

# NCDPI Transportation Bulletin—Fuel, Policy and TIMS

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Our state is experiencing an unprecedented increase in the cost of fuel. State allotments compensated for the increased cost until 2007-2008 when we fell short (\$2.80 per gallon allotted vs. \$2.95 actual).

## Are you prepared if fuel prices continue to increase?

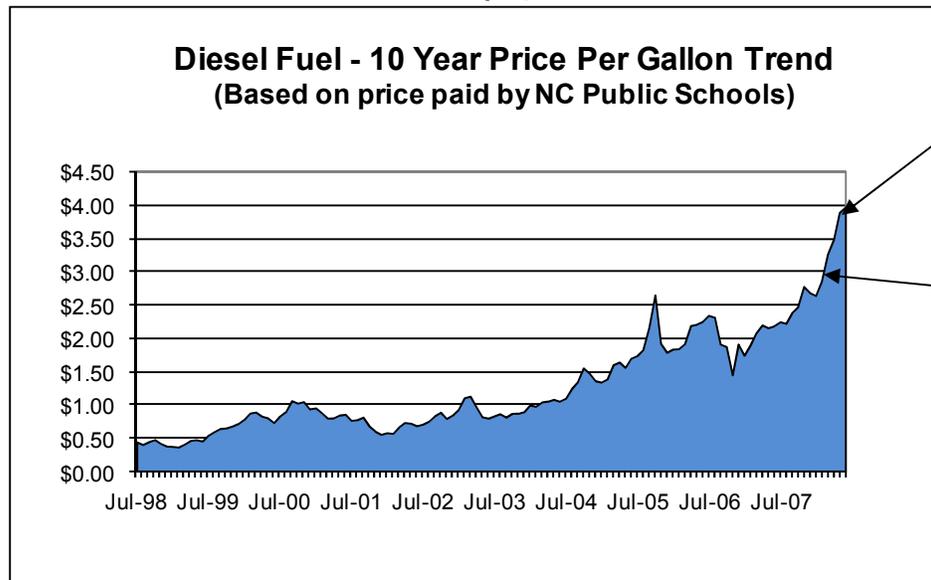
Price volatility makes it difficult to predict the cost for the coming year. Districts need contingency plans in case a deficit continues for 2008-2009.

## Are you ready if more students want to ride this fall?

Rising fuel prices also affect the families that we serve. There is a potential that these higher fuel costs will cause car riders to switch to the bus.

## Getting Ready

When the State Energy Office funded TIMS over 20 years ago, it was all about saving fuel. Just USING TIMS doesn't make things efficient or save fuel. It has to be used with those objectives in mind. On page 2 of this document is important information about how TIMS and its optimization capabilities can help the cause. Further, the many programs and requirements placed on our transportation systems require more oversight than ever.



*The self-assessment below can provide some direction in making sure that transportation impacts are considered when making key educational decisions.*

## District Decisions Make a Difference to Pupil Transportation: A Transportation Self-Assessment

**Assignment of Transportation Responsibilities** – Do you consider the effects of policy choices on cost, safety and efficiency? Is there accountability?

- Transportation Policies – Are there written stop placement and routing policies? Are they consistent with state policies?
- What is the school's role in daily transportation issues? Are routing decisions being made by staff without a stake in the financial costs of those decisions?
- Who sets the bell times for each school? Is there coordination with transportation staff?

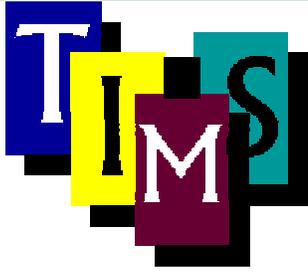
- Are transportation staff involved in IEP meetings related to transportation choice?
- Reviewing and auditing bus routes – who does it? How often? Who is responsible?
- Do parent complaints dictate the transportation plan? Does the local board overrule transportation policies? How much does this cost?

**Transportation Planning**—Do internal planning policies consider the costs of transportation in both dollars and student ride time?

- Locations of special programs, magnet programs and new schools can have significant effects on transporta-

tion. Are the right people included in these decisions?

- Is anyone looking at the big picture? Staggered bell times may have large fleet savings potential.
- Are bus stops reviewed so the total number of stops is limited and they are placed strategically?
- Is routing reviewed anew prior to each school opening? Are transportation needs of newly enrolling KI students identified?
- Do schools, transportation staff and bus drivers communicate effectively?



## District Decisions Make a Difference to Pupil Transportation

*"The power of TIMS is not truly harnessed until the transportation department is directed to use the system to improve efficiency and student service levels." - Ben Matthews, Director, NCDPI School Support*

### TIMS Service Indicators

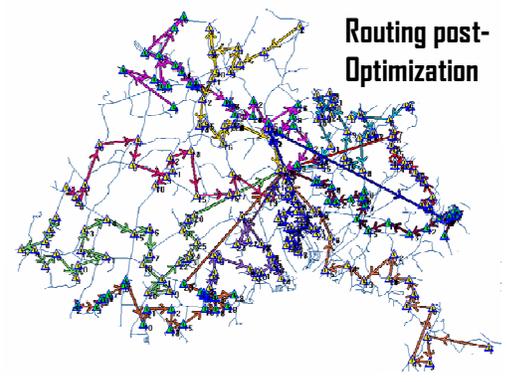
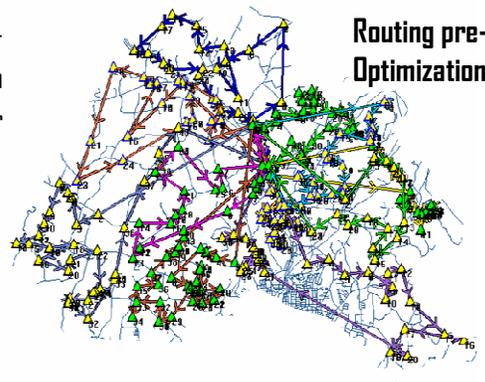
TIMS data are used to compile a state-wide report on service levels and operations in each district.

Reports for 2006-07 and 2007-08 include the following, available at [www.ncbussafety.org](http://www.ncbussafety.org). These reports provide district administrators with a wealth of information that can be used in analyzing your district's transportation system.

- \* **Student ride times**
- \* **Student distances to stops**
- \* **Earliest AM pickup times**
- \* **Operations data to evaluate optimization potential**

### Using TIMS to Reduce Fuel Cost: A Six Step Approach

1. Do a visual review of routes using TIMS mapping features.
2. Assign schools or areas to one of two categories: Requires minor cleanup or needs major revision. Examples of problems are incorrect stop order and stops assigned to the wrong bus.
3. Make manual modifications to areas where there are only a few problems that can be easily addressed.
4. Use run optimization in areas with larger issues to revamp routes more completely (see example in maps below).
5. Ensure this moves from paper and planning to practice.
6. Institute policies and procedures that will ensure periodic and frequent review to maintain efficient routing structure.



TIMS has the ability to give you a "big picture" of your bus routes. It also has an optimization component that can help to quickly improve routes. Above are before and after pictures of routes serving the same set of stops. After optimization, the mileage and fuel use would be reduced in this scenario.

### TIMS as a Resources For Your LEA

#### Power of TIMS

TIMS has modules designed to develop and/or improve routes - TIMS offers the ability to semi-automatically build efficient bus trips using various strategies such as run sequencing and optimization.

Using these strategies can help you to reduce mileage as well as reduce student ride time.

TIMS also can be used to reduce fleet size by developing new or improving bell schedules. Safety-enhancing reports for drivers that

highlight hazards such as railroad crossings are also available from TIMS.

#### Are you fully utilizing the staff and tools at your disposal?

As you assess your current operations and policies, you may find that you could make better use of the staff and software tools already in place in your district.

NCDPI provides TIMS software to help districts identify (and address) areas in transportation systems that could be improved.

#### TIMS support

Services are provided via contract with ITRE at NC State and The UNC Charlotte Urban Institute. The staff at ITRE and UNC Charlotte have many years experience in working with LEAs to accomplish these goals.

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*TIMS is a systems initiative of the North Carolina Department of Public Instruction. It is required to be used by all local education agencies (LEAs) [General Statute 115C-240(d)]. Funding for pupil transportation is based partially on data obtained from TIMS.*