



CASE STUDY: NC DEPT. OF TRANSPORTATION, DIV. OF HIGHWAYS' EQUIPMENT UNIT

The North Carolina Department of Transportation (NCDOT) directs, plans, constructs, maintains, and operates the second largest state-maintained transportation system in the nation. The Equipment Unit maintains a fleet of over 20,000 pieces of equipment for highway repair and construction via a central depot operation and over 100 field shops.

Due to the scope of NCDOT's system and growth of overall highway maintenance requirements, continuous improvement of fleet management was identified as being essential to the NCDOT mission. A comprehensive Equipment Management System and other improvements were needed to support this extensive fleet operation where annual replacements alone ranged from \$20 million to \$40 million per year.

The Equipment Management System which was implemented statewide over a 2 year period provided the following:

- A computerized system for equipment inventory, parts inventory, repair history, work control, planning/scheduling, performance reporting and more effective preventive maintenance
- A comprehensive statewide renewal of the PM program that included operator level PM tasks
- Equipment Services Planners; over 50 planners selected, trained and installed in selected shops for minor/major repair and PM scheduling, providing estimated repair time, shop schedules, parts coordination and increased customer service to field operations
- Improved PM effectiveness that increased equipment uptime, increased equipment life and reduced annual equipment repair costs by over \$5,000,000 per year
- Improved parts service and overall management in central warehouse and at shop sites with a net reduction of over \$2,000,000 per year in parts inventory costs
- Improved planning and customer service to field operations with increased craft wrench time valued at over \$3,000,000 per year
- Increased time for service to outside agencies resulting in new revenue of over \$1,500,000 per year
- A pioneering effort for fleet management, viewed by numerous agencies from U.S. and around the World