



Timothy B. Baughman, P.E.
Highway Operations and Safety Manager
The Institute for Transportation Research and Education
North Carolina State University
Centennial Campus, Box 8601
Raleigh, NC 27695-8601
919/515-8654 Fax 704/639-7569
E-mail: tbb@unity.ncsu.edu

EDUCATION

B.S., Civil Engineering, University of South Carolina, Columbia, SC, 1979.

PROFESSIONAL ASSOCIATIONS

Member, American Public Works Association
Member, American Society of Civil Engineers
Member, Institute of Transportation Engineers
Member, Committee on Traffic Safety in Maintenance and Construction Operations,
Transportation Research Board
Member, Committee on Roadside Maintenance, Transportation Research Board
Member, Regulatory and Warning Signs Technical Committee, National Committee on Uniform Traffic Control Devices

PROFESSIONAL EXPERIENCE

1998 - present

Highway Operations and Safety Manager

The Institute for Transportation Research and Education

Work has included coordinating research and training with the North Carolina Department of Transportation's Maintenance Unit, scheduling and conducting work zone safety training with the North Carolina Technology Transfer Center, development of a school crossing guard training program, and assisting in the implementation of work zone traffic control training programs in New Jersey and Wisconsin.

1997 - 1998

Research Assistant

The Institute for Transportation Research and Education

Upon reorganization of ITRE, returned to the Highway Operations and Safety program to assist in the development and presentation of work zone safety training programs, and developing and implementing new technologies and procedures within the North Carolina Department of Transportation.

Significant projects:

Roadway Drainage Maintenance: Developed and implemented the Roadway Drainage Maintenance training program for the North Carolina Department of Transportation. Trained over 720 participants in 27 one-day workshops on drainage principles, policy, and the installation and maintenance of drainage components, with emphasis on ditches and culverts.

North Carolina Intermediate Work Zone Safety: Developed and implemented the training program for North Carolina. Assisted in training nearly 875 participants at 35 one-day workshops in procedures for complex

work zone traffic control operations, such as multi-lane intersections, detours, and mobile operations.

North Carolina Advanced Work Zone Safety: Developed and implemented the training program for North Carolina. Trained over 200 participants at 8 one-day workshops in procedures for traffic control plan reading and development, work zone capacity, night work, and work zone inspection.

1995 -1997

Program Director for Local Governments

The Institute for Transportation Research and Education

Managed local government projects, including pavement condition surveys, sign and pavement marking surveys, and sidewalk condition surveys. Various tasks included informing local governments about management studies, verifying field data and calculations, report preparation, and occasionally presenting results at council meetings.

Presented asphalt pavement maintenance workshops. Workshops focused not only on maintenance practices, but also the benefits of pavement management.

Presented various workshops to maintenance, construction, and utility personnel, such as Work Zone Traffic Control, Flagger Training, Asphalt Emulsion Handling, and Guardrail Design and Repair, with participants including municipal, state department of transportation, and contractor personnel.

Working with the Highway Program section of ITRE, assisted in the development and presentation of training programs for the North Carolina Department of Transportation.

1992 - 1995

Senior Research Associate

The Institute for Transportation Research and Education

Assisted in the development and presentation of work zone safety and flagger safety training programs for South Carolina Department of Highways and Public Transportation and North Carolina municipalities. Taught work zone safety workshops for the NC LTAP Center and provided technical assistance in this area to North Carolina municipalities. Developed materials and aids for implementing new technologies and procedures within the North Carolina Department of Transportation.

Significant projects:

Guardrail Installation and Repair: Developed and implemented the Guardrail Installation and Repair training program for the North Carolina Department of Transportation. Trained over 750 participants in 30 one-day workshops in the design, installation, and maintenance of guardrails.

Flagger Instructor Training: Developed and implemented the Flagger Instructor Training Program in South Carolina. Participated in the presentation of most of the 12 one-and-one-half-day workshops. Trained nearly 150 utility, county, municipal, contractor and DOT personnel in being effective flagging instructors.

Basics of Work Zone Safety: Modified the North Carolina Work Zone Safety Training Program for implementation in South Carolina. Taught proper work zone traffic control techniques at 27 one-day workshops for nearly 700 participants.

South Carolina Advanced Work Zone Safety: Developed and implemented the training program for South Carolina. Trained nearly 400 participants at 16 one-day workshops in procedures for complex work zone traffic control operations, such as multi-lane intersections, interstates, and mobile road work.

Asphalt Emulsion Workshop: Developed and implemented workshops for North Carolina Department of Transportation. Trained nearly 550 participants at 25 one-day workshops in the proper storage and handling techniques of asphalt emulsion.

Work Zone Update: Developed and implemented one-day workshops for North Carolina local agencies. Designed for workers in North Carolina public roads, this course served as a refresher for those who participated in the Basics of Work Zone Safety course, as well as provided guidance on how to use the new "Part VI of the Manual on Uniform Traffic Control Devices."

1990 - 1992

Work Zone Traffic Control/Design Review Engineer

South Carolina Department of Highways and Public Transportation

Responsible for developing plans and specifications to maintain traffic in work zones, and reviewing road construction plans to assure adequacy of geometric details for traffic movements. Supervising an engineering staff of seven, worked closely with other engineering offices, field personnel, and consultants in the development and administration of all state primary contracts (100 to 125 per year). Significant projects included developing a work zone training program, a work zone inspection program, a system for coordinating activities with the plan development office, and a computerized project tracking system.

1988 - 1990

Upper State Operations Engineer

South Carolina Department of Highways and Public Transportation

Supervising an engineering staff of nine, conducted studies and prepared reports that recommended means to meet traffic operation demands for half of the state (answering 15 to 20 complaints/requests per month). This included evaluating the need for new traffic signals, upgrading existing signals, changes in signing or pavement marking controls, roadway geometric improvements, and access for pedestrians and school children. Extensive contact was made with field personnel, other agencies and public assemblies. During this time, eliminated a significant backlog of work left by predecessor, streamlined the traffic study and analysis process, upgraded the computerized project tracking system, and trained several new engineers in the areas of data analysis, writing reports, and workload management.

1986 - 1988

Signing and Marking Engineer

South Carolina Department of Highways and Public Transportation

Supervising a staff of 11, developed plans for signing and marking contracts, managed the state logo program, and reviewed geometric design details and developed work zone traffic control of freeway projects. During this time, oversaw the computerization of the sign size and estimate calculation program, simplified the sign requisition program, and made the logo sign application and approval process more efficient.

1979 - 1986

Associate Traffic Engineer

South Carolina Department of Highways and Public Transportation

Assisted senior traffic engineers in the study and analysis of traffic operation improvements. Learned traffic flow and operation theory, accident analysis techniques, traffic signal design, writing reports and cover letters, and personal computer operation.

Significant projects while at SCDHPT:

Representative on the Department's Engineering Computer Committee.

Member of the Cooper River Bridge Fog Mitigation study team.

Developed the Dilemma Zone Protection technique used with traffic signals at high speed locations in the state.

Initially studied and proposed the state oversized truck network.