consumption - 10% to 12%
- Improve Air Quality - Up to 30%
- Return on Investment - $5 to $40

Traffic Signal Maintenance

Implementation

- 6-month preventive maintenance inspections at a minimum
- 43% reduction in emergency calls in 4 years
- Timing plans reviewed every 18 months



Funding:

Fiscal Year	Current Allocation	Proposed Additional Allocation
03	$5.5	$9
04	$5.5	$10
05	$5.5	$13
06	$5.5	$16
07	$5.5	$18
08	$5.5	$20
09	$5.5	$22

Traffic Signal Maintenance

Questions?

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