



# **STATE OF NORTH CAROLINA**

**INFORMATION SECURITY VULNERABILITY ASSESSMENT**

**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**

**RALEIGH, NORTH CAROLINA**

**MAY 2007**

**OFFICE OF THE STATE AUDITOR**

**LESLIE W. MERRITT, JR., CPA, CFP**

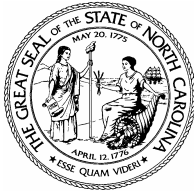
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Office of the State Auditor

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**AUDITOR'S TRANSMITTAL**

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The Honorable Michael F. Easley, Governor  
Members of the North Carolina General Assembly  
Mr. Lyndo Tippet, Secretary  
Mr. George Bakolia, State CIO

Ladies and Gentlemen:

The Office of the State Auditor, in consultation and coordination with Information Technology Services, undertook a project to evaluate the network and computer security in place over computer operations at the North Carolina Department of Transportation.

In February and March 2007, the Office of the State Auditor used a private contractor to perform a comprehensive vulnerability assessment of the network and computer security at the North Carolina Department of Transportation. This assessment was conducted under the authority granted by North Carolina G.S. 147-64.6(c)(18).

This report represents the general results of our assessment. A detailed report containing the conditions found and recommended corrective action was provided to the North Carolina Department of Transportation at the conclusion of our fieldwork.

The primary objective of this assessment was to evaluate the security controls over the information network at the Agency. The scope of our assessment included network vulnerability, application penetration, and wireless security.

We wish to express our sincere appreciation to the staff of the North Carolina Department of Transportation for the exceptional courtesy, cooperation, and assistance provided to us during this audit.

*North Carolina General Statutes* require the State Auditor to make audit reports available to the public. Copies of audit reports issued by the Office of the State Auditor may be obtained through one of the options listed in the back of this report.

Respectfully submitted,

A handwritten signature in black ink that reads "Leslie W. Merritt, Jr." in a cursive script.

Leslie W. Merritt, Jr., CPA, CFP  
State Auditor

## OBJECTIVES AND SCOPE

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The Office of the State Auditor, in consultation and coordination with Information Technology Services, undertook a project to evaluate the network and computer security in place over computer operations within the North Carolina Department of Transportation.

In February and March 2007, the Office of the State Auditor used a private contractor to perform a comprehensive information security assessment of the North Carolina Department of Transportation. The goal of the security assessment was to assist the North Carolina Department of Transportation with achieving and maintaining a “best practices” level of information security in order to protect agency internal systems, data, and assets.

The comprehensive information security assessment focused on three key areas:

- **Network Vulnerability Assessment.** The Network Vulnerability Assessment provides a thorough understanding of security-related weaknesses and exposures in networks.
- **Application Penetration Assessment.** The Application Penetration Assessment provides a thorough understanding of security-related weaknesses and exposures in an application.
- **Wireless Site Assessment.** A Wireless Site Assessment reviews the current security configuration of deployed wireless infrastructure.

Our assessment identified security controls within each area above that were well defined and effective as well as controls that posed security risks and exposed the agency to possible internal or external attack. Control weaknesses were classified in relation to the level of risk as High, Medium, or Low. Our assessment identified forty-six high level weaknesses, nineteen medium level weaknesses, and fifty-nine low level weaknesses. This report provides the North Carolina Department of Transportation with a benchmark for future assessments.

Due to the sensitive nature of the conditions found in these weaknesses, we have conveyed these findings to management in a separate report pursuant to the provision of the North Carolina General Statute 147-64.6(c)(18).

## OBJECTIVES AND SCOPE (CONCLUDED)

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### *Auditee's Response:*



### STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Michael F. Easley  
GOVERNOR

Lyndo Tippet  
SECRETARY

May 4, 2007

#### MEMORANDUM

**To:** Leslie Merritt, Jr. CPA, CFP, State Auditor

**From:** Mark C. Paxton, NCDOT Chief Information Officer *Mark C. Paxton*

**Re:** Information Security Audit of the North Carolina Department of Transportation

The Department of Transportation has reviewed the reports resulting from the information security assessment performed by a private contractor on behalf of the Office of the State Auditor. In general, we concur with the overall findings of the assessment, which highlighted areas of strength and those requiring attention. Remediation efforts have begun to address these identified weaknesses, many of which were underway before the security assessment was complete.

This assessment will be used as additional input into the Department of Transportation's efforts to strengthen our overall information security program. The Department of Transportation is committed to the continual evaluation and improvement of its security posture in an effort to protect the State's information resources and sensitive citizen information.

cc: Lyndo Tippet, Secretary of North Carolina Department of Transportation  
Steven Hulse, Deputy CIO North Carolina Department of Transportation  
Stratton Lindley, CISO North Carolina Department of Transportation

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