

**CHARLOTTE-MECKLENBURG SCHOOLS  
BOARD OF EDUCATION**

**THE CASE FOR CONTINUOUS IMPROVEMENT:  
A COMPREHENSIVE REVIEW OF CMS**

**OVERVIEW REPORT  
STUDENT TRANSPORTATION OPERATIONS (STO)**

**JUNE 28, 2010**

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## INTRODUCTION

Under the direction and guidance of the Board of Education and the Superintendent, a comprehensive review of Charlotte-Mecklenburg Schools (CMS) is being conducted with the ultimate goal to develop and prioritize guiding principles critical to provide positive and effective direction for the school district's future and student academic achievement.

Below are excerpts from the Board members' stated goals for this comprehensive review:

*"The review, expected to be completed by November, is intended to help the Board align decision-making in multiple areas with the goals of the district's strategic plan as well as take a consistent, strategic approach to individual issues.*

*Titled "The Case for Continuous Improvement: A Comprehensive Review of CMS," the review will address policies guiding such district operations as magnet schools, transportation, boundaries, projected enrollments, use of facilities and funding.*

*The Board will apply guiding principles to review CMS programs, transportation, funding, bell schedules, student assignment, facilities and capital needs to develop a comprehensive plan for the 2011-2012 school year."*

Charlotte-Mecklenburg Schools Student Transportation Operations (CMS STO) recognizes the significance of this review and supports the resulting outcome for future direction regarding provision of transportation services for CMS students to include transportation eligibility and levels of services provided for CMS students.

This report will provide a summary of key governing pupil transportation laws and regulations, major business functions, current service levels, a department overview and profile, funding sources and budget information, recent year's business improvements and department progress, and potential impact of anticipated areas of study within the Board's comprehensive review process. The foundation for this overview report detailing the current environment and the measured progress within CMS STO over the past 3 years stems from the 2007 Transportation Management Board Oversight Report. Defined key performance indicators and recommended strategies for continuous improvement have provided the road map for department efficiencies accomplished.



**CMS STO  
MISSION STATEMENT**

*"To support the educational process for all transportation eligible CMS students by providing safe, timely and courteous services daily"*

## OPERATING ENVIRONMENT

### LOCAL, STATE AND FEDERAL POLICIES AND REGULATIONS

CMS STO is strongly regulated by local, state and federal statutes, policies, regulations and laws. These levels of authority define and outline the local student assignment plan and student eligibility, routing and scheduling guidelines, compliance and training requirements, safety requirements, fiscal standards, employee conduct and work ethics, and other guidelines for pupil transportation services. Below is a brief overview of the major specifications for each authority as it relates to transportation.

#### **Local**

Local policies and regulations approved by the Board of Education *regarding student assignment provide definition and the baseline for student eligibility for transportation services*. These Board policies and regulations, including JCA and JCA-R (Student Assignment Plan Policy and Regulations) and JFAC and JFAC-R (Reassignments and Transfers) defines transportation eligibility, attendance boundaries and magnet transportation zones for lottery assignments. (EXHIBIT A, page 43) for the section referencing transportation service related information)

#### **State**

The State Board of Education is the primary governance for the operation and organization of a public school transportation system. The primary rules are found within the NC Public School Laws General Statutes 115C, Article 17, Section 239 – 262 (EXHIBIT B, page 45). Often the question is asked if transportation services are required or not. G.S. 115C-242 states: “*There is no obligation for the State Board to supply transportation to any pupil or employee enrolled or employed in any school. If the local board of education chooses to offer services, it must be within the state’s rules and regulations with reference to the construction, equipment specifications, color, maintenance and inspection of school buses.*” The state, among other rules and regulations, also establishes the riding capacity for buses, speed limits for school and activity buses, the age and qualifications of school bus drivers, parameters for use and operation of school buses, guidelines for school bus routes, who may be assigned to school buses, regulations on proper passing of a school bus, limitations for trespassing on a school bus, and required purchasing and replacement guidelines. Funding appropriations by the General Assembly and allocations by the State Board are in accordance with the defined state transportation funding formula. Local boards must use these funds only for the specific purpose of operating and maintaining the pupil transportation operation and equipment.

The State Tort Claims Act (STCA) is contained in G.S. 143-300.1 and covers the local board of education from all claims of negligent operations or maintenance of public school buses or school transportation service vehicles. The securing of liability insurance and the waiver of immunity as to certain torts of school bus drivers, school transportation service vehicle drivers and school activity bus drivers, is subject to the provisions of G.S. 115C-42.

A Commercial Drivers License (CDL) with a passenger and school bus (P and S) endorsement is required for every school bus and activity bus driver. To meet legal requirements to drive a school bus, the driver must:

- Pass the written examination administered at the conclusion of classroom training by the DMV;
- Have a good driving record and be at least 18 years of age with at least six months driving experience as a licensed operator of a motor vehicle;
- Satisfactorily complete behind-the-wheel training, including the skills tests, in school buses, under the instruction of the DMV School Bus & Traffic Safety Section, and
- Have a valid Commercial Driver License (CDL) with proper school bus endorsements.

### **Federal**

The federal laws governing pupil transportation include, but are not limited to the following authorities and laws:

- **The National Highway Traffic Safety Administration (NHTSA)** has a legislative mandate under Title 49 of the United States Code, Chapter 301, Motor Vehicle Safety, to issue Federal Motor Vehicle Safety Standards (FMVSS) and Regulations to which manufacturers of motor vehicle and equipment items must conform and certify compliance. Specific standards regarding school buses relate to school bus pedestrian safety devices, rollover protection, body joint strength, passenger seating and crash protection and flammability of interior materials. Reference website is <http://www.nhtsa.dot.gov/cars/rules/import/FMVSS>.
- **The Federal Motor Carrier Safety Administration (FMCSA)** is focused on reducing crashes, injuries, and fatalities involving large trucks and buses. Rules and regulations include bus drivers CDL license requirements for passenger and school bus (P and S) endorsements, qualifications and medical requirements for bus drivers, and safety and crash programs. Reference website is <http://www.fmcsa.dot.gov>.
- **No Child Left Behind (NCLB) Act of 2001** - public school choice under Title I of the Elementary and Secondary Education Act.
- **The McKinney-Vento Homeless Assistance Act** was reauthorized as part of the No Child Left Behind Act of 2001. The reauthorized Act of 2001 provides certain rights to homeless children and youths and their families. In addition, the Act confers certain responsibilities on State Education Agencies and on Local Educational Agencies (LEAs). The Act also provides states with funding to help remove barriers to the education of homeless children and youths. Under McKinney-Vento, school districts must: appoint a McKinney-Vento liaison; identify homeless children and youths; implement a coordinated system for ensuring that homeless children and youths are advised of their rights, are immediately enrolled, and are provided necessary services, *including* transportation to and from the child's school of origin, as well as special education, gifted and talented services, etc.; document that written notice of rights has been provided; prohibit schools from segregating homeless children; and identify and remove barriers that may cause difficulties in the educational success of homeless children and youths.
- **The Individuals with Disabilities Education Act (IDEA) of 2004** is a law ensuring services to children with disabilities throughout the nation. IDEA governs how states and public agencies provide early intervention, special education and related services such as transportation. One reference website is <http://idea.ed.gov> for more detailed information on transportation related services and requirements.

## MAJOR BUSINESS FUNCTIONS

The following highlights the five major divisions of the CMS STO and the respective core business functions (this list only summarizes the top tier functions). The core principals and goals for each of these functions are safety, accountability, efficiency, effectiveness and quality customer service.

### 1) **Transportation Service Operations**

Organizationally, four operations directors and their administrative assistants oversee 14 transportation area offices decentralized throughout the county in bus staging facilities or on school campuses. Staffing for each area includes a transportation specialist, operations technician, quality support technician, three to four lead drivers and bus drivers to support the TIMS assigned buses under the area's supervision.

The primary business functions for this division are:

- to and from school transportation for Pre-K – 12 students
- transportation for required and non-required field trips
- support for all athletic events and competitions
- transportation home after extended-day instructional programs at the majority of the schools
- transportation for Saturday Academy Programs
- transportation for special events within the school community
- summer school and summer program transportation
- customer relations with parents, school staff, and community partners
- accident and/or student incident investigation

### 2) **Routing and Scheduling**

This division is comprised of a routing and scheduling manager, a database administrator and routing technicians. This division generates and maintains student bus schedules through the Transportation Information Management System (TIMS) - a computerized routing and scheduling application.

The primary business functions for this division are:

- stop/run/route development for regular to/from, extended-day, and summer school requirements
- update TIMS data based on student changes incoming from eSIS
- annual transportation registration process
- route optimization and forecasting
- bell tier evaluation and optimization scenarios
- database administration to include daily maintenance and updates for GIS
- continual review of growth areas to open/close streets and neighborhoods for travel
- assist during investigation for unsafe stops, relocation requests and/or property damage claims
- liaison with planning and student assignment department, EC, Pre-K, and ESL
- EC contracted services assignments and vendor relations
- handles regulatory issues with MVA and NCLB students
- customer relations with school staff and parents regarding routing and scheduling

### 3) **Safety and Training**

This division currently consists of one safety and training specialist who oversees all operational and facility safety related issues. Every goal, event, and task within the department focuses on safety requirements and safety of transporting children. This area is vitally

important to the perception, image, and reality of safety within our daily routines and responsibilities.

The primary business functions for this division are:

- assist with accident investigation and reporting
- liaison with State Attorney General Office regarding accidents and claims
- development, implementation, and ongoing support for safety training programs and instruction
- responsible for safety training materials, transportation staff handbook and standard operating procedures manuals
- liaison with Human Resources and DMV regarding hiring and assignment of new bus drivers
- driver license review for compliance and renewals
- emergency evacuation and crisis planning

#### **4) Maintenance**

This division includes a fleet manager, shop foreman, quality assurance administrator, dispatch, technicians, tire technician and service truck operators. Staff is based out of five staging facilities: Craig Avenue, Orr Road, Wilkinson Blvd., Northpointe Blvd., and Downs Road.

The primary business functions for this division are:

- 30 day inspections and preventive maintenance programs required by NCDPI (annual state audit for compliance)
- pre-delivery inspection and in-service for new buses
- roadside assistance for bus breakdowns
- bus repairs and maintenance in shop
- OSHA and EPA compliance related to all shop facilities and hazardous materials
- radio dispatch
- fueling
- paint and body work
- tire building and mounting
- fleet data management and accountability
- fleet quality assurance

#### **5) Central Office and Fiscal Accountability**

Central office staff includes the executive director of transportation, financial support manager, inventory coordinator, financial secretary, quality support technicians and cost clerks.

The primary business functions for this division are:

- central call center and quality customer service
- department management administrative support
- fiscal accountability – tasks and activities related to:
  - budget
  - accounts payable and accounts receivable
  - cost accounting/fleet management system
  - payroll management (phasing in automated time keeping)
  - purchasing
  - record retention
- contract services
- asset management
- department oversight and leadership

## OUTSOURCED BUSINESS FUNCTIONS

According to a recent article on the *National School Transportation Association* Web site entitled "Why Outsource Your School Transportation Needs," the following are common reasons school boards and top administrators may consider outsourcing the school transportation operation:

*"The reasons that districts consider contracted transportation vary, but often fall into one of the following categories:*

- *The district fleet is aged, and funding is not available to upgrade it;*
- *New equipment regulations and safety or environmental innovations make new buses desirable, but the district replacement schedule does not allow for rapid turnover of the fleet;*
- *Transportation cost increases have outpaced funding;*
- *Economies of scale are not always available, and costs are out of line with similar districts;*
- *System inefficiencies have resulted in overextended resources and scheduling difficulties;*
- *Federal, state, or administrative changes and additional responsibilities (redistricting, addition of interdistrict magnet schools, parental choice prerogatives) challenge the system;*
- *Administrative headaches (dealing with parents, employee absenteeism, drug and alcohol testing, mandated paperwork) require an inordinate share of administrators' time and attention."*

Although there are definite challenges and room for improvement, CMS STO holistically does not meet the criteria above. No matter who manages and operates this corporate-sized business, challenges will always exist for maximizing limited resources, scheduling adjustments, and the administration of personnel issues and customer concerns, issues and complaints. To date, no previous study or review specifically of the CMS STO has identified any specific motive(s) or cause(s) to recommend outsourcing its entire operations or any portion thereof. To the contrary, the following section is from the *October 2006 Transportation Operations Plan* written by a well known and reputable consulting company, Management Partnership Services, Inc:

### ***"Outsourcing Transportation"***

*Finally, in Section VI, is a feasibility analysis of outsourcing transportation services. This section was included as an adjunct to the base operations plan to address the potential operational and cost benefits that might be derived from contracting transportation services. The analysis included a 10 year projection and comparison of the total estimated costs under a contracted scenario vs. the present in-house operation. The results of that analysis are as follows:*

- *There appears to be no cost benefit to contracting the present transportation program. Our estimate is that it would cost CMS an additional \$18.3 million during a 10 year period to change to contracted busing.*
- *Potential savings in the first year of contracted service delivery are estimated to be approximately \$3.7 million, resulting exclusively from the (calculated) sale of the existing fleet.*



- **Beginning in year two, and for every year thereafter, the contracted service scenario is estimated to be more expensive than the in-house option.** The cost difference in each year of the projection varies somewhat, but averages \$2.2 million more using contracted busing for each year in the forecast period. During the ten year projection, the total costs for each option are:

Contracted	\$713,627,625
In-House	<u>\$695,277,404</u>
Additional Cost of Contracting	<u>\$18,350,221</u>

*For CMS, we find no cost benefit to contracting all or any portion of the transportation system and therefore do not recommend this option. The department has the core expertise and experience. The fleet is provided (replaced) by the state in perpetuity under the present statutes. The need for improved facilities is a potential concern. However, with a growing school system like CMS, the cost of capital construction is already an ongoing enterprise, the school system owns land now, and the amortized capital and financing cost for new and remodeled transportation facilities would not be fully avoided, since a bus contractor would have to absorb (and pass along through its fee structure) similar costs to purchase or lease staging sites and facilities.”*

Although there is no recommendation to fully privatize CMS STO, management is continually evaluating areas of the operation that may be better served by outside vendors with specialized skill, capital equipment, and/or more adequate facilities to perform certain business functions. The majority of these functions (see chart below) currently relate to the maintenance and repair of the bus fleet. During 2009-10, CMS STO spent an estimated \$2.8M on the following maintenance and contracted services:

<b>CMS TRANSPORTATION OUTSOURCED BUSINESS FUNCTIONS</b>	
1)	Bus A/C Repair and Bus A/C Maintenance Service, Labor Only
2)	In-Frame Bus Engine Overhauls, Labor & Related Supplies
3)	Long Block Engine Remove & Replace, Labor Only
4)	Remove & Replace Transmissions, Labor Only
5)	Bus Floor Repair and Replacement Services
6)	Removal of Garage Hazardous Wastes
7)	Bus Washing/Cleaning Services
8)	5001 Airport Center HVAC Maintenance Service
9)	Contracted Transportation of Pupils with Special Needs

When opting to outsource any business function, consideration of effectiveness and compliance with all federal, state and local regulations are required. See [EXHIBIT C, page 56](#), for a state-level letter regarding areas of consideration for outsourcing transportation operations.

## DEPARTMENT PROFILE AND CURRENT SERVICE LEVELS

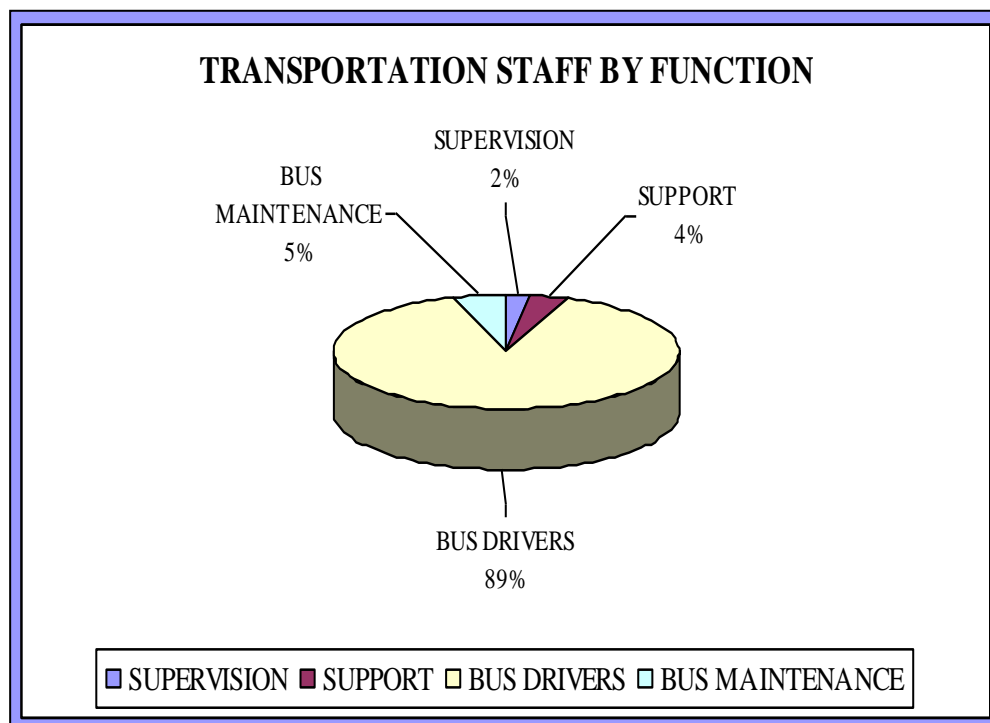
### PROFILE

School Bus Fleet Magazine recently released 2010 statistics revealing that Charlotte-Mecklenburg Schools Transportation Operation ranks 9<sup>th</sup> among the nations' top 100 school bus fleets. CMS STO is the largest pupil transportation industry in North Carolina supporting more than 1,600 vehicles with a team of more than 1,400 employees. Safety is the primary goal for all maintenance and services while supporting the safest method of transportation for students to and from school. According to the National Highway Traffic Safety Administration (NHTSA), "American students are nearly eight times safer riding in a school bus than with their own parents and guardians in cars."

CMS STO operates and maintains approximately 1,400 school buses (active and spare), 95 activity buses, and 100+ service trucks and administrative vehicles. These vehicles are primarily staged and maintained at five bus staging facilities, of which only two offers full turnkey facilities.

During 2009-2010, CMS Transportation served an estimated 84,000 students (66% of the total eligible) to and from school. An average of 1,155 buses transported students more than 546 square miles in Mecklenburg County safely, traveling more than 21 million annual miles which is the equivalent of 44 roundtrips to the moon!

### MANAGEMENT AND STAFFING



**The Majority of the Transportation Staff Serves CMS Students Directly Through Delivery of Daily Services.**

## HISTORY AND TRENDS

In 2002-2003, the Choice Student Assignment Plan shifted the entire paradigm and assignment process for CMS students and resulting transportation eligibility. Prior to this year, the majority of non-magnet students were assigned by the district to their home or satellite school, and were only eligible for transportation if they attended this school. Beginning in 2002-2003, students were no longer automatically assigned a school; every student was required to apply for a school of choice through a lottery application process. Transportation eligibility was calculated within four choice zones which “replaced” individual school attendance zones (with the exception of magnet feeder boundaries). Estimated geographic size of each choice zone for travel purposes is as follows:

Green – 260 square miles

Gold - 62 square miles

Blue – 106 square miles

Purple – 117 square miles

During 2002-2003, CMS Transportation

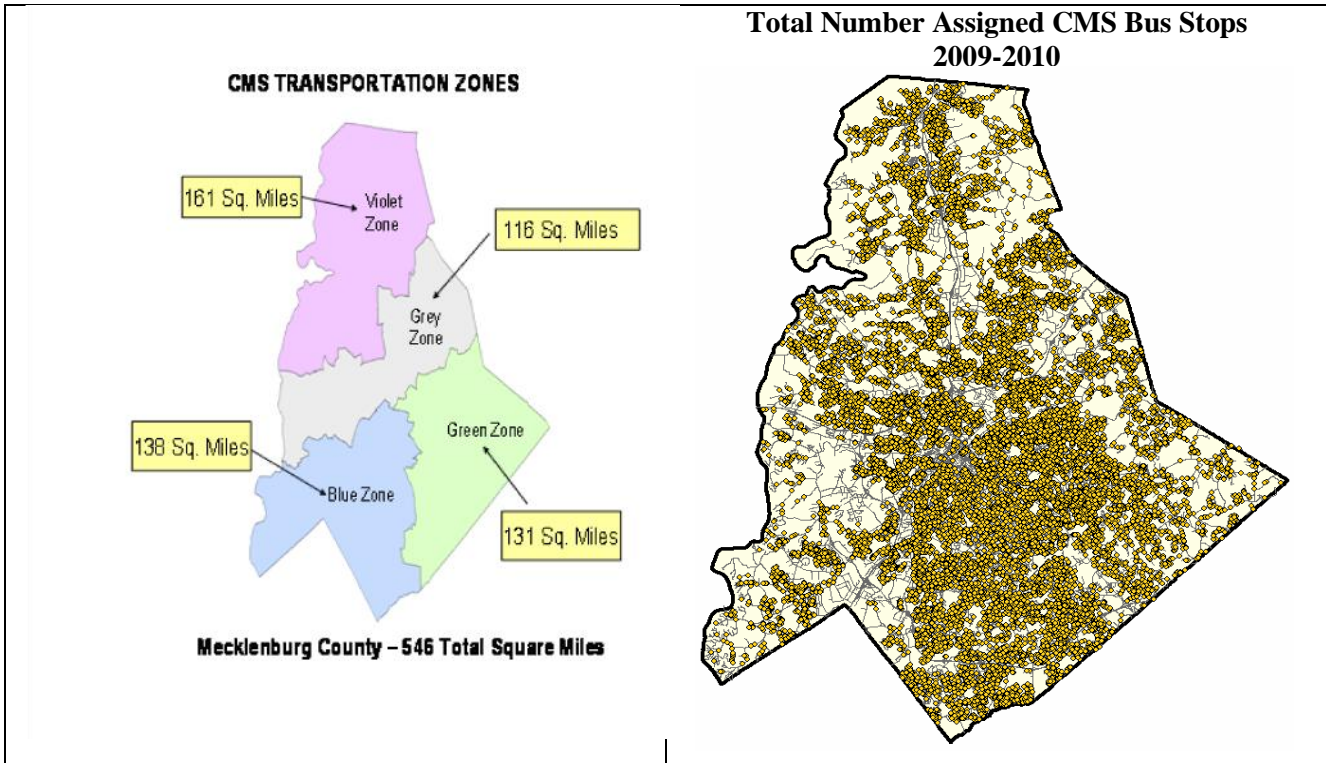
- experienced an increase in the total operating fleet of 109 buses
- traveled an average of 28,000 more miles *per day and five million more miles for the year*
- gained 6,500 more transportation eligible students due to the large transportation zones and grandfathered students (the previous year’s average was a growth rate of 2,500 eligible students)
- scheduled an estimated 39,000 bus stops; *an increase of 9,000* over the 30,000 stops assigned the previous year
- increased the number of buses serving the same neighborhoods and traveling the same street networks due to multiple school choices within the same geographic area.

## CURRENT SERVICE LEVELS - SCOPE AND DEFINITION

Although CMS no longer offers “choice” to students for non-magnet schools, the long lasting effects of the choice plan, coupled with the district’s holistic educational offerings and *transportation eligibility for 93% of the total students*, continues to impact and challenge transportation resources and quality of services. Factors influencing daily bus miles traveled, number of bus stops, reduced number of students per stop, distance between stops, and lengthier ride times for many students are:

- significant numbers of county-wide and zoned magnet programs with smaller populations
- five Pre-K centers serving students in larger than normal attendance zones
- federally mandated transportation for NCLB and McKinney Vento students
- county-wide transportation offered for CMS specialized academic, special needs, and alternative programs such as Midwood High (Eight Plus), Performance Learning Center, Morgan, Hawthorne, Metro and Turning Point Academy Schools. These schools generally serve small populations of students distributed throughout the county.

The map below signifies the vastness of current transportation zones and a visual of the distribution of students assigned a bus stop during 2009-2010.



**Current Distribution of Students and Transportation Eligibility**

The chart below identifies the patterns of educational categories and the transportation eligibility for the number of attending students. Based on the 2009-2010 20<sup>th</sup> day data compiled from the CMS Transportation Information Management System (TIMS) **93% of all students enrolled are eligible. Of those students eligible, 84% are assigned to a bus and approximately 73% used the services.**

<b>CMS Students' Eligibility By Educational Category</b>					
	Transportation Eligibility Status			Resides In "No Trans Zone"	Total Students by Education Category
	Eligible (Y)	Grandfathered (G)	Not Eligible (N)		
General Education	106,083	0	6,200	2,274	114,557
Magnet	16,023	0	1,112	139	17,274
Pre K	3,065		47	14	3,126
Exceptional Programs	1,487	0	37	3	1,527
Alternative Programs	535				535
<b>Total Students</b>	<b>127,193</b>	<b>0</b>	<b>7,396</b>	<b>2,430</b>	<b>137,019</b>

<b>How Many Students Are Scheduled for Transportation Services?</b>				
	Total Students By Eligibility	% of Total	Total Assigned Students in TIMS	% Assigned of Total Eligibility
Total Eligible (Yes)	127,193	<b>93%</b>	114,249	90%
Total Grandfathered	0	<b>0%</b>	0	
Total Not Eligible	7,396	5%	1,100	15%
Total "No Trans Zone"	2,430	2%	7	0%
<b>Totals</b>	<b>137,019</b>	<b>100%</b>	<b>115,356</b>	<b>84%</b>

## EFFICIENCY AND EFFECTIVENESS BUILDING THE PRODUCT AND DELIVERY OF SERVICES

### INTERDEPENDENCIES AND INTERRELATIONSHIPS OF TIME, DISTANCE AND SCHEDULES

Safety for children, employees, equipment and facilities is primary in all facets of transportation operations and services. Equally important to the department’s mission and goals is balancing the efficiency of the operation with the effectiveness of serving all customers.

The mammoth task of scheduling and transporting more than *115,000 students* (see previous chart above) to approximately *169 school sites* in peak traffic hours and congestion throughout Mecklenburg County while making approximately *25,000 bus stops* morning and afternoon is unparalleled in most businesses. In addition, the estimated *123,000 mile round trip each day must occur within set time constraints and varying distances*. CMS STO must optimize these relationships to the extent possible to gain efficient trip pairings and to maximize the utilization of available equipment, staff and budget.

The development, maintenance, and delivery of transportation services can often be compared to working a jigsaw puzzle. To be successful, all pieces must be available and they must interlock securely. Often, it takes many attempts to fit the “right” pieces together to eventually see the whole and comprehensive picture. Optimization and proper use of every piece must be recognized and correction made if the interrelationships do not work. When pieces of the puzzle are missing and/or they do not belong in the set of parameters, the product will never be complete. *Time and distance are significant pieces of the puzzle when building and supporting bus schedules.*

**Time parameters** include school bell schedules, ranges of time allowable for bus arrival in the morning and afternoon, constraints for bus stop pick up and drop off times, time to load and unload students at bus stops and school parking lots, posted speed limits on the travel path, mechanically governed speeds on buses, and limitations on reasonable student ride times.

**Distance parameters** include distance from student addresses to bus stops, distance from student addresses to attending school, distance between bus stops, distance required to travel due to geocode limitations such as four lane highways and hazardous or no travel segments, distance of “walk or no transportation” zones surrounding schools, and distance from school previously served to the next closest student population for the next school being served by the same bus. Despite the complex challenges of the student assignment plan and academic offerings, CMS STO maximizes use of resources and expertise to provide services levels within the average range for ride times in the state.

**The 2009-2010 TIMS Service Indicators Report**, produced by UNC Charlotte Urban Institute, revealed the following county comparison:

County	Avg. Morning Ride Time	Avg. Distance to School	Statewide Average
Mecklenburg County	15 minutes	3.56 miles	25 minutes and 4.19 miles
Wake County	17 minutes	4.41 miles	
Guilford County	21 minutes	3.80 miles	

## BUILDING THE PRODUCT

The basic principle of establishing bus schedules, with all factors and sensitivity of time and distance noted above, centers around:

- 1) assigning eligible students to bus stops
- 2) assigning bus stops to bus runs
- 3) pairing bus runs to develop a bus route
- 4) delivery of students to schools assigned on the route within an optimal bus arrival time of each school's bell schedule

Definitions:

- **Bus stop** – a location, often intersecting streets, identified generally within .2 to .4 miles of the student's eSIS address (exception are the shuttle or consolidated bus stops)
- **Bus run** – individual trips made by a bus, often to pick up and drop off students attending only one school
- **Bus route** – the entire activity for a bus during the morning and afternoon, often consisting of more than one bus run or trip
- **Bell schedule** – approved daily beginning and ending times for the students' instructional day
- **Tiered bell schedules** – time tiers established for different grade levels to assist in maximizing efficiency and cost effectiveness of transportation and district operational resources. The current distribution for number of schools within 2009-2010 bell tiers are:

2009-2010 BELL SCHEDULE TIERS								
Type of School	Total Schools	7:15AM 2:15PM	7:30AM 1:45PM	8:00AM 3:00PM	8:30AM 2:45PM	8:45AM 3:45PM	9:15AM 3:30PM	9:15AM 4:15PM
Alternative	4	3		1				
Elementary	104		45		26		33	
High	21	20						1
Middle	33			15		18		
Pre K	5		3				2	
Special Needs	2			2				

Bell schedules for every school are reviewed annually to determine if any adjustments are required to assist in the balance of the effectiveness and efficiency of transportation service levels and use of resources. A large difference in tiered or staggered bell times allows for multiple bus runs or trips to different schools. CMS currently has a 120-minute range for morning bell times (7:15AM – 9:15AM) and a 150-minute range in the afternoon bell times (1:45PM – 4:15PM). *Future district decisions and/or growth may require even larger ranges of time to be considered to maintain efficiencies and zero balanced budgets.*

This bell schedule variance is among the largest in the state. This contributes to one of the highest uses of fleet based on number of bus runs to bus routes. *The higher the number of bus runs to bus route minimizes total required buses and maximizes student loads per bus route.* As of 9-22-09, CMS STO had 5,772 bus runs scheduled on 1,150 buses for an average daily total of 5.0 bus runs per bus routes. A survey among the nation's largest urban school districts nationwide conducted by the Council for Great City Schools (CGCS) last year revealed the national average daily ratio of bus runs per bus route was 4.0. *CMS STO ratio exceeds this national average as well as the state average.*

## **SERVICE DELIVERY - PLANNED VERSUS ACTUAL SCHEDULES**

The CMS student population generates constant changes. Historically, more than 20,000 student record changes occur during the first couple of weeks of school. These changes, including families moving in and out of the district, new addresses, transfers among schools, and the need for alternate arrangements for transportation (particularly daycare arrangements) create bus schedule changes, not only for the respective student involved, but often bus stop time changes and ride times for the entire bus load of children. People often ask, *"Why can't my child's bus stop, bus stop time, bus number and bus driver just stay the same from year to year?"* The simple, yet somewhat complicated, answer is due to variables such as growth in student population, promotions of students, changes in school attendance boundaries, program changes, adjustments in bell schedules, the location and number of bus stops, the bus route pairings and/or the assignment of the students riding the bus from year to year fluctuates.

Planning bus schedules for the following school year begins in the spring. Bus assignments for opening day of school are based on student promotions and daily student record changes from March through late July. Bus schedules for students are finalized and printed for distribution to schools and families generally the second week of August. The challenge is these schedules will change the moment after printing is complete due to the type of constant and voluminous changes mentioned above. So what does this mean? This means the bus stop times and bus number assigned for a student will possibly be adjusted even prior to the first day of school! Thousands of notifications for changes in schedules are distributed to schools for communication with parents during the first several weeks of school. At the same time families and schools are attempting to call a transportation customer service representative asking for information about bus schedules; more than likely transportation staff is working on those requests and sending the information as fast as humanly possible to the schools. Currently, the *supply* of available expert staff and sufficient working hours in the day to process these changes **do not** match the *demand* in volume of requests and/or customer calls.

There is no simple solution or quick answer to remedy this bottleneck during the opening weeks of school. However, the more information (including correct student addresses, whether or not the child is going to actually ride a bus, and alternate stop needs) that the CMS STO has about students in June and July, the more accurate the bus schedules. This will also reduce the volume of student record changes, customer calls and online requests. These proactive efforts from families and school staff would assist in keeping planned bus schedules versus actual bus schedules more aligned on opening day and throughout the year. Bus stop times and bus numbers would not vary as much and adjustments in family schedules would lessen.

Only an estimated 70% of the total assigned students actually use transportation services, although CMS STO schedules about 85% of the total student population. These assignments are primarily based on the information gathered through the spring and summer transportation registration process. Many

families choose to retain bus schedules “just in case” they may ever need it. While there is no rule against this, families need to understand the potential negative impact on bus schedules for the children who do use the service regularly. This 15% variance of planned versus actual is the primary factor for inconsistent schedules, longer ride times, lack of accurate bus schedule information and, to some extent, degradation in customer service. Eligible students may “sign up” for services at any time during the year if arrangements change and families need regular bus service. An electronic transportation request form on the CMS Web site can be used to obtain these services at any time after the opening of schools.

In the past two years, the implementation of a GPS unit on all school buses has allowed more accurate accounts of the actual versus planned schedules and updates of the route directions. Customer service to schools and families have significantly improved with real time data available to all transportation staff members, City View call center agents and CMS Law Enforcement.

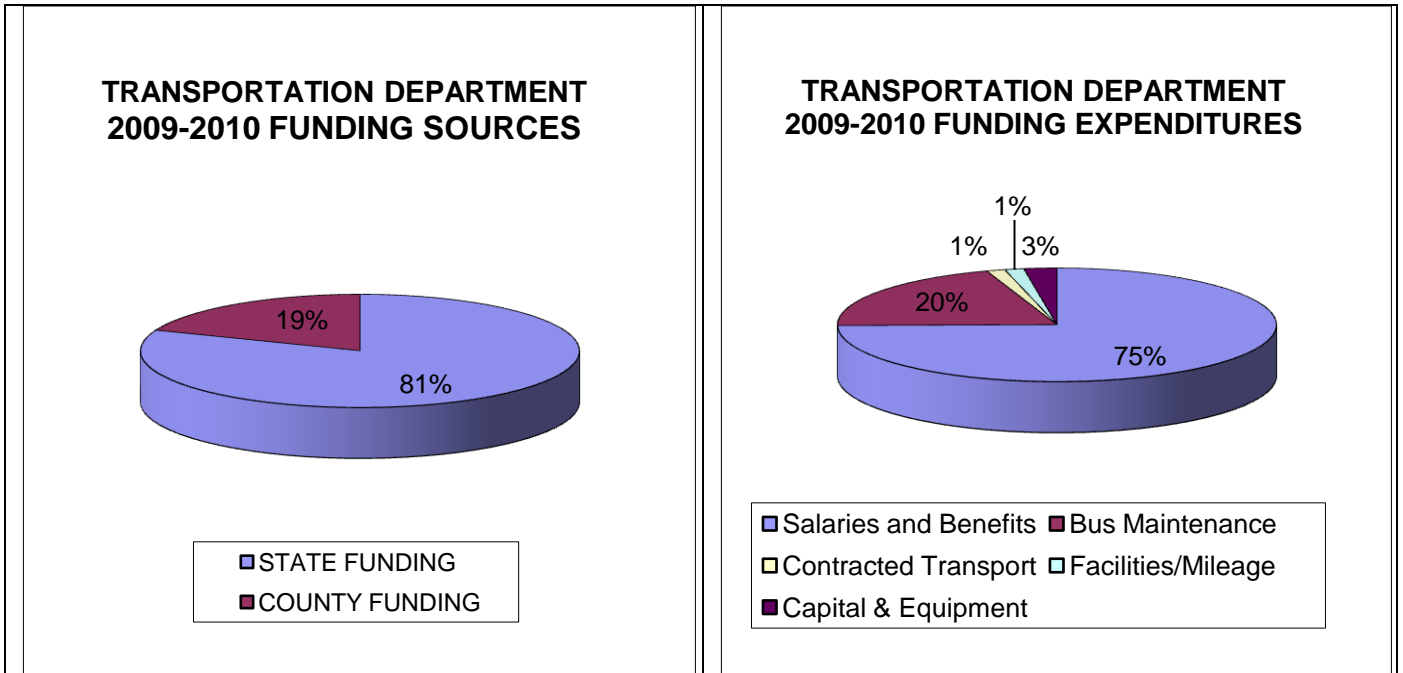
While these bus stop changes are occurring, CMS STO is continually attempting to balance time, distance (ride times), assigned student loads versus bus capacity, and adjusting schedules for students assigned to every bus stop, bus run and bus route. Optimization and efficiency should not compromise the importance and consideration of safety and rationality for all aspects of the transportation operation and service delivery. For example, buses are manufactured to transport a defined capacity of students. ***Balancing the amount of time available to deliver students to school combined with the total distance the bus can travel geographically to arrive at that school in a timely fashion may limit the efficiency of student load per bus, but it becomes effective if that same bus can serve more than one school.***

Any piece of a puzzle that does not fit or is not present alters the total picture. The same applies to transportation services. Just to name a few, driver and other staff vacancies and absences, student discipline issues, traffic congestion, street construction projects, limitations of school parking lots to properly load and unload, loading and unloading procedures by school administrators, mechanical breakdowns, student behavior issues on the bus, and accidents will likely alter the scheduled delivery of services. The ultimate goal is to accomplish these daily trips in a safe and timely manner, and to account for every passenger.



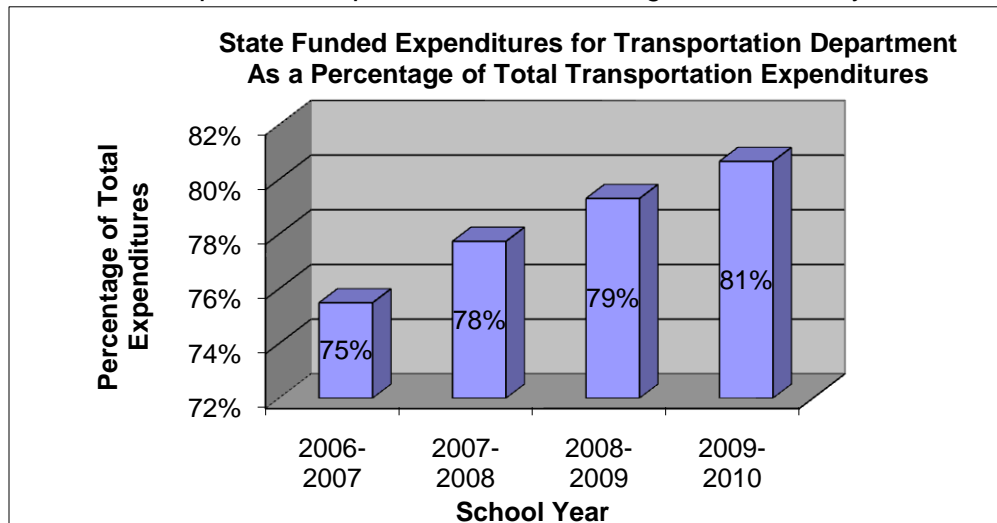
## DEPARTMENT FUNDING, BUDGET, AND EFFICIENCY

CMS STO is primarily funded by State of North Carolina allocations designated for pupil transportation operations. **In 2009-2010, an estimated 81% of the CMS STO expenditures of \$58,956,254 were state funded.** The block grant funding allotment from the state is distributed among the department budget to support all facets of transporting students to and from school to include salaries and bus maintenance (includes parts, fuel, oil, tires, etc). Below, the chart to the left shows the percentage of local and state funding sources. The chart to the right shows the percentage of total expenditures for each funding category.



### STATE FUNDING

Due to recent operational efficiencies and reduced overall operating expenditures *the percent of state funding to the total transportation expenditures is increasing* as indicated by the following graph:



## STATE FUNDING FORMULA

The State of North Carolina determines each LEA's transportation appropriation or block grant using a funding formula that is based on a calculated *budget rating* derived from the previous year's adjusted cost rating, bus rating and efficiency rating. Each school district's transportation operation is evaluated with respect to the *number of buses operated; number of students transported and total eligible state and local expenditures (eligible expenditures are ones that correspond to a state object code for PRC 056 and apply to to/from transportation for grades K-12).*

In addition, data, such as average distance of students to school, elevation and pupil density is gathered to "level the playing field" which, according to the state, allows for an equitable county-by-county comparison. The budget rating is derived through a linear regression formula. It is then multiplied by the total eligible state and local expenditures (the funding base) for the prior year to determine the amount of state funding for the current year (before any applicable additions of contingency funding or legislative increases). Final allotments for pupil transportation from the State of North Carolina are not usually appropriated until after new budget ratings are calculated in December.

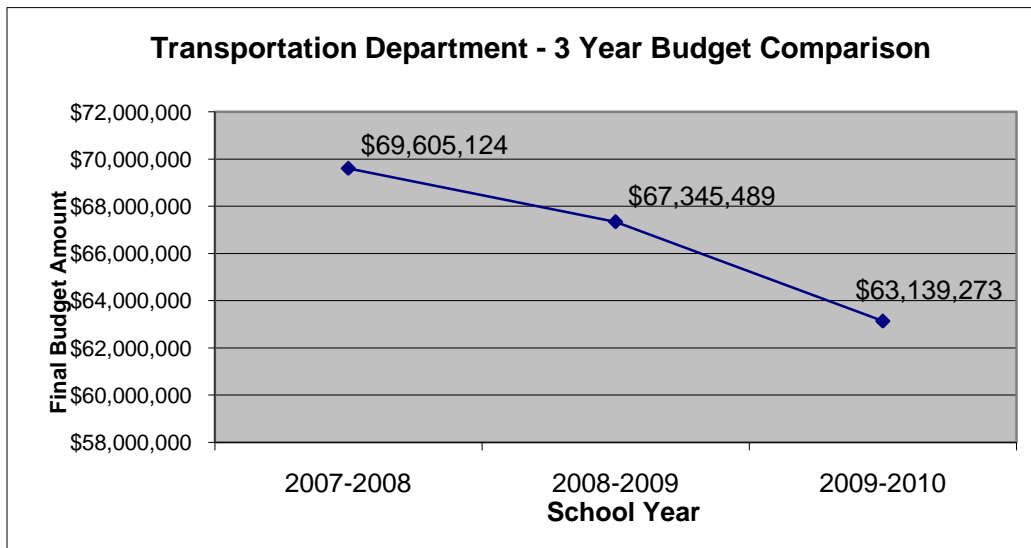
A budget rating simulator software is available from the state to enter updated number of students transported, number of buses operated 91 days or more, and total local and state eligible expenditures from the prior year. *CMS STO local expenditures are capped* for purposes of calculating the final budget rating. Therefore the total amount of eligible local dollars spent to support to and from transportation is not considered in the funding base. It is also important to note the calculated simulator budget rating generally varies from the final model budget rating, of which the higher of the two ratings determines the final state dollar allotment. Why? One major reason is because the simulator software utilizes last year's *frontier efficiency rating* for all transportation operations in North Carolina's 100 counties. LEAs that operate at the lowest cost per student transported and/or operate the fewest buses per 100 students establish the "efficiency frontier" and all other LEAs are rated relative to this frontier. In recent years the frontier has become more unpredictable and has lessened the accuracy of the projected CMS STO simulator budget rating. Another contributing factor for variation in the simulator versus model rating is some of the local and state eligible expenditures are projected amounts at the time of entry due to the cap on local expenditures and unknown legislative increases or student growth adjustments.

For further information regarding the details of the state funding formula process and calculations, please refer to a power point presentation by Derek Graham, Section Chief of DPI Transportation Services found in [EXHIBIT D, page 57](#). In addition, EXHIBIT D includes a letter generated from a meeting with CMS staff in January 2009 regarding the funding formula and the potential impact if the no transportation zones were to be expanded to the fullest extent of the law (up to 1.5 mile radius around a school).

## BUDGET

A complete Requested Budget is prepared each year by the Transportation Department. This Requested Budget is based on budget projections which consider three year historical budget actual expenditure data, growth factors for the district and department, current economic conditions, current needs, and other related data including the Consumer Price Index (CPI), Producer Price Index (PPI), and fuel pricing forecasts by the US Department of Energy. Budgeting for new initiatives and positions as needed for growth are also considered. Zero-Based Budgets are prepared for all asset, equipment, and service-related budget codes. This Requested Budget is then reviewed, revised, and approved by the Associate Superintendent of Auxiliary Services, the CMS Budget Director, and the CMS Chief Operating Officer before becoming a part of the total CMS Requested Budget Proposal.

The Adopted Budget for the CMS STO is monitored within the Transportation Department throughout the year for all expenditures versus appropriations versus prior year spending. ***Due to recent declining economic trends, operational efficiencies, quality management techniques and tighter controls on spending, CMS STO has accomplished a reduction of over \$6M in the total department budget and actual expenditures over the past 3 years.*** (See chart below)



During the fiscal year, the CMS STO monitors all state budget revision notices for additional state budget allotments for fuel, legislative changes, or other contingency funding. As a department of a school district, CMS STO has some advantages in buying diesel fuel for school bus use. The department buys fuel on state contract and is not subject to federal or state excise taxes which save an average of \$.40 cent per gallon.

### **CAPITAL IMPROVEMENT**

#### **Capital Replacement Vehicles**

In accordance with the defined state vehicle replacement schedule and guidelines, the State will replace district-owned yellow school buses and approved service trucks, fuel trucks and wreckers based on the following criteria:

- Age of vehicles
- Mileage of vehicles
- Type of bus engine
- Condition of bus
- Availability of state appropriations
- Unique circumstances about a given bus

*It is important to note the school district must initially purchase these vehicles with local dollars. These vehicles can include buses and service vehicles in support of K-12 transportation. Once a vehicle is replaced, the state “owns” the vehicle and, in the case of buses, the bus is typically placed on the school district’s spare bus line. CMS maintains approximately 10% - 12% of the total fleet as spare operating buses. Tort claim insurance for state-owned capital replacement is provided by the State Attorney General’s Office. There is no direct cost to the school district for accident claims paid in these cases.*

## **Capital Outlay Vehicles**

A school district may purchase vehicles and increase the size of the fleet that provides school transportation. The need for this action is generally the result of growth, opening/closing of schools or redistricting. The district is given this authority under Statute 115C-249(a). The purchase order request for such additions is reviewed by NC Department of Public Instruction (DPI) Transportation Services. The purchase of capital outlay buses, yellow or activity, and other vehicles to support student transportation is locally funded.

## **Activity Buses**

All activity buses are strictly purchased and replaced by the local school board. While the state does not replace this fleet, the required compliance for preventive maintenance and inspection schedules apply as they do for all other bus and service fleet. Insurance for locally owned and operated vehicles, to include activity buses, service vehicles, and local administrative vehicles, is provided through the Division of Insurance and Risk Management. There is a cost associated for the school district for claims paid in these cases.

## **Facilities Improvement and Expansion**

Although CMS STO does not fund renovations or new construction, there are many capital improvements and recommended expansions of facilities that need to be addressed.

These needs include building a full turnkey maintenance and administrative complex (bays, tire room, mini parts room, training room, defensive driving course and administrative offices) at Northpointe and Downs Road staging facilities. Expansion of sites strategically located throughout the county should be identified and built to support district growth during the next 10 years. Existing area offices need up fitting and expanding.

## **CLEAN AIR QUALITY FUNDING AND INITIATIVES**

In recent years, CMS STO has been a leader in the North Carolina pupil transportation industry, supporting initiatives for clean air quality issues surrounding school buses. In November 2005, the department was recognized by the Carolinas Clean Air Coalition (CCAC) with an Airkeeper Award for efforts taken to reduce potentially harmful emissions. The district also was praised for participation in CCAC's recent diesel school bus study in cooperation with the Southern Alliance for Clean Energy to evaluate air quality inside the cabins and outside air quality, using different retrofit technologies and fuels. Other initiatives of CMS STO include:

- applying for and receiving various grants for low emissions retrofit equipment to include over 250 diesel oxidation catalyts (DOCs) and diesel particulate filters (DPFs)
- receipt of grant to support GPS units to monitor bus idling
- operating 4 CNG buses
- utilizing ultra low sulfur diesel (ULSD) in all buses and heavy duty vehicles
- operation of one of two hybrid electric buses in the state
- repowering older model engines

*Awarded grants over the past 5 years have totaled more than \$1M and efforts are continual to expand these opportunities.*

## PROFESSIONAL DEVELOPMENT – A CRITICAL INVESTMENT

Significant contributors to any organization's success are the investment in continual education and professional growth of a very important asset – the employee. Time and proper funding to properly develop existing staff will ultimately build and retain a competent, strong and stable team. CMS STO dedicates budgeted resources (although limited) to offer hands-on and/or classroom setting instruction for specific categories of employees. Examples of ongoing instruction and types of professional development that has been offered are:

### **Bus Drivers**

Bus Drivers are a unique category of employees because they must obtain certification and a CDL license to drive a school bus prior to employment. Every driver applicant must obtain a Class B Commercial Driver's License with a Passenger (P) and School Bus (S) endorsement. To become licensed, candidates must attend a four-day classroom driver training session and earn a passing grade on four written tests. Once they have completed the written portion of the training, candidates must pass a road test with the Department of Motor Vehicles trainer. After successful completion, the candidate must purchase the appropriate commercial driver's license. All time and financial obligations to meet this pre-employment requirement are at the applicant's expense. The average cost for a three-year CDL license to drive a school bus is \$93.

After the initial licensing, school bus drivers must be recertified through the DMV every three years due to new legislation. This recertification process evaluates the bus driver's knowledge base and skill set required to continue transporting students.

Additional measures to retain and enhance bus driver skills and performance, professional development workshops are offered annually at the Opening of Schools Transportation Conference and at mandatory safety training sessions scheduled throughout the school year. While the work-related topics change from year to year, examples of training provided include:

- "Handling Aggression with Knowledge" (HAWK) strategies to handle stress as well as student behavior through self monitoring and self control while operating the school bus
- Customer Service Training – basic customer service standards for communicating with parents, students, and school administrators
- Exceptional Children disability recognition, wheelchair securement training, and sensitivity training
- Introductory Spanish
- Diversity Training
- Emergency evacuation
- Operation School Bus Watch – nationally recognized program designed to train bus drivers in basic awareness for possible terrorist threats or suspicious behavior on the route
- Operation Lifesaver – training for proper safety precautions when operating any vehicle around rail grade crossings
- Student Behavior Management Training; PBIS – Positive Behavior Intervention System
- Student Allergies & Basic First Aid
- Pre Trip/Post Trip Procedures

### **Maintenance Staff**

The maintenance of school buses requires training in the latest technology to include computer software and hardware as well as equipment adjustments due to changes in bus specifications by the state. To the extent possible, technicians and other staff are provided hands-on and classroom training by NC DPI, school bus manufacturers, and vendors specialized in electrical, braking and air conditioning systems. Instruction is also provided by NC DPI on the fleet management system, Business Information Systems Portal (BSIP)/SAP R/3 for all staff responsible for vehicle fleet and inventory.

### **Central Office/Area Office Personnel**

Central Office and area office staff participates in a variety of professional development offerings to include:

- Customer Service
- Diversity Training
- TIMS
- Educational Journey
- Lawson
- MMIS (inventory tracking system)
- BSIP/SAP R/3
- Accident Reporting Procedures
- Evacuation and Crisis Management
- GPS
- Time Management and Attendance

## **TECHNOLOGY TO SUPPORT THE DEPARTMENT'S ACCOUNTABILITY & INTEGRITY**

### **1. Business Call Management (BCM) System (Department Users)**

The Business Communications Manager is installed on the Nortel telecommunications system at the main transportation office location at Airport Center. The key technologies of this system include support for both IP and digital telephony, interactive voice response, auto attendant, unified messaging, and tracking and managing call activity. This system was fully installed in August 2007, and the functionality is still being reviewed and implemented. This initiative was implemented to improve customer service.

The primary component that has been utilized to this point is the monitoring of call traffic in the main call center during the opening weeks of schools. This information and analysis will be useful and proper management of call traffic to include the support for additional and experienced staffing needed during the peak call patterns in the cycle of our business operation.

### **2. Educational Journey (Department and School Level Users)**

Educational Journey is a comprehensive online field trip program designed to track field trip requests, related approvals, scheduling/logistics, billing and receipt of payments. Use of this program is required in order to schedule a CMS school bus or activity bus for a field trip or other events. School and/or department personnel requesting use of equipment and/or drivers to serve a trip must complete the required information and submit it two weeks prior to the trip. A hierarchy of approvals for the type of trip and the funding source must be acquired prior to a trip being scheduled by CMS STO. Field trips are

scheduled on a first come first serve basis based on availability of appropriate resources. Data entry and reporting tools are extensive in this application. A comprehensive online user manual is available on the CMS Intranet for internal users with an authorized user login approved by CMS Transportation.

Field trips must be tracked in case of emergencies and for safety, logistics, and proper approvals/oversight. CMS must accurately reimburse the state each month for use of school buses for purposes other than to/from school (K-12) such as field trips. The Educational Journey Application provides a record of this type of use for buses and staff.

### **3. Fleet Management System - BSIP or Business Systems Information Portal (Department Users)**

CMS STO is required by North Carolina Department of Instruction (NC DPI) to utilize the state furnished fleet management system owned by the North Carolina Department of Transportation (NCDOT). NC DPI chose to utilize only certain modules of the SAP R/3 software application to maintain fleet vehicle information, generate and track preventive maintenance and repair work orders, maintain parts inventory (is not used for procurement, only receiving and issuing stock), and for data entry of all labor, parts, supplies, fuel, oil and antifreeze issued to buses, service and administrative vehicles. State fleet preventive maintenance schedules (based on mileage) and monthly inspections are generated from BSIP.

### **4. Lawson (CMS District-Wide Users)**

Lawson is a Web-based application CMS departments and schools use for procurement, budget and accounts payable. A district wide effort is underway to integrate the department's current Synovia GPS time management component with the Kronos Time and Attendance system and eventually with the district's Lawson Payroll system.

### **5. MegaTrak Automated Fuel Management System (Department Users)**

The MegaTrack Fuel System, manufactured by Megatronics International Corporation, tracks all types of fuel dispensed using host computers, micro control units (MCU) and programmable data keys. This system is designed to withstand heavy use, weather and other environments and has built in security through authorized user login and passwords to monitor use and gallons pumped from the island tanks at two bus staging facilities and the bulk fuel trucks. The MCU mounted on each island pump and fuel truck is an accounting unit designed to record the transactions for each hose on the dispenser and has the ability to track fuel consumption, identify vehicles dispensing and the vehicle receiving fuel. The system has various reporting options to include detailed daily, weekly, monthly, quarterly or yearly transactions. The fault tolerant design allows the "swap out" of MCUs in a matter of seconds if the primary MCU fails to ensure continuous tracking to the extent possible.

### **6. Onvicord Total Call Recording System (Department Users)**

Onvicord, a product offered by Onvisource, is a call recording, monitoring and quality assurance software. CMS STO has installed this software on more than 100 phones in the department for the primary purposes of improving quality of customer service. OnviCord captures and stores the call activity for a single point of access in a server located at Airport Center. It enables authorized users to monitor calls in progress for quality assurance, training, or evaluation from virtually any location. It also allows monitoring of historical calls by searching for the recordings based on caller number, date, time and other identifiers that can be defined.

This software has been used to monitor many calls that were claimed to be deficient in quality customer service. The finding was just the opposite; the caller received respectful customer service, but perhaps not the answer they wanted to receive. Good customer service is sometimes confused with always giving the answer the customer wants to receive. Quality customer service in CMS Transportation is serving more than 115,000 students and their families with timely, respectful and professional responses resulting in consistent delivery services.

#### **7. Transportation Information System (TIMS) (Department Users/Statewide Users)**

TIMS (also known as Edulog) is state-mandated pupil transportation software that allows the user to maintain a map of their district and to enter parameters such as new developments, street addresses, direction of travel and speed limits for buses to actually travel. The database contains the entire student population, boundaries for schools, school bell times, arrival and departure from school times and more. Stops are created by the user for students and then runs are created from the stops for each school. The system generates driver directions for the runs based on the stops assigned and the parameters of the map. Routes (multiple runs assigned to a bus in the morning and afternoon) are entered and linked with driver directions. The system allows the user to generate and print numerous types of reports from student rosters to run and route reports that are distributed to drivers daily.

The student information in this program is updated daily from eSIS. An extensive series of maintenance programs must run nightly to update daily work and recalculate run directions. An important feature of the program is to maintain accuracy of the mapping software in order to accurately match student addresses for proper scheduling. CMS STO maintains a near perfect match of all students in the district due to expert skill and detailing of the system geocode.

TIMS information described above is also used as the foundation for bus route development. Route optimization scenarios are generated and used as a basis for route pairings and to forecast required resources and potential adjustments needed in bell tiers.

#### **8. Every Info (Department and School Level Users)**

Every Info is a Web-based application which provides data entry, inquiry and reporting capabilities for provides a comprehensive notification and tracking system for students' bus schedules.

- imports from TIMS nightly and generates requests for new students and students that have a change in school, address or transportation eligibility to include McKinney Vento status. Routing Technicians begin the bus scheduling process based on these notifications.
- notifies the Transportation Specialists Area offices which children have been assigned to existing stops and which need to have an effective date set to begin services. This also triggers bus stop and/or bus run changes to forward to drivers.
- notifies the Routing Technician or Transportation Specialist of any online Transportation Service Request Forms for Alternative Stop requests or Unsafe Stop concerns that require review and action.
- allows each school to follow the path of the child through the transportation process and allows them to print boarding passes for students when the requests appear in the approved status. The boarding passes indicate the stop assignments, bus number and pick up and drop off times. These boarding passes serve as official notification to the child and parent(s) of approved services and should be sent home through the schools.
- provides audit reports for the status of each request (in process, pending, approved, overdue, etc.)



**9. Synovia GPS System Solution (Department and Various Level Users)**

A full implementation of GPS units were completed in 2008-2009 on each yellow bus, activity bus, fuel truck and service truck in the CMS STO fleet. With the use of the Synovia GPS software and management solution, CMS STO staff is able to track the fleet in real time, compare actual versus planned bus routing, monitor vehicle idling, enhance accountability of time management, dispatch with a higher degree of timeliness, and provide immediate and accurate customer service. Within the first year of full implementation the department realized over \$1.5M savings in driver overtime and reduced idling time on school grounds by 50%. These and other significant operational improvements have been possible due to the supportive data supplied through this technology.

CMS Transportation is in the process of installing mobile data terminals (MDTs) on each bus which will allow drivers to electronically capture their work time. These units will identify each bus number and have the capacity to enter the number of students entering the bus at each stop and eventually may become a tool for individual student tracking as they enter and exit the bus. This bus route and student data will interface with the Transportation Information Management System (TIMS) for comparative analysis of real time versus planned scheduling. It is anticipated all buses will be equipped by the end of the 2009-2010 school year.

**10. Video Surveillance Camera Systems (Department and School Level Users)**

CMS Transportation completed installations of 247 Security Digital Camera Video Systems on 170 yellow school buses in February 2008. In less than a month after the initial installation, school administrators and transportation staff observed and corrected inappropriate behaviors on several buses. Proper student behavior and positive interaction of students and drivers generate and maintain safe transportation for everyone. These camera systems have proven invaluable and are assisting in accomplishing the business improvement plan strategies outlined in the BOE Oversight Report to improve the overall safety and security for our children.

**DEPARTMENT REVIEW AND ASSESSMENT**

**PREVIOUS STUDY AND RESEARCH**

**External Committee and Consultant Reports**

During the years, a number of CMS transportation department studies and/or overviews (see below) have been conducted by a variety of agencies, task force/committees and/or consultants.

- 1) October 2006 Transportation Consultant Report - Management Partnership Services (MPS), Inc. Rockville, Maryland**  
About MPS

Management Partnership Services is an independent, third-party company that provides professional management services to student transportation and government fleet management organizations across the United States. MPS employs consulting professionals in offices around the nation who possess highly relevant industry experience and analytical skills that synthesize operational data to develop unique and highly informative analysis. Staff has experience as transportation directors, facility managers, logistics professionals, transportation contractors, program auditors, and fleet managers.

## Highlights and Excerpts of the Report Summary :

The operations plan that MPS developed focuses on developing structured system improvements that will provide a road map for the transportation department as it adapts to the rapid growth and changing needs of the school system over the next 10 years. It pointed out many positive aspects of the operation and also areas in need of improvement. It describes the changes required in each of five major operational areas which, when completed, will strengthen the department's effectiveness and lead it toward the consistent delivery of high quality, safe, and cost effective transportation services to the school community.

“Before outlining areas of deficiency, it is important at this juncture to point out the positives in this operation. First, the department is very adept in the use of route planning technology to develop its bus routes and schedules. CMS has an extraordinarily complex transportation mission, and to the degree that it has accommodated the varying and extensive service demands made on it, its performance in this area is certainly better than it might otherwise be.

Second, the department has been able to operate with a large degree of cost effectiveness despite the difficulty of its mission. Overall, the cost of transportation, when viewed on per-student basis is well within the range of national norms; this despite the fact that most of these peer systems do not have anything that approaches the logistical complexity brought on by extensive non-traditional educational programs.

Finally, the department has shown itself to be remarkably resilient in meeting the daily operational demands of the system. Despite limitations in terms of inadequate facilities, thin line management staffing in the transportation areas, and under-equipped and obsolete maintenance centers, the students *do* get to school, and do so safely. This is due largely to the dedication and work ethic of staff.

### **(a) Conclusion: What the Findings Indicate**

As the school system has grown, the sheer size has created management challenges that call for systemic change and need improvement. The overall impression is of a system that is organized for operations of a much smaller scale; one that has adapted to growth incrementally and is overdue for an organizational overhaul. The present facilities and organization structure are increasingly difficult to manage, and will at some point in the near future become untenable. The size of the CMS transportation system dictates that line management (fleet support and daily bus operations), and staff management (central management and support services) be clearly delineated in a consolidated, regionalized configuration. This will require investments by CMS in facilities, equipment, staff and technology. However, to continue to avoid this investment will result in both progressively more degraded service levels, and growing costs as the department is forced to continue in a reactive mode, applying “Band Aid” solutions to increasingly entrenched problems and growing service expectations.

Finally we find no cost benefit to contracting all or any portion of the transportation system and therefore do not recommend this option. Over a ten year period, we estimate that contracting transportation would cost approximately \$18.3 million more than under the current LEA-owned structure. Moreover, the department currently has the core expertise and experience to manage the transportation program effectively. The fleet is provided (replaced) by the state in perpetuity under the present statutes. The need for improved facilities is a potential concern. However, with a growing school system like CMS, the cost of capital construction is already an ongoing enterprise, the school system owns land now, and the amortized capital and financing cost for new and remodeled

transportation facilities would not be fully avoided, since a bus contractor would have to absorb (and pass along through its fee structure) similar costs to purchase or lease staging sites and facilities.

**(b) Recommended Corrective Action**

The Transportation department did not arrive at its current position overnight. It has been an evolutionary process over a number of years. It is essential to understand that establishing a new operational baseline will also be a process that will take a number of years to bring to fruition. There are several short term solutions that will immediately improve the level of service delivery, and that should be pursued aggressively in the coming months. Some possible near term (FY2007) changes that are designed to improve service delivery include:

- *Establish a quality assurance team. It is important that this group participate with the inception of the overall transportation operations plan.*
- *Place a substantial portion of the routing technicians at the (present) area locations to provide better support staff coverage and improved integration of real-world route data within TIMS.*
- *Review transportation service parameters and policies as these pertain to service delivery. These include such items as bus stop location criteria, maximum ride time parameters, daycare transportation policies, and others.*
- *Develop standard operating procedures focusing on intra-district and public communications and complaint resolution. This should integrate the telecommunications and web-based initiatives that are currently underway.*

However, to address the long-term challenges faced by the transportation department will require some intensive planning to flesh out a detailed road map from which to implement the needed changes over the next five years. The *Transportation Operations Plan* companion document to the original study provides a realistic framework for that plan based on the current business model. The immediate task will be to debate this model and modify it as necessary such that CMS can systematically operationalize it in the coming years. The key recommendations contained in the operations plan are to implement the following improvements:

- *Implement a permanent quality assurance and planning team to provide oversight, audit, and planning implementation activities throughout the transportation department. This team should not be an adjunct to any of the operational areas of the department, but rather should have direct reporting responsibilities to the executive director of transportation. This will provide sufficient autonomy and separation to ensure that department objectives are being met, and that both strategic and short term goals are being properly integrated across different operations within the department.*
- *Change the overall organization structure to comport with the decentralized framework of the transportation department, relocating more operational personnel at a smaller number of field operations to achieve both economies of scale and improved coverage and communications.*
- *Decentralize and consolidate the present transportation structure into six transportation areas with complete responsibility for transportation operations, bus staging and maintenance facilities at each compound.*

- *Continue to reengineer the telecommunications system, including complaint tracking and response, and inculcate a more responsive, customer service oriented culture within the department.*
- *Develop clear transportation policies and guidelines and reengineer the school bell times and bus routing structure to improve service delivery while minimizing the need for additional fleet resources.*
- *Restructure the fleet maintenance processes, including constructing modern repair facilities, instituting better management accountability and control over cost and quality, and modifying or replacing automated fleet management information systems to meet the needs of a large and dispersed school bus fleet.*
- *Retain the current in-house transportation program. Limited outsourcing for certain specific functions in fleet maintenance, such as vehicle paint and body repairs, is a viable option that should be pursued.”*

Progress on these recommendations and other initiatives are discussed throughout the report.

## **2) 2005 Citizens’ Task Force Report**

Highlights: The goal of the Task Force was to oversee a study that would address and recommend the most advantageous governance model and management structure to allow the Board of Education to focus on the challenges of its core business: educating all children. One such recommendation was to assess the effectiveness of each business operation within the district and to entertain the proposition of outsourcing these functions.

Progress: The Auxiliary Services Division is assessing all major business operations to clearly define the purpose and mission of each operation, as well as assess effectiveness and efficiencies in part by measurable key performance indicators (KPI) with targets for satisfactory service levels for each KPI. Business improvement strategies are being defined, recommended and implemented as approved to ensure a method of achieving targeted business ratings and ultimately best practices within each operation such as CMS STO.

## **3) 2004 CMS and Chamber of Commerce Efficiency and Effectiveness Review Transportation Review Team Leader: Bobby Drakeford (The Drakeford Company)**

### Key Findings – Effectiveness of Current Activities:

- 85% of all buses arrive within a 15-30 minute window at schools (based on on-time arrival reports).
- 94.5% transportation efficiency rating as defined by NCDPI Transportation. Above state average rating of 93%.
- 50 installations of emission reduction devices completed – 50 more are scheduled for installation.

### Highlights of Key Recommendations:

- a) Explore Global Positioning Systems**  
Benefits / Areas of Opportunities

- Ensures buses on proper routes and on time
- Assists in driver compensation issues
- Increases effectiveness for maintenance
- Provides enhanced method of vehicle locator in cases of emergencies/evacuations

Progress: Full implementation of GPS units was completed in 2008-2009

**b) Route Optimization (via Spring Registration)**

Benefits / Areas of Opportunities

- Pre-registration allows CMS to better plan routes and reduce use of loaner buses
- Significantly reduces routing delays / schedule changes inherent in the start up of a new year

Progress: Intent to Ride information is surveyed each spring and used in route planning. The trends reveal this process has avoided scheduling services for an estimated 10,000 students eligible who do not utilize CMS STO services.

**c) Charlotte Area Transit System (CATS) Collaboration**

Benefits / Areas of Opportunities

- Explore transportation of CMS students to after-school opportunities
- Better utilization of CATS associated with the transit corridors
- Review possible joint use of existing or future maintenance and fueling facilities

Issues/Implementation

- CATS routes are constrained by federal regulations. See [EXHIBIT E, page 70](#) – Brochure explaining Federal Regulations prohibiting CATS services exclusively for school students)
- Brad Miller, CATS operations manager states: *“In a nutshell, we can (and do already on a limited basis) provide student transportation on our regular CATS buses that are open to the general public and charge the normal fares. We can even set up special services that go by schools (on public streets) as long as the services are also open to the general public and charge normal fares. What the Federal Transit Administration (FTA) doesn't allow us to do is provide any service exclusively for students. So we can't put special signs on the buses or go onto school property and restrict other members of the public from getting on or off.”*
- CATS is unaccustomed to the accountability expectations for school children.
- CATS buses are not properly equipped with NC specified safety features required for individual passenger stops.

Progress:

- A core team of CMS STO staff and CATS staff have met regularly during the spring of 2010 to discuss the options for partnership between the 2 agencies and moreover the options that CATS may be offer CMS families and students if they elect to use the CATS services.
- The Director of CATS has met with the CMS Superintendent to discuss the efforts being made to ensure the proper attention is being given to define the agencies options and limitations for providing school children transportation services.

- A power point presentation providing a comprehensive overview of the core team's findings and recommendations was given to the CMS Superintendent of Auxiliary Services and the CATS Director of Operations in June 2010.
- Plans are underway for CATS to enhance marketing available services for CMS students and families if they elect to use the public transit system as an optional delivery service to and/or from school or related events. This information will include pricing and a trip planner.

**d) Additional Bus Staging Facilities / Centralization (north and south end of county)**  
Benefits / Areas of Opportunities

- Potential for reduced travel time resulting in more efficient and effective maintenance and area operations
- Enhanced security for equipment and staff
- Easier to ensure OSHA and EPA compliance

Progress: This recommendation requires capital investments which are included, in part, in the district's capital improvement plan. Minimal progress has been made. Continued focus on the inadequate working and storage conditions must be addressed for quality of service, safety, work schedules, OSHA, EPA and other compliance issues.

**4) 2002 McKinsey Report**

Article II. Key Recommendations: While CMS STO was not the primary focus of this district-wide study, recommendations focused on pursuing fuel efficiency tactics, such as reducing idle time.

Progress: CMS Board Policy EEC regarding Vehicle Idling was adopted in January 2006 which states *"In an effort to reduce emissions accumulating from school buses and other district vehicles and to conserve fuel, save money, and reduce air pollution, the Charlotte-Mecklenburg Board of Education prohibits all unnecessary idling by vehicles owned by CMS. In addition, the Board prohibits the warming up of school buses for longer than five minutes, except in extraordinary circumstances or circumstances beyond the control of the bus driver."* In addition, to assist in monitoring bus idling time, a phased installation of GPS systems was completed in 2008-2009.

**Internal Methodology and Research -Comparison of transportation services and levels of services**

In recent years, CMS transportation staff conducted site visits, invited LEA representatives to Charlotte, contacted and researched other district websites in an attempt to better understand and compare the dynamics of other school districts in relationship to student transportation. These districts include Boston Public Schools, Gwinnett County Schools near Atlanta, Atlanta Public Schools, Chicago Public Schools, Guilford and Wake Counties in North Carolina, Broward and Duval County Schools in Florida, Clark County Schools in Nevada, Prince Georges and Fairfax County Schools in Virginia.

The discovery process primarily focused on the districts' demographics, aspects of the student assignment plan and levels of transportation eligibility and services. *The primary conclusion drawn from these studies is that CMS has one of the most complex transportation systems with very generous transportation eligibility and levels of services offered to students attending school types ranging from non-magnet, magnet, Pre K and alternate program settings.* For example, CMS offers transportation

services to 11 full county magnet schools and 45 zoned magnet schools/programs within four large geographic transportation zones. In addition, CMS offers countywide and zoned transportation for alternative programs, exceptional children programs, Pre K and other specialized programs such as the Performance Learning Center and Midwood High.

Another significant difference found during the research is that many large urban school districts such as Clark County (Nevada), Fairfax County (Virginia), Prince Georges County (Maryland) and several in Florida do not offer transportation within a one-mile or two-mile radius of the attending school. Conversely, CMS offers transportation services to all eligible students who do not live within a defined “walk zone.” *An estimated 50% of CMS schools have “no transportation zones” and are generally no larger than .5 mile in radius surrounding the school.* According to NC Public School Law, Article 17, section 115C-246(b) no student living within the assigned school is eligible for transportation services. In part it reads as follows: *“Each public school bus shall be routed so that the bus passes within one mile of the residence of each pupil assigned to that bus. A pupil who lives one and one-half miles or more from the school to which the pupil is assigned shall be eligible for school bus transportation.”*

The chart below indicates the existing number of students (2,430) in the 2009-2010 “no transportation zones” compared to the number currently assigned a bus and living within tiers of 0.5 mile, 1 mile, and 1.5 mile radius of ALL CMS schools. *Decisions to consider expanding either the quantity and/or distance for the transportation zones should take into account the impact on the state funding formula.* Primarily state-defined efficiency is based on transporting more students on fewer buses. The chart below reveals approximately 28,000 additional students would lose transportation eligibility that live relatively close to their school (1.5 miles) and generally have shorter bus rides. *Efficiency begins to diminish for services for students living further distances from their attending school with longer ride times, not for those within a close parameter of the attending school.*

	Current No Transportation Zones	Estimated Number of Students Assigned Transportation and Living Within the Following Radius of Their Attending School (This includes All CMS Schools)		
		.5 Mile Zone	1 Mile Zone	1.5 Mile Zone
Avg # Students	2,430	2,537	13,601	27,790

In addition to the above research and evaluation, CMS Auxiliary Services conducted a survey of the top 100 school districts. Of the estimated 60% districts who responded, only 6 school districts indicated they outsource all or any part of transportation services or operations management. These districts are as follows:

- 1) Fresno California – contracts special education services
- 2) Anne Arundel County, Maryland – contracts to and from transportation
- 3) Cleveland Public Schools – contracts 30-40% special education services
- 4) Boston Public Schools – contracts to and from transportation
- 5) Howard County, Maryland – contracts special education services
- 6) Duval County, Florida – contracts to and from transportation

CMS STO is currently contracting certain services or business functions defined earlier in the report, to include certain maintenance functions and a portion of special needs services.

## CMS STO CONTINUOUS IMPROVEMENT PLAN (CIP)

In recent years CMS STO has made significant progress and improvements in many facets of the department and operations. As mentioned in the Introduction section, the foundation of this overview report and the measured progress over the past 3 years stems from the 2007 Transportation Management Board Oversight Report. This measured progress is substantiated by trends and patterns of consistently compiled and analyzed data such as Key Performance Indicators (KPIs) and department benchmarks. *In addition, progress has been realized in implementing many of the recommended business improvement strategies as outlined in the 2007 Oversight Report.* These will be detailed later in this section.

### KPIs, BENCHMARKS AND BEST PRACTICES

Below represents continued KPIs and department benchmarks that largely identify the department's efficiency and quality services, to include best practices among the industry. These KPIs supported the Superintendent's Strategic Plan 2010 and is currently aligned with the Strategic Plan 2014.

<b>Current Benchmark/KPI Review for CMS Transportation 2009-2010</b>						
5. Best Practice	4. Target	3. Acceptable				
2. Needs Improvement		1. Unsatisfactory				
Benchmark/KPI	Ranking					
	Standard	9/30/2009	12/30/2009	3/31/2010	6/30/2010	Rating
<b>FINANCIAL MEASURES</b>						
<b>1. Total Cost Percentage</b> – total cost of CMS STO as a % of total CMS budget.	4% - 6%	<b>5.48%</b>	<b>5.48%</b>	<b>5.48%</b>		<b>5</b>
<i>Performance Standard – within the national average based on data from a nationwide pupil transportation consultant, Management Partnership Services, Inc. (MPS).</i>						
<b>2. Cost/Student</b> – total transportation cost/total expected regular and SE students transported to assigned schools.	\$797 - \$881	<b>\$748</b>	<b>\$756</b>	<b>\$756</b>		<b>5</b>
<i>Performance Standard – within +/- 5% of national average cost based on data from the Council of Great City Schools (CGCS) KPI Survey (Avg for FY 2009 = \$839)</i>						
<b>3. Cost/Mile</b> – total transportation cost/total annual yellow bus miles	\$1.60 - \$3.42	<b>\$2.70</b>	<b>2.82</b>	<b>\$2.82</b>		<b>5</b>
<i>Performance Standard – within the low to high range of the state refund/mile rate as defined by DPI Transportation</i>						
<b>OPERATIONAL MEASURES</b>						
<b>4. PreK-12 Students Transported</b> – percent of PreK-12 students transported compared to total enrollment.	41%	<b>65%</b>	<b>62%</b>	<b>62%</b>		<b>5</b>
<i>Performance Standard - Average percent of students transported per the CGCS. Historically, the percent of transported CMS students to total enrollment has ranged from 62% - 68%.</i>						



5. <b>Average Daily Ride Time</b> – average morning travel time to school	24 minutes	19	15	15		5
<i>Performance Standard – less than or equal to average statewide morning ride time as calculated and compiled by UNC Charlotte Urban Institute (TIMS Service Indicators)</i>						
6. <b>Daily Bus Runs</b> – average number of daily bus runs (trips) per bus route (morning and afternoon).	4.2 runs/bus	4.99 runs/bus	5.04 runs/bus	5.04 runs/bus		5
<i>Performance Standard – greater than the average runs/bus based on CGCS survey data (based on 09-10 20<sup>th</sup> day data)</i>						
7. <b>Bus Stops/Students</b> – ratio of eligible and assigned students to the number of bus stops assigned in TIMS	4	4.41	4.41	4.41		5
<i>students per stop by Performance Standard - CMS STO target is 2-5% increase over prior year with goal of 4 2010 (based on 09-10 20<sup>th</sup> day data)</i>						
8. <b>Average Student-to-Stop Distance</b> – average distance from home location to the assigned bus stop	0.08	0.12	0.12	0.12		5
<i>Performance Standard – greater than or equal to average statewide distance to stop as calculated and compiled by UNC Charlotte Urban Institute (TIMS Service Indicators) (based on 09-10 20<sup>th</sup> day data)</i>						
<b>CUSTOMER SATISFACTION MEASURES</b>						
9. <b>Opening of Schools Customer Satisfaction Survey</b> – Customer = School. It is important to note that not all schools participate in this district survey; therefore this is only a <i>partial measurement</i> .	90.00%	91.96	91.96	91.96		5
<i>Performance Standard - CMS STO Target: Overall Average Response Rate to be High (4) or 90% of possible total score (based on 09-10 Opening of Schools Survey)</i>						
10. <b>Bus Arrival Times</b> – AM and PM arrival times at schools for buses reporting 80% or more during the course of the school year	90%	94.77%	94.67%	97.27%		5
<i>Performance Standard - CMS STO Target: 90% Early and/or Optimal Arrival Times as measured by the Data Dashboard Metric</i>						
<b>STAFFING MEASURES</b>						
11. <b>Bus Driver Staffing Levels</b> – permanent bus driver staffing levels are projected and fulfilled by first day of school.	100%	100%	100%	100%		5
<i>Performance Standard - CMS STO Target: within 95% to 100% of scheduled bus routes have an assigned permanent bus driver</i>						

**ENVIRONMENTAL, HEALTH & SAFETY MEASURES**

<p><b>12. Bus Accident Rate</b> – total number of preventable accidents per million miles driven.</p> <p><i>Performance Standard – Per the National Safety Council, a preventable accident is one that the driver failed to do all that reasonably could have been done to avoid the accident. Target is 15 to 20 preventable accidents per million miles driven</i></p>	15-20	7.8	7.8	6.6		5
<p><b>13. Annual NCDPI Fleet Audit</b> – an inspection of the overall safety condition of a statistical sampling of the fleet audited annually by the NCDPI Field Consultants. The resulting score of these audits are based on defect points (the lower the score the lesser number of safety defects found).</p> <p><i>Performance Standard - CMS STO Target: Meet or exceed the average score for the Western region score</i></p>	26.83	annual rating tbd	annual rating tbd	34.08		2

**BUSINESS IMPROVEMENT STRATEGIES AND PROGRESS**

Among others, the following are recommendations and strategies outlined in the 2007 Board Oversight report to be considered to assist and support in balancing safety, customer service and satisfaction, student academic achievement, operational efficiency, and cost effectiveness of transportation services.

The section below includes those recommendations and strategies that have been implemented within the past 3 years. Included is confirmation of accomplishments and the positive impacts on services, budget and operating resource requirements. Any recommendation or strategy that has not yet been considered or implemented and still remains vital to the continuous improvement of the district and/or department remains under constant review.

**CMS STO Accomplishments and Continual Improvement**

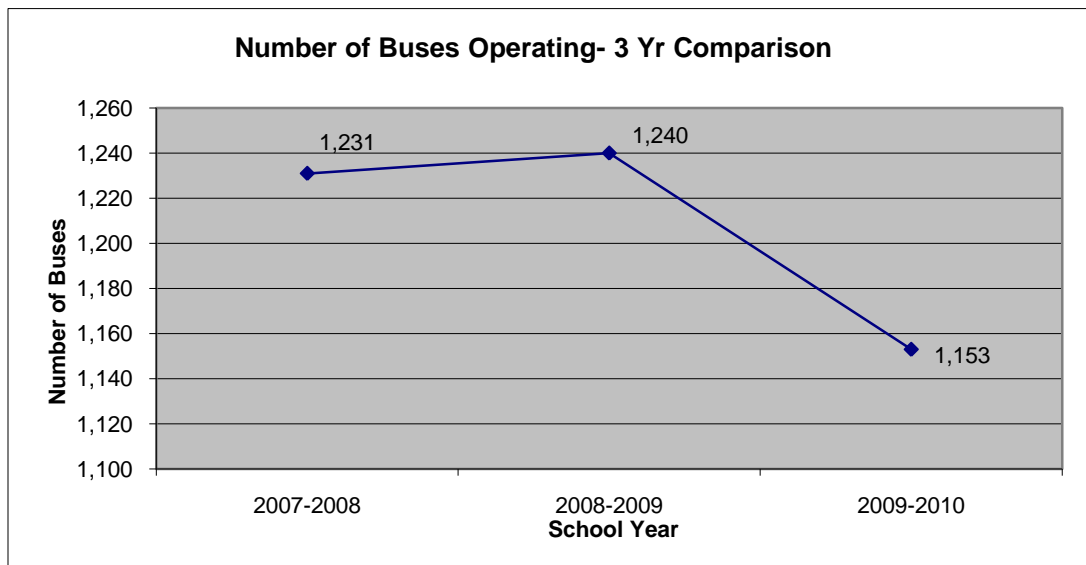
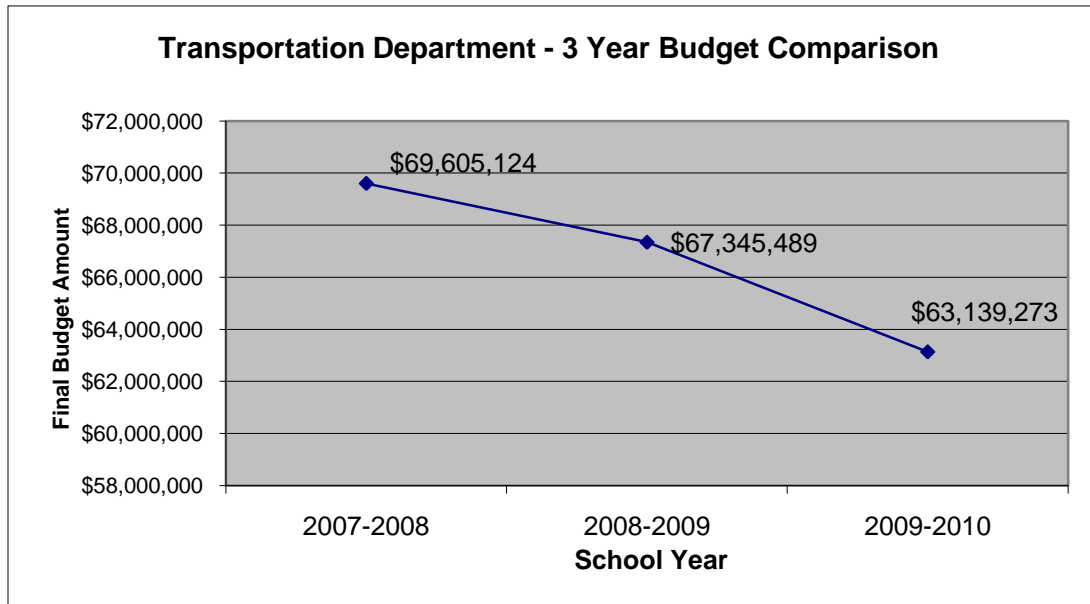
1) Recommendation:

Simplify and improve enforcement of transportation eligibility criteria for students

Strategies:

- ✓ Redefine transportation zones; reinstate use of home school boundaries and magnet school feeder zones
- ✓ Provide transportation for students only residing within their home school boundary or within the magnet feeder zones
- ✓ Eliminate extension of services within the school year for students moving addresses outside of these boundaries
- ✓ Eliminate further approval of grandfathered students with the exception of rising 12 graders
- ✓ Limit transportation for any transfer or reassignment granted unless to a home school or in boundary magnet program
- ✓ Conduct yearly transportation audit to ensure only students eligible are granted services

Results: *More efficient and cost effective transportation services*; overall operating budget and required buses operating 91 days or more during the year have significantly reduced in the past three years – see graph below



2) Recommendation:

Reduce overall student ride times, early morning pickups and late afternoon drop offs and average distance to school

Strategies:

- ✓ Reduce delivery services for county wide/zoned magnet programs or other specialized schools/programs (non-EC); establish shuttle stops at schools (to be implemented 2010-11)
- ✓ Eliminate grandfathered transportation arrangements
- ✓ Offer only shuttle stop locations for students attending full magnet programs (effective 2010-11)

Results:

<b>CMS STO Average Student Ride Time and Average Distance Comparison</b>					
			2007-08	2008-09	2009-10
Average AM ride time			21.15	17.18	15.25
Average distance to school			3.65	3.59	3.12

3) Recommendation:

Adjust bus stop parameters to decrease number of bus stops and frequency of stopping to pick up and drop off students; reduce overall miles traveled

Strategies:

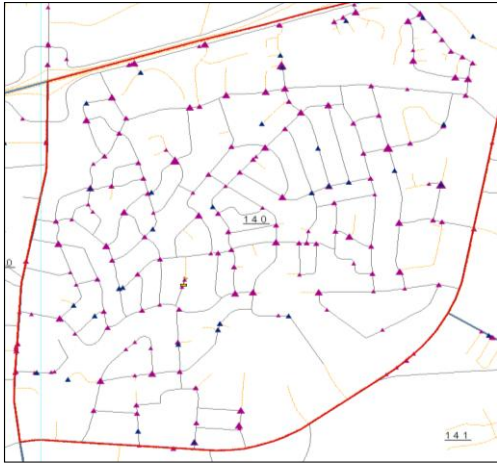
- ✓ Increase home to bus stop walk distance; where feasible up to .2 mile for elementary students and up to .4 mile for secondary students
- ✓ Establish common stops, where feasible, within neighborhoods at clubhouses or other universal gathering areas versus bus stops often every .02 or less per mile.
  - A recent study by the UNC Charlotte Urban Institute regarding CMS school representation and number of bus stop occurrences within an estimated 200 defined neighborhoods in Mecklenburg County revealed astounding results in many cases. *This study confirmed many neighborhoods have frequent occurrences of students attending multiple schools living the same neighborhood. Buses are making more stops in the same neighborhood and likely picking up fewer students per stop*
  - This plan is designed to simplify, streamline, and make transportation more effective, efficient, timely, and less costly in the long run.
- ✓ Reduce overall miles traveled daily to support to and from school

Results:

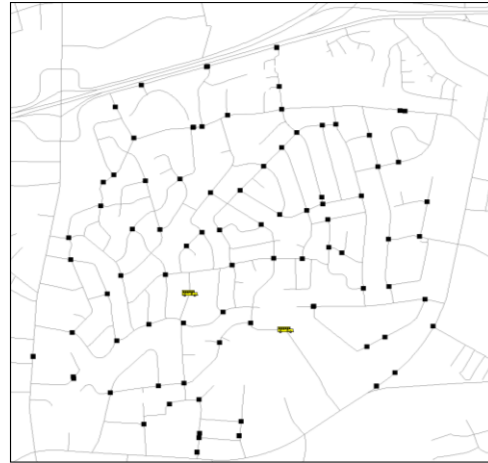
<b>CMS STO Average Daily Number of Bus Stops and Annual Miles Traveled</b>			
	2007-08	2008-09	2009-10
Average # Bus Stops	40,000	37,000	26,000
To/From School Miles Traveled	24,539,025	24,927,246	21,991,532

The DOT maps below represent the “before and after” comparison of the number of bus stops within two selected neighborhoods, Hidden Valley and Carmel, as defined by the UNCC Quality of Life Areas.

## Hidden Valley Stops

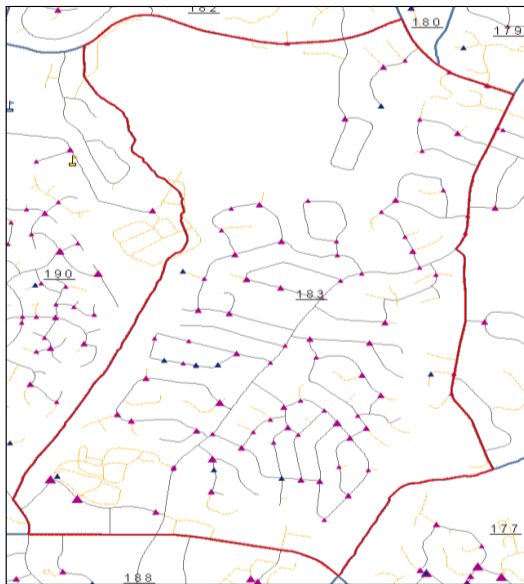


2008-2009; 536 am stops, 545 pm stops

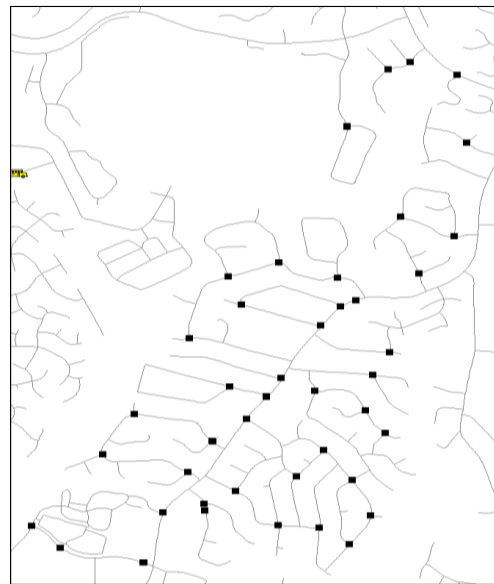


2009-2010; 348 am stops; 365 pm stops

## Carmel Area

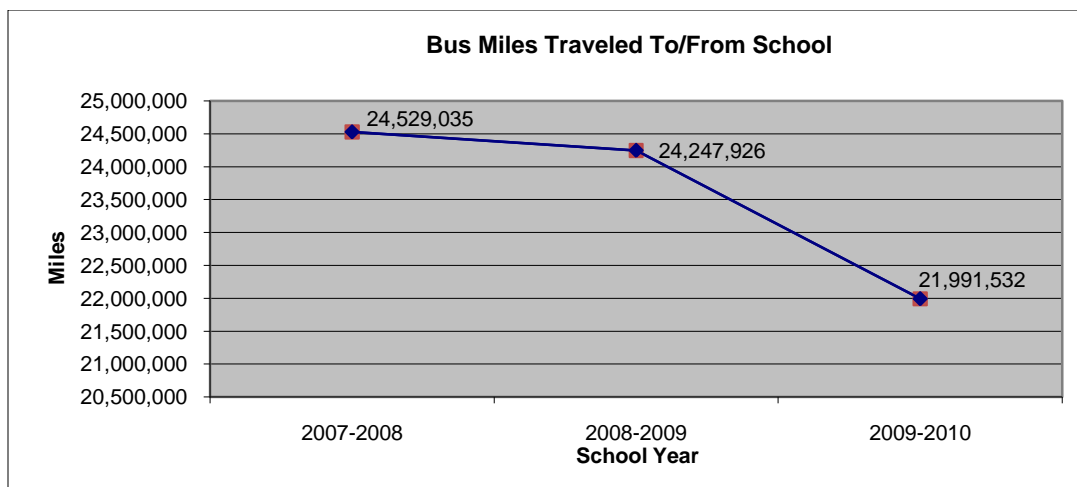


2008-2009; 141 stops am, 166 stops pm



2009-2010; 88 am stops; 113 pm stops

The result of implementing the common stops, among other initiatives and strategies throughout this report, has resulted in significant reduction of required miles traveled, reduced the total budget and resource requirements.



4) Recommendation:

Improve timeliness of bus arrivals at bus stops and school parking lots (CMS STO Data Dashboard Metric)

Strategies:

- ✓ Emphasize critical need for accurate information regarding need for CMS transportation services; inform CMS STO during “intent to ride” spring registration if the student is a carpooler or will not need CMS bus service
- ✓ Require accurate and up-to-date student residence addresses (in eSIS) prior to end of school year
- ✓ Encourage student to school enrollment and alternate bus stop location requests deadline to ensure bus schedule opening day
- ✓ Establish structured expectations for parents/families to provide student’s transportation to and from school if enrollment and/or request for alternate stop is after deadline
- ✓ Ensure a bus driver is available for every assigned bus (coordinated efforts of Human Resources, DMV and CMS STO); any open or uncovered bus negates timely arrivals

Result: ***the average percent of buses arriving during the early or optimal window*** (as defined in the table below) ***for the entire 2009-2010 school year was 97.27%***, which significantly exceeds the benchmark goal of 90% defined in the department KPIs

CMS STO BUS ARRIVAL DATA DASHBOARD DEFINITIONS			
Morning		Afternoon	
Early	up to 30 minutes prior to bell	Early	up to 15 minutes prior to bell
Optimal	<b>10 to 30 minutes prior to bell</b>	Optimal	<b>15 mins before and up to 15 mins after the bell</b>
Marginal	0 to 10 minutes prior to bell	Marginal	15 to 30 minutes after bell
Late	Any time after bell	Late	30 minutes or more after bell

5) Recommendation:

Maximize capacity planning and use of active bus fleet; increase average number of students per bus route and increase the average number of bus runs to route ratio

Strategies:

- ✓ Reduce the gap between planned versus actual bus schedules using GPS system data; requires synchronization of students to stops, stops to runs and runs to routes
- ✓ Balance workloads and dedicate a routing technician per transportation area
- ✓ Utilize TIMS route optimization models to maximize pairings of bus runs to bus route (use as a basis for the final product)
- ✓ Reduce out of boundary student assignments with transportation privileges and eliminate grandfathered transportation (with the exception of rising 12<sup>th</sup> graders, if applicable)
- ✓ Reduce number of bus stops resulting in more students per stop and ultimately more students per bus

Results: Higher number of students per bus and maximized use of bus fleet

<b>CMS STO Average # Students and Bus Runs Per Bus Route</b>		
	Avg. # Students/Bus Run	Avg. # Bus Runs/Bus Route
<b>2007-2008</b>	68	4.82
<b>2008-2009</b>	70	4.86
<b>2009-2010</b>	73	5.01

6) Recommendation:

Improve staff and process accountability and effectiveness

Strategies:

- ✓ Implement improved processes and continually review KPI ratings and measurements; strive for no less than “target” or “best practice” benchmarks
- ✓ Establish district wide employee attendance policy; enforce consequences for excessive absenteeism and lack of performance
- ✓ Implement electronic time management system as part of the GPS total solution for ease of payroll completion and more accurate compensation for actual time worked
- ✓ Develop department standard operating procedures manual and refine transportation personnel handbook annually
- ✓ Improve retention of quality employees

Results:

- ✓ Reduced employee turnover
- ✓ *Realized \$1.5M savings in driver overtime utilizing GPS data as a monitor for accurate time keeping and optimizing labor time to remain under 40 hours per week*
- ✓ Increased career longevity and overall levels of expertise
- ✓ Improved daily attendance
- ✓ Performed consistent standard operating procedures throughout department
- ✓ Achieved “best practice” targets for all KPIs with the exception of one

7) Recommendation:

Improve employee performance and enhance measures for safe transportation operations

Strategies:

- ✓ Establish enhanced and continual professional development programs for maintenance technical training, computer skills and leadership training
- ✓ Establish a CMS STO accident prevention campaign and consequences
- ✓ Monitor driver performance and trends; provide remediation and correction as needed; defensive driving course – The Smith System
- ✓ Implement GPS devices on total CMS STO bus and service fleet
  - These units are being implemented for a variety of reasons to include:
    - monitoring buses instantly for timeliness and “on route” any time of the day
    - safety and security safeguards for a bus during any emergency, crisis or terrorist situation via an alert button
    - real time tracking allows enhanced and more accurate responses to parents about the location of the bus and an estimated time of arrival
    - capturing real time data for bus arrivals at school and bus stops
    - reducing variance of planned versus actual route directions and time
    - monitor driving performance for proper compliance with speed limits, idling time, pre trip and post trip inspections
    - ability to “track” and assist drivers when they are not familiar with the area of the county being traveled
    - ability to assist drivers determine more accurately student residences or destinations if the address is known
    - time management and route optimization (significant potential savings in “overages” in compensation)
    - more efficient dispatching of staff to assist in bus breakdowns and/or accidents
- ✓ Bus driver scorecard to support measurement of performance

Result:

- ✓ Experienced a critical reduction in preventable accidents

<b>CMS STO - Percent Comparison of Preventable Bus Accidents per Million Miles</b>	
<b>2007-2008</b>	11.3
<b>2008-2009</b>	9.7
<b>2009-2010</b>	7.8
It is noteworthy that the industry benchmark is 15-20 preventable accidents; CMS STO is considerably less than this benchmark and is an indicator of high safety standards among our drivers	



8) Recommendation:

Improve overall operating condition of the bus fleet

Strategies:

- ✓ Quality Assurance Administrator hired to conduct internal fleet audits and inspections; feedback is provided to respective staff and supervisor(s)
- ✓ Analyze NCDPI state audit data; share specific issues related to drivers and mechanics
- ✓ Pre/Post Trip Form has been revised and expectations communicated to drivers
- ✓ Implement quality assurance practices to enhance condition of bus fleet to include 30 day bus inspections, unannounced bus stings, pre/post trip inspection training, regular spot inspections of mechanical and operational condition of buses

Result:

- ✓ Significant improvement in annual state fleet audit inspection score which measured the overall condition of about a 10% statistical sampling of the fleet

<b>CMS STO - Comparison of Annual State Audit Inspection Rating</b>	
<b>2007-2008</b>	47.89
<b>2008-2009</b>	44.15
<b>2009-2010</b>	34.08
A lower score indicates less bus defects found and overall condition of the fleet has improved	

In summary, the improvements and progress stated above have been achievable due to varying levels of support and accountability extending from the Board of Education, executive staff, department staff, and the school community to include administrators and CMS students and their families. Collectively, these strategies have reduced the overall transportation annual budget by more than \$6M, increased students per bus, reduced the required number of daily operating buses, increased the percent of state to local funding in relation to the total department budget, enhanced the quality of customer service, improved the condition of the bus fleet and enhanced the safety of transporting students while in the care and responsibility of the CMS STO. With the challenges of the economic environment and less resources to maintain quality services, the department staff is to be commended for attaining these critical improvements.

**Recommendations and Strategies Needed for Continual Improvement**

1) Recommendation:

Reduce overall student ride times; early morning pickups and late afternoon drop offs; reduce total miles traveled

Strategies:

- a) Continue to conduct yearly audit to ensure only students eligible are granted services
- b) Reduce vastness of magnet feeder zones; have more replicas of similar themes within smaller zones
- c) Limit establishment of future county wide programs with transportation provided

d) Increase walk distances to bus stops, where feasible

2) Recommendation:

Maximize capacity planning and use of active bus fleet; increase average number of students per bus route

Strategies:

- a) Evaluate bell tiers and recommend adjustments to broaden range of bell schedules in the morning (currently 7:15AM – 9:15AM) and/or afternoon (currently 1:45PM – 4:15PM); this allows for maximization of bus pairings and utilization of buses and other resources
- b) Explore networking bus services for schools in close proximity with similar bell schedules and distribution of attending students
- c) Evaluate feasibility of expanding grade levels on the same school campus
- d) Review adjusting length of instructional day in relation to fleet requirements

3) Recommendation:

Improve staff and process accountability and effectiveness

Strategies:

- a) Implement and continually review KPI ratings and measurements; strive for no less than “target” or “best practice” benchmarks
- b) Improve retention of quality employees; merit performance plans, cross training, enhanced communications top down, bottom up and information flow
- c) Improve employee incentives and recognition for exemplary staff performance

4) Recommendation:

Facilities Improvement

Strategies:

- a) Build out of two existing staging facilities at Northpointe and Downs Road for a turnkey maintenance and administrative complex
- b) Expand bus staging and turnkey maintenance and administrative compounds strategically located throughout the high growth areas of the county, primarily north and southeast
- c) Expansion of parts room and staff to adequately stock required inventory and store special stock and non stocked items for short periods
- d) Replace Craig Avenue facility (cannot renovate due to compliance with building code and EPA issues) with state of the art maintenance facility and equipment, to include adequate working environment for the maintenance supervisors, shop foreman and dispatch
- e) Up fit and replace outdated and inadequate mobile office units

While these continual improvement recommendations and strategies are not all inclusive, they cover the major areas of the operation within the department. Any adjustments to the district’s local and/or state funding, the student assignment plan, transportation eligibility parameters, offerings of academic programs, new construction, use of swing space, consolidation or closure of school buildings, or adjustments and/or elimination of bus services may alter, add or delete recommendations and strategies for continual improvement within the CMS STO. While most decisions for implementation of given strategies are made within the internal CMS STO operation, some may require external approval, policy and/or regulation change, financial support, new technology or upgrades to existing applications, or other influences to successfully achieve the goal(s) and objective(s).

## EXHIBIT A

### LOCAL BOARD OF EDUCATION POLICY AND REGULATION

#### CHARLOTTE - MECKLENBURG SCHOOLS

#### SECTION J - STUDENTS

Policy Code: JCA Student Assignment Plan

Regulation Code: JCA-R Student Assignment Plan

#### **(SECTION) IX. CMS Transportation**

Students shall be assigned to buses and transportation eligibility shall be determined so as to provide for the orderly, safe, and efficient transportation of students, the orderly and efficient administration of the schools, and the health and safety of the students who are transported.

A. Guidelines: The following guidelines govern eligibility for CMS transportation:

1. For initial Lottery assignments, students may receive CMS transportation to schools within their Transportation Zones or magnet feeder areas.
2. In all cases in which a student is initially admitted to a magnet program within his/her magnet feeder area and attends through the terminal grade, the student will be provided CMS transportation to magnet programs the student subsequently attends that are in the magnet feeder pattern of the original school. This provision does not apply to a student who moves outside of the magnet feeder area after initially being admitted to the magnet program.
3. CMS transportation will be provided to a student who is repeating a terminal grade if the student, in accordance with Section III, E, above, is assigned to one of the following schools:
  - a. Magnet program:
    - i. The same magnet program in which the student was enrolled at the time the Lottery was conducted; [Note: If the magnet program has been moved to a different location, transportation will be provided to the new location]; or
    - ii. The student's home school.
  - b. Non-magnet school:
    - i. The same school in which the student was enrolled at the time the Lottery was conducted; or
    - ii. The student's home school.
  - c. Note: If students who meet the above qualifications have address changes, they may not be eligible for transportation. See paragraphs 4 – 6, below, for the rules applicable in this circumstance.
4. A student who attends his or her home school, moves into another home school area during the instructional year, and chooses to remain in his or her original home school is no longer eligible for CMS transportation. It is the responsibility of parents to inform the school of their child's current address. Schools shall ensure that all address changes are entered into the automated student information system (eSIS) so that transportation eligibility may be accurately determined. (See Section V. D., above: with the exception of 11th graders, students who move into a different home school area during an instructional year will be assigned to attend the home school serving their new address the following school year.)
5. A student in a non-magnet school who moves to a location outside of the school's attendance

area is not eligible for CMS transportation.

6. CMS transportation will not be provided to magnet program students who move outside of the geographic area served by their magnet program.

B. Alternate Stop Locations: Transportation for bus stop locations other than ones assigned based on the student's residence address may be provided within the boundary of the school the student attends. Such alternate stops may include licensed daycare providers or the home of a student's relative. Transportation services will not be provided to locations such as public businesses (such as a parent's workplace), non-CMS after school activities (such as a dance studio or a karate class), or student workplaces. In order to receive this service, students must be eligible for CMS transportation. Alternate stop location requests must be submitted electronically to CMS transportation no later than the third week in July to be considered for bus assignments the first week of school. Requests received after the deadline will be processed in a reasonable period of time, but are not guaranteed to be completed by the beginning of the school year.

C. Instructional After-School Programs: Subject to the fiscal capability of the district to provide this service, CMS transportation will be provided for students remaining after school for instructionally related extended day programs. Such programs include, but are not limited to: high school and middle school extended day programs, after-school tutorials, and other programs that are a direct extension of the instructional day and student achievement goals. CMS transportation is limited to locations within the attendance area of the school the student is attending. In order to receive this service, students must be eligible for CMS transportation.

## EXHIBIT B

### STATE GENERAL STATUTES GOVERNING PUPIL TRANSPORTATION

#### Article 17.

#### Supporting Services.

#### Part 1. Transportation.

##### **§ 115C-239. Authority of local boards of education.**

Each local board of education is hereby authorized to acquire, own, lease, contract and operate school buses for the transportation of pupils enrolled in the public schools of such local school administrative unit, and of persons employed in the operation of such schools in accordance with rules and regulations adopted by the State Board of Education under the authority of G.S. 115C-12(17) and within the limitations set forth in G.S. 115C-239 to 115C-246, 115C-248 to 115C-254 and 115C-256 to 115C-259. Boards of education which own and operate school buses for the transportation of pupils shall have authority to establish separate systems of transportation for pupils attending elementary schools and for pupils attending middle schools, junior high schools, or senior high schools. Each such board may operate such buses to and from such of the schools within the local school administrative unit, and in such number, as the board shall from time to time find practicable and appropriate for the safe, orderly and efficient transportation of such pupils and employees to such schools. (1955, c. 1372, art. 21, s. 1; 1973, c. 586, s. 1; 1981, c. 423, s. 1; 1983, c. 630, s. 2; 2001-97, s. 3.)

##### **§ 115C-240. Authority and duties of State Board of Education.**

(a) The State Board of Education shall promulgate rules and regulations for the operation of a public school transportation system.

(b) The State Board of Education shall be under no duty to supply transportation to any pupil or employee enrolled or employed in any school. Neither the State nor the State Board of Education shall in any manner be liable for the failure or refusal of any local board of education to furnish transportation, by school bus or otherwise, to any pupil or employee of any school, or for any neglect or action of any county or city board of education, or any employee of any such board, in the operation or maintenance of any school bus.

(c) The State Board of Education shall from time to time adopt such rules and regulations with reference to the construction, equipment, color, and maintenance of school buses, the number of pupils who may be permitted to ride at the same time upon any bus, and the age and qualifications of drivers of school buses as it shall deem to be desirable for the purpose of promoting safety in the operation of school buses. Every school bus that is capable of operating on diesel fuel shall be capable of operating on diesel fuel with a minimum biodiesel concentration of B-20, as defined in G.S. 143-58.4. No school bus shall be operated for the transportation of pupils unless such bus is constructed and maintained as prescribed in such regulations and is equipped with adequate heating facilities, a standard signaling device for giving due notice that the bus is about to make a turn, an alternating flashing stoplight on the front of the bus, an alternating flashing stoplight on the rear of the bus, and such other warning devices, fire protective equipment and first aid supplies as may be prescribed for installation upon such buses by the regulation of the State Board of Education.

(d) The State Board of Education shall assist local boards of education by establishing guidelines and a framework through which local boards may establish, review and amend school bus routes prepared pursuant to G.S. 115C-246. The State Board shall also require local boards to implement the Transportation Information Management System or an equivalent system approved by the State Board of Education, no later than September 1, 1992. The State Board of Education shall also assist local boards of education with reference to the acquisition and maintenance of school buses or any other question which

may arise in connection with the organization and operation of school bus transportation systems of local boards.

(e) The State Board of Education shall allocate to the respective local boards of education funds appropriated from time to time by the General Assembly for the purpose of providing transportation to the pupils enrolled in the public schools within this State. Such funds shall be allocated by the State Board of Education in accordance with the number of pupils to be transported, the length of bus routes, road conditions and all other circumstances affecting the cost of the transportation of pupils by school bus to the end that the funds so appropriated may be allocated on a fair and equitable basis, according to the needs of the respective local school administrative units and so as to provide the most efficient use of such funds. Such allocation shall be made by the State Board of Education at the beginning of each fiscal year, except that the State Board may reserve for future allocation from time to time within such fiscal year as the need therefor shall be found to exist, a reasonable amount not to exceed ten percent (10%) of the total funds available for transportation in such fiscal year from such appropriation. If there is evidence of inequitable or inefficient use of funds, the State Board of Education shall be empowered to review school bus routes established by local boards pursuant to G.S. 115C-246 as well as other factors affecting the cost of the transportation of pupils by school bus.

(f) The respective local boards shall use such funds for the purposes of replacing, maintaining, insuring, and operating public school buses and service vehicles in accordance with the provisions of G.S. 115C-239 to 115C-246, 115C-248 to 115C-254 and 115C-256 to 115C-259 and for no other purpose, but in the making of expenditures for such purposes shall be subject to rules and regulations promulgated by the State Board of Education. (1955, c. 1372, art. 21, p. 2; 1981, c. 423, s. 1; 1983, c. 630, ss. 3-6; 1989 (Reg. Sess., 1990), c. 1066, s. 96(a); 1991 (Reg. Sess., 1992), c. 900, s. 77(a); 2007-423, s. 1.)

#### **§ 115C-241. Assignment of school buses to schools.**

The superintendent of the schools of each local school administrative unit which shall elect to operate a school bus transportation system, shall, prior to the commencement of each regular school year and subject to the approval of the local board of education, allocate and assign to the respective public schools within the jurisdiction of such local school administrative unit the school buses which the local board shall own and direct to be operated during such school year. From time to time during such school year, subject to the directions of the local board of education, the superintendent may revise such allocation and assignment of school buses in accordance with the changing transportation needs and conditions at the respective schools of such local school administrative unit, and may, pursuant to such revision, assign an additional bus or buses to a school or withdraw a bus or buses from a school in such local school administrative unit. (1955, c. 1372, art. 21, s. 3; 1981, c. 423, s. 1.)

#### **§ 115C-242. Use and operation of school buses.**

Public school buses may be used for the following purposes only, and it shall be the duty of the superintendent of the school of each local school administrative unit to supervise the use of all school buses operated by such local school administrative unit so as to assure and require compliance with this section:

- (1) A school bus may be used for the transportation of pupils enrolled in and employees in the operation of the school to which such bus is assigned by the superintendent of the local school administrative unit. Except as otherwise herein provided, such transportation shall be limited to transportation to and from such school for the regularly organized school day, and from and to the points designated by the principal of the school to which such bus is assigned, for the receiving and discharging of passengers. No pupil or employee shall be so transported upon any bus other than the bus to which such pupil or employee has been assigned pursuant to the provisions of this Article: Provided, that children enrolled in a Headstart program or any More at Four program may be transported on public school buses, and any additional costs

associated with such contractual arrangements shall be incurred by the benefitting Head Start or More at Four program: Provided further, that children with disabilities may be transported to and from the nearest appropriate private school having a special education program approved by the State Board of Education if the children to be transported are or have been placed in that program by a local school administrative unit as a result of the State or the unit's duty to provide such children with a free appropriate public education.

- (2) In the case of illness or injury requiring immediate medical attention of any pupil or employee while such pupil or employee is present at the school in which such pupil is enrolled or such employee is employed, the principal of such school may, in his discretion, permit such pupil or employee to be transported by a school bus to a doctor or hospital for medical treatment, and may, in his discretion, permit such other person as he may select to accompany such pupil.
- (3) The board of education of any local school administrative unit may operate the school buses of such unit one day prior to the opening of the regular school term for the transportation of pupils and employees to and from the school to which such pupils are assigned or in which they are enrolled and such employees are employed, for the purposes of the registration of students, the organization of classes, the distribution of textbooks, and such other purposes as will, in the opinion of the superintendent of the schools of such unit, promote the efficient organization and operation of such public schools.
- (4) A local board of education which elects to operate a school bus transportation system, shall not be required to provide transportation for any school employee, nor shall such board be required to provide transportation for any pupil living within one and one half miles of the school in which such pupil is enrolled.
- (5) Local boards of education, under rules adopted by the State Board of Education, may permit the use and operation of school buses for the transportation of pupils and instructional personnel as the board deems necessary to serve the instructional programs of the schools. Included in the use permitted by this section is the transportation of children with disabilities, and children enrolled in programs that require transportation from the school grounds during the school day, such as special vocational or occupational programs. On any such trip, a city or county-owned school bus shall not be taken out of the State.

If State funds are inadequate to pay for the transportation approved by the local board of education, local funds may be used for these purposes. Local boards of education shall determine that funds are available to such boards for the transportation of children to and from the school to which they are assigned for the entire school year before authorizing the use and operation of school buses for other services deemed necessary to serve the instructional program of the schools.

Children with disabilities may be transported to and from the nearest appropriate private school having a special education program approved by the State Board of Education if the children to be transported have been placed in that program by a local school administrative unit as a result of the State or the unit's duty to provide those children with a free appropriate public education.

- (6) School buses owned by a local board of education may be used for emergency management purposes in any state of disaster or local state of emergency declared under Chapter 166A of the General Statutes. Under rules and regulations adopted by a local board of education, its school buses may be used with its permission for the purpose of testing emergency management plans; however, neither the State Board of

Education nor the local board of education shall be liable for the operating cost, any compensation claims or any tort claims resulting from the test.

- (7) Uses authorized by G.S. 115C-243. (1955, c. 1372, art. 21, s. 4; 1957, c. 1103; 1969, c. 47; 1973, c. 869; 1977, c. 830, ss. 2, 3; 1977, 2nd Sess., c. 1280, s. 2; 1979, c. 885; 1981, c. 423, s. 1; 1983, c. 630, s. 7; c. 768, s. 8; 1987, c. 827, s. 49; 2006-66, s. 7.18(i); 2006-69, s. 3(g).)

**§ 115C-243. Use of school buses by senior citizen groups.**

(a) Any local board of education may enter into agreements with the governing body of any county, city, or town, or with any State agency, or any agency established or identified pursuant to Public Law 89-73, Older Americans Act of 1965, to provide for the use of school buses to provide transportation for the elderly.

(b) Each agreement entered into under this section must provide the following:

- (1) That the board of education shall be reimbursed in full for the proportionate share of any and all costs, both fixed and variable, of such buses attributable to the uses of the bus pursuant to the agreement.
- (2) That the board of education shall be held harmless from any and all liability by virtue of uses of the buses pursuant to the agreement.
- (3) That adequate liability insurance is maintained under G.S. 115C-42 to insure the board of education, and that adequate insurance is maintained to protect the property of the board of education. The minimum limit of liability insurance shall not be less than the maximum amount of damages which may be awarded under the Tort Claims Act, G.S. 143-291. The costs of said insurance shall be paid by the agency contracting for the use of the bus, either directly or through the fee established by the agreement.

(c) Before any board of education shall enter into any agreement under this section, it must by resolution establish a policy for use of school buses by the elderly. The policy must give first priority to school uses under G.S. 115C-242 and 115C-42. The resolution must provide for a schedule of charges under this section. Such resolution, if adopted, shall be amended or readopted at least once per year to provide for adjustments to the schedule of charges or to provide for maintaining the same schedule of charges. If the price bid for the service by a private bus carrier is less than the schedule of charges adopted by the board of education, then the board of education may not enter into the agreement.

(d) No board of education shall be under any duty to sign any agreement under this section.

(e) No bus operated under the provisions of this section shall travel outside of the area consisting of the county or counties where the local board of education is located and the county or counties contiguous to that county or counties, but not outside of the State of North Carolina.

(f) Before any agreement under this section may be signed, the State Board of Education shall adopt a uniform schedule of charges for the use of buses under this section. Such schedule shall include a charge by the hour and by the mile which shall cover all costs both fixed and variable, including depreciation, gasoline, fuel, labor, maintenance, and insurance. The schedule may be amended by the State Board of Education. The schedule of charges adopted by the local board of education under subsection (c) may vary from the State schedule only to cover changes in wages. (1977, 2nd Sess., c. 1280, s. 1; 1981, c. 423, s. 1; 1983, c. 717, s. 92; 1985 (Reg. Sess., 1986), c. 955, ss. 17, 18; 2006-203, s. 32.)

**§ 115C-244. Assignment of pupils to school buses.**

(a) The superintendent or superintendent's designee shall assign the pupils and employees who may be transported to and from school upon the bus or buses assigned to each school and shall implement and enforce the plan developed under G.S. 115C-246. No pupil or employee shall be permitted to ride upon any school bus to which such pupil or employee has not been so assigned by the superintendent or



superintendent's designee, except by the express direction of the superintendent or superintendent's designee.

(b) In the event that the superintendent or superintendent's designee assigns a school bus to be used in the transportation of pupils to two or more schools, the superintendent or superintendent's designee shall assign the pupils to be transported to and from each school by that bus, and the principals of the respective schools shall implement and enforce this assignment of pupils.

(c) Any pupil enrolled in any school, or the parent or guardian of any such pupil, or the person standing in loco parentis to such pupil, may apply to the principal of such school for transportation of such pupil to and from such school by school bus for the regularly organized school day. The principal shall deliver the application to the superintendent or superintendent's designee, who shall assign a pupil to a school bus if the pupil is entitled to school bus transportation under this Article and the rules of the State Board of Education. Such assignment shall be made by the superintendent or superintendent's designee so as to provide for the orderly, safe and efficient transportation of pupils to such school and so as to promote the orderly and efficient administration of the school and the health, safety and general welfare of the pupils to be so transported. Assignments of pupils and employees to school buses may be changed by the superintendent or superintendent's designee as he may from time to time find proper for the safe and efficient transportation of such pupils and employees.

(d) The parent or guardian of any pupil enrolled in any school, or the person standing in loco parentis to any such pupil, who shall apply under subsection (c) of this section for the transportation of such pupil to and from such school by school bus, may, if such application is denied, or if such pupil is assigned to a school bus not satisfactory to such parent, guardian, or person standing in loco parentis to such pupil, pursuant to rules and regulations established by the local board of education, apply to such board for such transportation upon a school bus designated in such application, and shall be entitled to a prompt and fair hearing by such board in accordance with the rules and regulations established by it. The majority of such board shall be a quorum for the purpose of holding such hearing and passing upon such application, and the decision of the majority of the members present at such hearing shall be the decision of the board. If, at such hearing, the board shall find that pupil is entitled to be transported to and from such school upon the school bus designated in such application, or if the board shall find that the transportation of such pupil upon such bus to and from such school will be for the best interests of such pupil, will not interfere with the proper administration of such school, or with the safe and efficient transportation by school bus of other pupils enrolled in such school and will not endanger the health or safety of the children there enrolled, the board shall direct that such child be assigned to and transported to such school upon such bus.

(e) A decision of a local board under subsection (d) is final and, except as provided in this subsection, is subject to judicial review in accordance with Article 4 of Chapter 150B of the General Statutes. A person seeking judicial review shall file a petition in the superior court of the county where the local board made its decision.

(f) No employee shall be assigned to or permitted to ride upon a school bus when to do so will result in the overcrowding of such bus or will prevent the assignment to such bus of a pupil entitled to ride thereon, or will otherwise, in the opinion of the superintendent or superintendent's designee, be detrimental to the comfort or safety of the pupils assigned to such bus, or to the safe, efficient and proper operation of such bus. (1955, c. 1372, art. 21, s. 5; 1981, c. 423, s. 1; 1987, c. 827, ss. 47, 48; 1998-220, s. 3.)

#### **§ 115C-245. School bus drivers; monitors; safety assistants.**

(a) Each local board, which elects to operate a school bus transportation system, shall employ the necessary drivers for such school buses. The drivers shall have all qualifications prescribed by the regulations of the State Board of Education herein provided for and must be at least 18 years old and have at least six months driving experience as a licensed operator of a motor vehicle before employment as a regular or substitute driver, but the selection and employment of each driver shall be made by the local

board of education, and the driver shall be the employee of such local school administrative unit. Each local board of education shall assign the bus drivers employed by it to the respective schools within the jurisdiction of such board, and the superintendent or superintendent's designee shall assign the drivers to the school buses to be driven by them. No school bus shall at any time be driven or operated by any person other than the bus driver assigned to such bus except by the express direction of the superintendent or superintendent's designee or in accordance with rules and regulations of the appropriate local board of education.

(b) The driver of a school bus subject to the direction of the superintendent or superintendent's designee shall have complete authority over and responsibility for the operation of the bus and the maintaining of good order and conduct upon such bus, and shall report promptly to the principal any misconduct upon such bus or disregard or violation of the driver's instructions by any person riding upon such bus. The principal may take such action with reference to any such misconduct upon a school bus, or any violation of the instructions of the driver, as he might take if such misconduct or violation had occurred upon the grounds of the school.

(c) The driver of any school bus shall permit no person to ride upon such bus except pupils or school employees assigned thereto or persons permitted by the express direction of the superintendent or superintendent's designee to ride thereon.

(d) The superintendent or superintendent's designee may, in his discretion, appoint a monitor for any bus assigned to any school. It shall be the duty of such monitor, subject to the direction of the driver of the bus, to preserve order upon the bus and do such other things as may be appropriate for the safety of the pupils and employees assigned to such bus while boarding such bus, alighting therefrom or being transported thereon, and to require such pupils and employees to conform to the rules and regulations established by the local board of education for the safety of pupils and employees upon school buses. Such monitors shall be unpaid volunteers who shall serve at the pleasure of the superintendent or superintendent's designee.

(e) A local board of education may, in its discretion within funds available, employ transportation safety assistants upon recommendation of the principal through the superintendent. The safety assistants thus employed shall assist the bus drivers with the safety, movement, management, and care of children boarding the bus, leaving the bus, or being transported in it. The safety assistant should be either an adult or a certified student driver who is available as a substitute bus driver. (1955, c. 1372, art. 21, s. 6; 1979, c. 719, ss. 1-4; 1979, 2nd Sess., c. 1156; 1981, c. 423, s. 1; 1987, c. 276; 1989, c. 558, s. 2; 1998-220, s. 4.)

#### **§ 115C-246. School bus routes.**

(a) The superintendent of the local school administrative unit shall, prior to the commencement of each regular school year, prepare a plan for a definite route, including stops for receiving and discharging pupils, for each school bus so as to assure the most efficient use of such bus and the safety and convenience of the pupils assigned thereto. The superintendent may, in his discretion, obtain the advice of the State Board of Education with reference to the plan. The buses shall be operated upon the route so established and not otherwise, except as provided in this Article. From time to time the principal may suggest changes in any such bus route as he shall deem proper for the said purposes, and the same shall be effective when approved by the superintendent of the local school administrative unit.

(b) Unless road or other conditions make it inadvisable, public school buses shall be routed on state-maintained highways, municipal streets, or other streets with publicly dedicated right-of-way. The local board of education shall not be responsible for damage to the roadway. Each public school bus shall be routed so that the bus passes within one mile of the residence of each pupil assigned to that bus. A pupil who lives one and one-half miles or more from the school to which the pupil is assigned shall be eligible for school bus transportation.

(c) All bus routes when established pursuant to this section shall be filed in the office of the board of education of the local school administrative unit, and all changes made therein shall be filed in the office of such board within 10 days after such change shall become effective.

(d) Repealed by Session Laws 1985 (Regular Session, 1986), c. 975, s. 24.

(e) No provision of this Article shall be construed to place upon the State, or upon any county or city, any duty to supply any funds for the transportation of pupils, or any duty to supply funds for the transportation of pupils who live within the corporate limits of the city or town in which is located the public school in which such pupil is enrolled or to which such pupil is assigned, even though transportation to or from such school is furnished to pupils who live outside the limits of such city or town. (1955, c. 1372, art. 21, s. 7; 1959, c. 573, s. 15; 1963, c. 990, ss. 2, 3; 1965, c. 1095, ss. 2, 3; 1981, c. 423, s. 1; 1985 (Reg. Sess., 1986), c. 975, s. 24; 1987, c. 827, s. 49; 1989 (Reg. Sess., 1990), c. 1066, s. 96(b); 2005-151, s. 1.)

#### **§ 115C-247. Purchase of activity buses by local boards.**

The several local boards of education in the State are hereby authorized and empowered to take title to school buses purchased with local or community funds for the purpose of transporting pupils to and from athletic events and for other local school activity purposes, and commonly referred to as activity buses.

Each local board of education that operates activity buses shall adopt a policy relative to the proper use of the vehicles. The policy shall permit the use of these buses for travel to athletic events during the regular season and playoffs and for travel to other school-sponsored activities.

The provisions of G.S. 115C-42 shall be fully applicable to the ownership and operation of such activity school buses. Activity buses may also be used as provided in G.S. 115C-243. (1955, c. 1256; 1957, c. 685; 1959, c. 573, s. 2; 1961, c. 1102, s. 4; 1977, 2nd Sess., c. 1280, s. 3; 1981, c. 423, s. 1; 2006-208, s. 1.)

#### **§ 115C-248. Inspection of school buses and activity buses; report of defects by drivers; discontinuing use until defects remedied.**

(a) The superintendent of each local school administrative unit, shall cause each school bus owned or operated by such local school administrative unit to be inspected at least once each 30 days during the school year for mechanical defects, or other defects which may affect the safe operation of such bus. A report of such inspection, together with the recommendations of the person making the inspection, shall be filed promptly in the office of the superintendent of such local school administrative unit, and a copy thereof shall be forwarded to the principal of the school to which such bus is assigned.

(b) It shall be the duty of the driver of each school bus to report promptly to the principal of the school, to which such bus is assigned, any mechanical defect or other defect which may affect the safe operation of the bus when such defect comes to the attention of the driver, and the principal shall thereupon report such defect to the superintendent of the local school administrative unit. It shall be the duty of the superintendent of the local school administrative unit to cause any and all such defects to be corrected promptly.

(c) If any school bus is found by the principal of the school, to which it is assigned, or by the superintendent of the local school administrative unit, to be so defective that the bus may not be operated with reasonable safety, it shall be the duty of such principal or superintendent to cause the use of such bus to be discontinued until such defect is remedied, in which event the principal of the school, to which such bus is assigned, may permit the use of a different bus assigned to such school in the transportation of the pupils and employees assigned to the bus found to be defective.

(d) The superintendent of each local school administrative unit, shall cause each activity bus which is used for the transportation of students by such local school administrative unit or any public school system therein to be inspected for mechanical defects, or other defects which may affect the safe operation of such activity bus, at the same time and in the same way and manner as the regular public school buses for the normal transportation of public school pupils are inspected. A report of such

inspection, together with the recommendations of the person making the inspection, shall be filed with the principal of the school which uses and operates such activity bus and a copy shall be forwarded to the superintendent of the local school administrative unit involved. It shall be the duty of the driver of each activity bus to make the same reports to the principal of the school using and operating such activity bus as is required by this section. If any public school activity bus is found to be so defective that the activity bus may not be operated with reasonable safety, it shall be the duty of such principal to cause the use of such activity bus to be discontinued until such defect is remedied to the satisfaction of the person making the inspection and a report to this effect has been filed in the manner herein prescribed. Nothing in this subsection shall authorize the use of State funds for the purchase, operation or repair of any activity bus. (1955, c. 1372, art. 21, s. 8; 1961, c. 474; 1975, c. 150, s. 2; 1981, c. 423, s. 1.)

**§ 115C-249. Purchase and maintenance of school buses, materials and supplies.**

(a) To the extent that the funds shall be made available to it for such purpose, a local board of education is authorized to purchase from time to time such additional school buses and service vehicles or replacements for school buses and service vehicles, as may be deemed by such board to be necessary for the safe and efficient transportation of pupils enrolled in the schools within such local school administrative unit. Any school bus so purchased shall be constructed and equipped as prescribed by the provisions of this Article and by the regulations of the State Board of Education issued pursuant thereto. Any school bus so purchased that is capable of operating on diesel fuel shall be capable of operating on diesel fuel with a minimum biodiesel concentration of B-20, as defined in G.S. 143-58.4. At least two percent (2%) of the total volume of fuel purchased annually by local school districts statewide for use in school bus diesel engine motor vehicles shall be biodiesel fuel of a minimum blend of B-20, to the extent that biodiesel blend is available and compatible with the technology of the vehicles or equipment used.

(b) The tax-levying authorities of any county are hereby authorized to make provision from time to time in the capital outlay budget of the county for the purchase of such school buses or service vehicles.

(c) Any funds appropriated from time to time by the General Assembly for the purchase of school buses or service vehicles shall be allocated by the State Board of Education to the respective local boards of education in accordance with the requirements of such boards as determined by the State Board of Education, and thereupon shall be paid over to the respective local boards of education in accordance with such allocation.

(d) The title to any additional or replacement school bus or service vehicle purchased pursuant to the provisions of this section, shall be taken in the name of the board of education of such local school administrative unit, and such bus shall in all respects be maintained and operated pursuant to the provisions of this Article in the same manner as any other public school bus.

(e) It shall be the duty of the county board of education to provide adequate buildings and equipment for the storage and maintenance of all school buses and service vehicles owned or operated by the board of education of any local school administrative unit in such county. It shall be the duty of the tax-levying authorities of such county to provide in its capital outlay budget for the construction or acquisition of such buildings and equipment as may be required for this purpose.

(f) In the event of the damage or destruction of any school bus or service vehicle by fire, collision, or otherwise, the board of education of the local school administrative unit which shall own or operate such bus or service vehicle may apply to the State Board of Education for funds with which to replace it. If the State Board of Education finds that such bus or service vehicle has been destroyed or damaged to the extent that it cannot be made suitable for further use, and if the State Board of Education finds that the replacement of such bus or service vehicle is necessary in order to enable such local school administrative unit to operate properly its school bus transportation system, the State Board of Education shall allot to the board of education of such local school administrative unit from the funds now held by the State Board of Education for the replacement of school buses or service vehicles, or from funds hereafter appropriated by the General Assembly for that purpose, a sum sufficient to purchase a new school bus or service vehicle to be used as a replacement for such damaged or destroyed bus or service

vehicle and upon such allocation such sum shall be paid over to or for the account of the board of education of such local school administrative unit for such purpose.

(g) Repealed by Session Laws 2003-147, s. 3, effective for a local school administrative unit when the unit is certified as being E-Procurement compliant, or April 1, 2004, whichever occurs first.

(h) Appropriations by the General Assembly for the purchase of public school buses shall not revert to the General Fund. Any unexpended portion of those appropriations shall at the end of each fiscal year be transferred to a reserve account and be held, together with any other funds appropriated for the purpose, for the purchase of public school buses. (1955, c. 1372, art. 21, s. 9; 1961, c. 833, s. 16; 1975, c. 879, s. 46; 1981, c. 423, s. 1; 1987, c. 827, s. 49; 1991 (Reg. Sess., 1992), c. 1039, s. 24; 2003-147, s. 3; 2004-203, s. 72(b); 2007-423, s. 2.)

#### **§ 115C-250. Authority to expend funds for transportation of children with disabilities.**

(a) The State Board of Education and local boards of education may expend public funds for transportation of children with disabilities who are unable because of their disability to ride the regular school buses and who have been placed in programs by a local school board as a part of its duty to provide these children with a free appropriate education under Article 9 of this Chapter. At the option of the local board of education with the concurrence of the State Board of Education, funds appropriated to the State Board of Education for contract transportation of children with disabilities may be used to purchase buses and minibuses as well as for the purposes authorized in the budget. The State Board of Education shall adopt rules concerning the construction and equipment of these buses and minibuses.

The Departments of Health and Human Services, Juvenile Justice and Delinquency Prevention, and Correction may also expend public funds for transportation of children with disabilities who are unable because of their disability to ride the regular school buses and who have been placed in programs by one of these agencies as a part of that agency's duty to provide these children with a free appropriate public education under Article 9 of this Chapter.

If a local area mental health center places a child with a disability in an educational program, the local area mental health center shall pay for the transportation of the child who is unable due to the disability to ride the regular school buses to the program.

(b) Funds appropriated for the transportation of children with disabilities may be used to pay transportation safety assistants employed in accordance with G.S. 115C-245(e) for buses to which children with disabilities are assigned. (1955, c. 1372, art. 21, s. 6; 1973, c. 1351, s. 1; 1975, c. 678, ss. 9, 10; 1977, c. 830, s. 1; 1979, c. 719, ss. 1-4; 1979, 2nd Sess., c. 1156; 1981, c. 423, s. 1; c. 912, s. 1; 1981 (Reg. Sess., 1982), c. 1282, s. 31; 1985, c. 479, s. 26(b); 1987, c. 769; 1997-443, s. 11A.118(a); 1998-202, s. 4(n); 2000-137, s. 4(q); 2006-69, s. 3(h).)

#### **§ 115C-251. Transportation supervisors.**

The State Board of Education shall from time to time adopt such rules and regulations with regard to the qualifications of persons employed by local boards of education as chief mechanic or supervisor of transportation as it shall deem necessary or desirable for the purpose of assuring the proper maintenance and safety of school buses. A local board of education shall not employ any person as chief mechanic or supervisor of transportation if that person does not meet the qualifications established by the State Board. (1977, c. 314; 1981, c. 423, s. 1.)

#### **§ 115C-252. Aid in lieu of transportation.**

(a) When, by reason of road conditions or otherwise, any local board of education, which shall elect to operate a school bus transportation system, shall find it impracticable to furnish to a pupil transportation by school bus to the school in which such pupil is enrolled, or to which such pupil is assigned, the board may assign such pupil to such other school within such local school administrative unit as the board shall deem advisable, unless the parent or guardian of such pupil or the person standing in loco parentis to such pupil, shall notify the principal of the school, in which such pupil is enrolled or to

which such pupil is assigned, of the desire of such pupil to continue to attend such school without the benefit of transportation by school bus.

(b) In the event that any local board of education, which shall operate a system of school bus transportation, shall find it impracticable to furnish to a pupil such transportation to the school in which such pupil is enrolled or to which such pupil is assigned, and if, as a result thereof, such pupil shall be required to obtain board and lodging at a place other than the residence of such pupil in order to attend a school, such board may, in its discretion, provide for the payment to the parent or guardian of such pupil of a sum not to exceed fifty dollars (\$50.00) per month for each school month that such pupil shall so obtain board and lodging at a place other than the residence of the pupil for the purpose of attending a school. (1955, c. 1372, art. 21, s. 10; 1973, c. 932; 1981, c. 423, s. 1.)

#### **§ 115C-253. Contracts for transportation.**

Any local board of education may, in lieu of the operation by it of public school buses, enter into a contract with any person, firm or corporation for the transportation by such person, firm or corporation of pupils enrolled in the public schools of such local school administrative unit for the same purposes for which such local school administrative unit is authorized by this Article to operate public school buses. Any vehicle used by such person, firm or corporation for the transportation of such pupils shall be constructed and equipped as provided in rules and regulations promulgated by the State Board of Education, and the driver of such vehicle shall possess all of the qualifications prescribed by rules and regulations promulgated by the State Board of Education. Where a contract for transportation of pupils is entered into between a local board of education and any person, firm or corporation which contemplates the use of an automobile or vehicle other than a bus for the transportation of 16 pupils or less, the automobile or vehicle shall not be required to be constructed and equipped as provided for in G.S. 115C-240(c), but shall be constructed and equipped pursuant to rules and regulations promulgated by the State Board of Education. In the event that any local board of education shall enter into such a contract, the board may use for such purposes any funds which it might use for the operation of school buses owned by the board, and the tax-levying authorities of the county or of the city may provide in the county or city budget such additional funds as may be necessary to carry out such contracts. (1955, c. 1372, art. 21, s. 11; 1975, c. 382; 1981, c. 423, s. 1; 1987, c. 827, ss. 49, 50; 2007-423, s. 3.)

#### **§ 115C-254. Use of school buses by State militia or national guard.**

When requested to do so by the Governor, the board of education of any local school administrative unit is authorized and directed to furnish a sufficient number of school buses to the North Carolina State Defense Militia or the National Guard for the purpose of transporting members of the State militia [or] members of the National Guard to and from authorized places of encampment, or to and from places to which members of the State militia or members of the National Guard are ordered to proceed for the purpose of suppressing riots or insurrections, repelling invasions or dealing with any other emergency. Public school buses so furnished by any local school administrative unit to the North Carolina State Defense Militia or the National Guard shall be operated by members or employees of the State militia or National Guard, and all expense of such operation, including any repair or replacement of any bus occasioned by such operation, shall be paid by the State from the appropriations available for the use of the State militia or the National Guard. (1955, c. 1372, art. 21, s. 12; 1981, c. 423, s. 1; 1999-456, s. 33(e); 2009-281, s. 1.)

#### **§ 115C-255. Liability insurance and waiver of immunity as to certain acts of bus drivers.**

The securing of liability insurance and the waiver of immunity as to certain torts of school bus drivers, school transportation service vehicle drivers and school activity bus drivers, is subject to the provisions of G.S. 115C-42, except when such vehicles are operated with funds from the State Public School Fund. (1981, c. 423, s. 1.)

**§ 115C-256. School bus drivers under Workers' Compensation Act.**

Awards to school bus drivers under the Workers' Compensation Act shall be made pursuant to the provisions of G.S. 115C- 337(b). (1981, c. 423, s. 1.)

**§ 115C-257. Attorney General to pay claims.**

The Attorney General is hereby authorized to pay reasonable medical expenses, not to exceed three thousand dollars (\$3,000), incurred within one year from the date of accident to or for each pupil who sustains bodily injury or death caused by accident, while boarding, riding on, or alighting from a school bus operated by any local school administrative unit. (1955, c. 1372, art. 22, s. 1; 1981, c. 423, s. 1; c. 576, s. 1; 1998-212, s. 9.17(a).)

**§ 115C-258. Provisions regarding payment.**

The claims authorized herein may be paid, regardless of whether the injury received by the pupil was due to negligence on the part of the school bus driver, the injured pupil, or any other person. To the extent of payments made under this Article, the Attorney General shall be subrogated to the right of the pupil against any third party legally responsible for the injury. Further, any amounts paid shall constitute a credit against any obligation arising under the provisions of the Tort Claims Act. (1955, c. 1372, art. 22, s. 2; 1981, c. 423, s. 1; c. 576, s. 1.)

**§ 115C-259. Claims must be filed within one year.**

The right to payment as authorized herein shall be forever barred unless a claim be filed with the Attorney General within one year after the accident. (1955, c. 1372, art. 22, s. 3; 1981, c. 423, s. 1; c. 576, s. 1.)

**§§ 115C-260 through 115C-261: Repealed by Session Laws 1981, c. 576, s. 2.**

**§ 115C-262. Liability insurance and tort liability.**

Liability insurance and tort liability of local boards of education for actions arising out of activities conducted pursuant to this Part, are subject to the provisions of G.S. 115C-42. (1981, c. 423, s. 1.)

## EXHIBIT C

### STATE LEVEL LETTER OUTLINING ISSUES WITH PRIVATIZATION OF TRANSPORTATION

May 30, 2002

#### MEMORANDUM

TO: Jim Newlin  
Linda Suggs

FROM: Derek Graham, Section Chief  
Transportation Services

RE: School Transportation Issues - Privatization

There is nothing that prohibits contracting for transportation services. Several LEAs contract for the transportation of children with special needs. Guilford and Wake Counties in particular contract for a significant number of school buses to transport students going to special programs.

There are 4 primary issues which impact a contractor operating in the state of North Carolina:

Liability Insurance	Vehicle Replacement
Fuel Taxes	Driver Training

Liability Insurance. The State is self-insured under the Tort Claims Act and therefore does not purchase insurance for school transportation. When an LEA owns the buses and employs the drivers, the state's Tort claims coverage still applies. If a private contractor owns his own buses and employs his own drivers, the contractor would be required to carry insurance - hopefully to a level at or exceeding the levels of the Tort Claims Act. This is an extra expense to the contractor (and therefore to the LEA) that they don't incur with their own buses and drivers.

School Bus Replacement. DPI Transportation Services replaces school buses annually subject to age and mileage criteria within funds appropriated by the General Assembly for that purpose. If an LEA is contracting for transportation services and does not own its buses, then the contractor must recoup the depreciation cost of the bus from the LEA in its fees. There is nothing currently that allows school bus replacement money to be used to replace contractors' school buses.

Fuel Taxes. School districts are exempt from paying excise tax on diesel fuel to be used for school transportation. In a privatized situation where the contractor owns the vehicles, the contractor would have to pay the excise tax on fuel

Driver Training. Bus drivers in North Carolina are required by law to be trained by the Division of Motor Vehicles. This applies not only to public school bus drivers, but to school bus drivers for private and charter schools as well. Contractors see this as a disadvantage because they are not able to train their own drivers.

**Article III. Finally, LEAs are funded based on a budget rating which is, in part, a measure of efficiency. The lower their costs, the higher percentage funding from the state. As a result, LEAs have every incentive to be efficient in their use of state funds. Any part of their operation that they contract out – because the contractor has to make a profit to stay in business – is likely to be more expensive than performing the same service in-house.**



**EXHIBIT D**

**NCDPI TRANSPORTATION SERVICES – STATE FUNDING FORMULA PRESENTATION  
JANUARY 2009**

## CMS Transportation Funding

Derek Graham, Section Chief  
North Carolina Department of Public Instruction

## Transportation Funding Formula: Step by Step

1. Determine Funding Base
2. Determine Budget Rating
3. Multiply (1) x (2) and Adjust

## EXHIBIT D

### NCDPI TRANSPORTATION SERVICES – STATE FUNDING FORMULA PRESENTATION JANUARY 2009

#### Step 1: Determine Funding Base

- (Previous Years' Eligible Expenditures)
- All State Expenditures except for equipment line items
- All Local Expenditures corresponding to a state object code, except equipment lines
- Exceptions:
  - Salaries in excess of the state maximum
  - Salary bonuses

#### Step 2: Determine Budget Rating

- Inputs: Expenditures, Students Transported, Buses Operated
- Adjustments for Site Characteristics
  - Avg. Distance from School; Street Network
  - Pupil Density; % EC Transportation
- Generate Bus Rating, Cost Rating, Combined Rating, Efficiency Rating and, (by adding up to 10 points) Budget Rating

## EXHIBIT D

### NCDPI TRANSPORTATION SERVICES – STATE FUNDING FORMULA PRESENTATION JANUARY 2009

#### Determining the Ratings

- Calculate the cost per student transported for each county
- Calculate the # buses operated per 100 students transported for each county
- Use Linear Regression to make sure that there is nothing *beyond the county's control* that unfairly penalizes them: Site Characteristics

#### Leveling the Playing Field: Consider Site Characteristics Beyond the Control of the LEA

- Pupil Density (Students Transported per Mile of Road)
- Distance of Students to School
- % Students transported by contract or "EC buses"

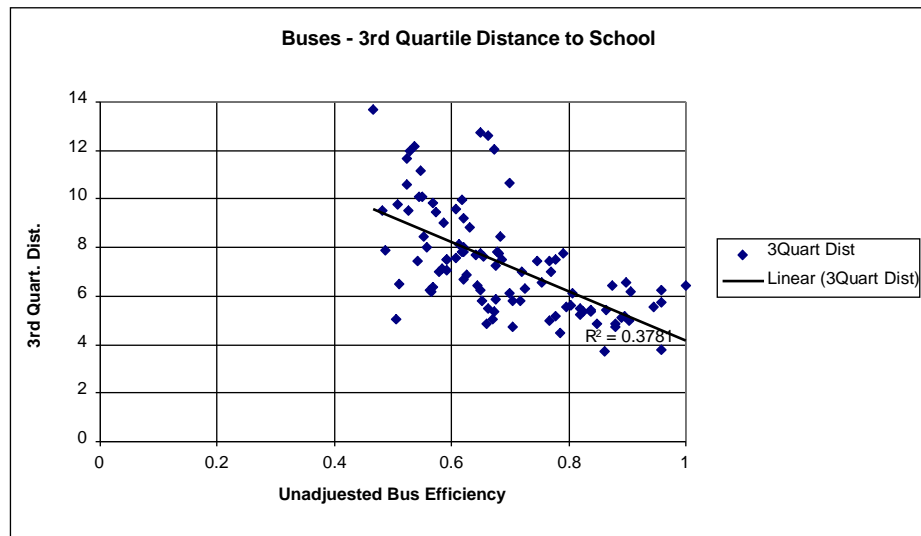
## EXHIBIT D

### NCDPI TRANSPORTATION SERVICES – STATE FUNDING FORMULA PRESENTATION JANUARY 2009

## Site Characteristics

- Funding Formula Legislative Study
  - Recommendation to standardize site characteristics
- In 2005 street network updated from 1990 DOT data to actual TIMS data
- CMS pupil density highest in the state
  - Density is seen by the formula as “easier to fill buses and be efficient”

## Unadjusted Bus Efficiency



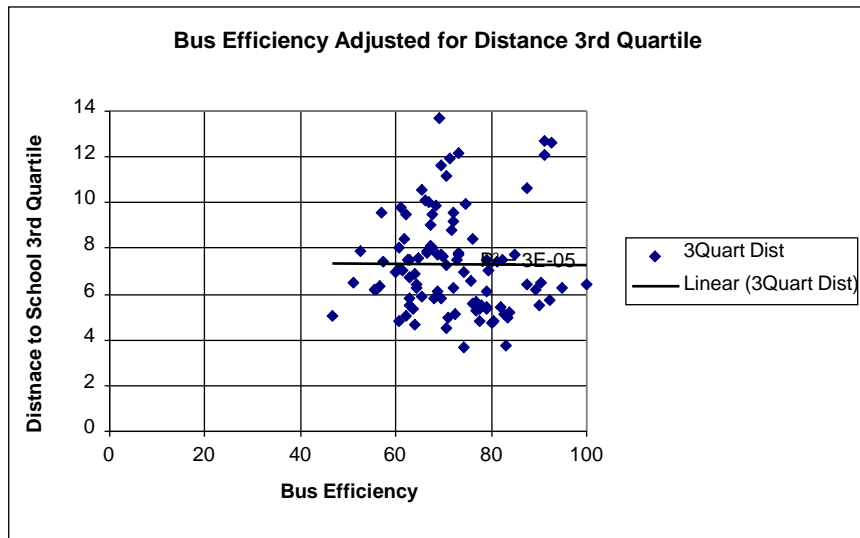
## EXHIBIT D

### NCDPI TRANSPORTATION SERVICES – STATE FUNDING FORMULA PRESENTATION JANUARY 2009

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## Bus Efficiency Adjusted for Distance to School 3rd Quartile



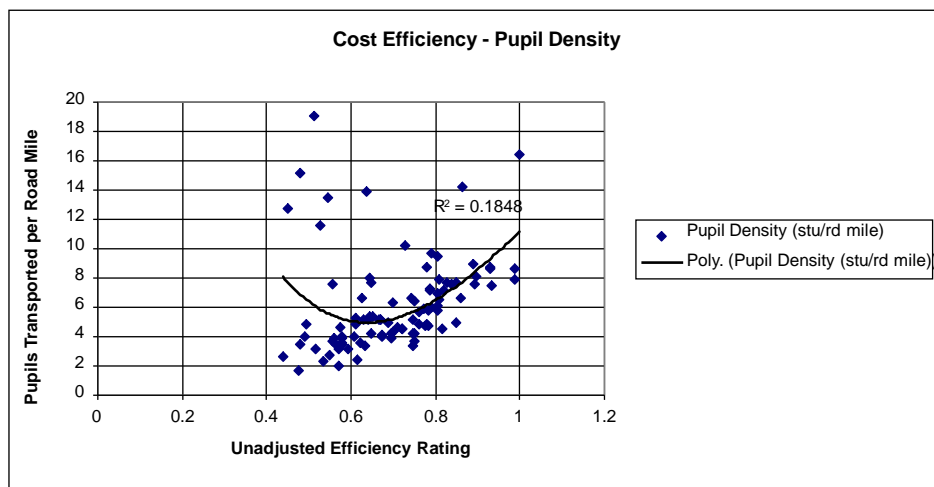
## EXHIBIT D

### NCDPI TRANSPORTATION SERVICES – STATE FUNDING FORMULA PRESENTATION JANUARY 2009

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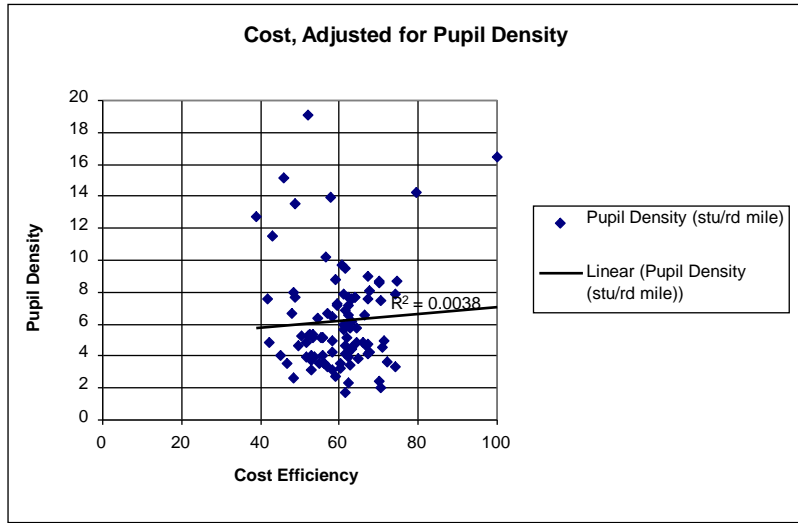
## Unadjusted Cost Efficiency - Pupil Density



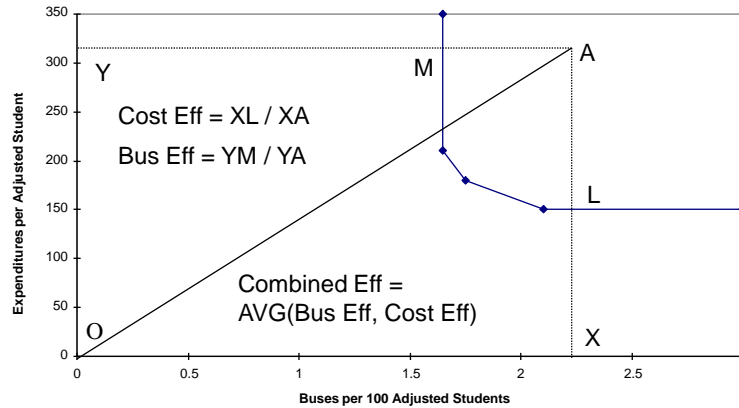
**EXHIBIT D**

**NCDPI TRANSPORTATION SERVICES – STATE FUNDING FORMULA PRESENTATION  
JANUARY 2009**

**Cost Efficiency Adjusted for  
Pupil Density**



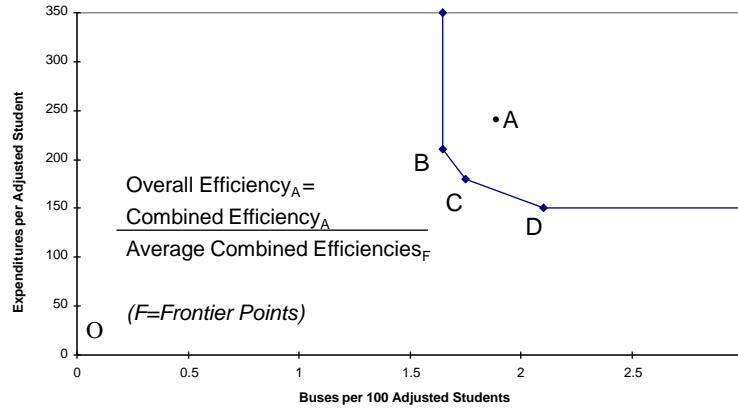
***Factor Efficiencies - Step 1***



## EXHIBIT D

### NCDPI TRANSPORTATION SERVICES – STATE FUNDING FORMULA PRESENTATION JANUARY 2009

#### **Factor Efficiencies - Step 2**



#### **Step 3: Apply Rating to Base Funding and Adjust**

- Multiply Budget Rating By Base Funding (Step 1).
- Add funding for (positive) growth in students transported
- Adjust for Legislated Increases



## EXHIBIT D

### NCDPI TRANSPORTATION SERVICES – STATE FUNDING FORMULA PRESENTATION JANUARY 2009

#### CMS Funding Base for 2009-2010

- \$52,553,497 Eligible State/Local 2008-2009
  - Add additional \$300,000 eligible
  - Subtract Fuel \$1,413,713
    - Reduced to \$2.40 per gallon
  - Add Legislated Salary Increase \$1,650,616
  - Add 2008-2009 ADM growth \$368,293
  
- TOTAL: \$53,458,693
  - \$49,064,775 State, \$4,393,918 Local (\$6,500,000 actual)
  - Multiply by budget rating to get allotment base

#### Projecting for 2009-2010 Enter Data in Simulator

- Students **87,128** requested
  - 85,678 original count
- Buses **1235** estimated
  - 1231 buses run 2008-2009
  - 1260 reported on TD-2R bus route report
- Expenditures **\$53,221,740**
  - See following Calculations

## EXHIBIT D

### NCDPI TRANSPORTATION SERVICES – STATE FUNDING FORMULA PRESENTATION JANUARY 2009

## Expenditures To Be Entered in Simulator: \$53,221,790

2008-2009 Expenditures in 2007-2008 dollars  
used to build simulator

- \$52,553,497 Eligible 2008-2009
- Add ADM Increase \$368,293
- Add additional local allowed: \$300,000  
(assuming same allowance as last year)
- (note: fuel deduction of \$1,412,713 not  
applied here because simulator built using  
data reflecting \$2.90 per gallon.

## Running the Simulator

- Enter number of students (87,128)
- Enter number of buses (1235)
- Enter Expenditures / 1000 (53,222)
  
- Budget Rating: 92.07%
- Multiply by Funding Base \$53,458,693
- State Funding for 2009-2010: \$49,219,419

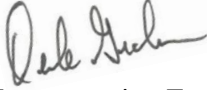
## EXHIBIT D

### NCDPI TRANSPORTATION SERVICES – STATE FUNDING FORMULA

February 5, 2009

#### MEMORANDUM

TO: Carol Stamper

FROM: Derek Graham 

RE: Follow-up from Transportation Funding Meeting

Thank you for inviting me to discuss CMS pupil transportation funding with Mr. Chamberlain, Ms. Shirley and other members of the CMS team. Hopefully our discussion of the transportation funding formula gave you some additional insight into how funds are allocated to the 115 LEAs in North Carolina. I wanted to reiterate some of the key points that we discussed on Monday. Further, additional analysis of students transported verifies that you are not being penalized for transporting students within the 1.5 mile zone who do not have a safe alternative means of transportation to and from school.

1. CMS, along with a relatively small number of other counties, has its local expenditures “capped.” As I explained, local expenditures are included in the funding formula because in the early days of this formula it was underfunded by the state and local funds were spent on necessities. The Office of State Budget and Management (OSBM) allows eligible expenditures to grow by the amounts allocated for legislated salary increases, increases in ADM and increases in the cost of fuel. When high budget ratings imply the need for a lesser amount of local funding, yet the local funding has continued at a level where total expenditures grow faster than those OSBM allowances, there are insufficient state funds to support that increase – thus the “cap.”
2. Because of this cap, the amount of local expenditures from one year to the next for CMS is pretty much set – based on these allowances – until such time that total expenditures might be reduced and no longer capped. As such, reductions in total expenditures will not contribute to an increased budget rating; rather, they will contribute to a direct savings in local dollars.
3. We discussed the issue of pupil density – the number of students transported per mile of roadway in the county. For CMS the pupil density is the highest in the state. In fact, it is quite an outlier at 19 students/mile. Wake County’s pupil density is 13.82 students/mile and Forsyth County’s is 11.27 students/mile. Since pupil density is the single most important site characteristic the formula “expects” CMS to be more efficient than other counties because of the number of students available to fill buses.
4. We discussed the merits of CMS transporting students within 1.5 miles of home. In terms of a budget rating, this practice has pros and cons.
  - a. This practice obviously *increases* the total number of students transported which – all other things equal – increases the budget rating. However, in each new run of the funding model, pupil density is recalculated along with the 3<sup>rd</sup> quartile of student distance from home to school.
  - b. Increasing the number of students transported (by picking up within the 1.5 miles) *increases* student density (which is seen, as described above, as easier to be efficient).
  - c. Increasing the number of students within 1.5 miles *deceases* the 3<sup>rd</sup> quartile distance to school (which is also seen as easier to be efficient).

5. In simulations using last year's data for all LEAs and making adjustments to simulate discontinuing the practice of transporting students within the 1.5 mile area, it appears that, from a budget rating perspective, the benefit of increased ridership outweighs the impact of the site characteristics. That is, if these students *were not* transported, CMS would have a lower budget rating. My simulations are detailed at the end of this memo.
6. While the funding formula "expects" CMS to be more efficient than other counties because of its density and relatively low distance to school, I understand that there are some complexities that most other counties do not have to deal with.
  - a. As an example, in many other counties, assistant principals still have a role to play in transportation. Large urban districts have, for the most part, relieved the schools of that responsibility by putting in transportation supervisory staff that handle drivers, routing, stop assignments, etc. It costs money to do this, but results in a better-managed transportation system. The formula just sees the funds.
  - b. In many other counties, students attend the school that is closest to their home and do not have as many options as in the large metro counties. Sending students to special programs away from their closest school is, as you know, expensive.

Recall that the budget rating is comprised of the "efficiency rating" plus 10%. These are the kinds of things for which the bonus 10% is intended to compensate.

7. We went over the calculations for 2009-2010. The simulator rating should be 92.07% based on the 1235 buses you suggested. That will result in about \$49 million, subject to ADM or fuel adjustments. When the ratings are recalculated with the newest data, the CMS rating will undoubtedly change. Whether it goes up or down depends in part on what efficiency measures other counties have taken.

Again, the simulations that I promised, based on all county data for 2007-2008 and updated, hypothetical, data for CMS for 2007-2008, are contained on the following page.

I enjoyed our discussion and hope that it was helpful. Please let me know what additional questions you might have.

c: Guy Chamberlain  
Shelia Shirley  
Ben Matthews  
Philip Price

**CMS Transportation Budget Rating Simulations – 2007-2008 Data**

Grades	# students < 1.5 miles from sch	# students < 1 mi from sch	# students <.5 mi from sch
KI-05	13,923	7,142	1,098
06-08	3,178	1,089	132
09-12	1,976	636	58
<b>Totals</b>	<b>19,077</b>	<b>8,867</b>	<b>1,288</b>
Resulting countywide 3Q Dist when excluded	5.37 miles	5.07 miles	4.8 miles
Resulting Pupil Density when excluded	14.8 Students/mile	17.05 Students/mile	18.7 Students/mile

**Scenario #1**

Reduce student count by the number of students living less than 1 mile from school.

$86,595 - 8,867 = 77,728$  students.

Impact on site characteristics: Lower density, higher distance to school

Assume no change in cost or buses

Resulting Rating: **85.64%**

**Scenario #2**

Same as scenario #2 PLUS reduction of 50 buses

Resulting Rating: **86.32%**

**Scenario #3**

Reduce student count by the number of students living less than 1.5 mile from school.

$86,595 - 19,077 = 67,518$  students.

Impact on site characteristics: Lower density, higher distance to school

Assume no change in cost or buses

Resulting Rating: **76.04%**

**Scenario #4**

Same as scenario #3 PLUS reduction of 50 buses

Resulting Rating: **77.0%**

## EXHIBIT E

# FEDERAL TRANSIT ADMINISTRATION BROCHURE – GUIDELINES FOR PUPIL TRANSPORTATION

For more information, contact your FTA Regional Office:

**Region 1** (CT, MA, ME, NH, RI, VT)  
55 Broadway, Suite 920  
Cambridge, MA  
021 42-1093  
Phone (617) 494-2055  
Fax (617) 494-2865

**Region 2** (NJ, NY, VI)  
One Bowling Green,  
Room 429  
New York, NY  
10004-1415  
Phone (212) 668-2170  
Fax (212) 668-2136

**Region 3** (DC, DE, MD, PA, VA, WV)  
1760 Market Street,  
Suite 500  
Philadelphia, PA  
19103-4124  
Phone (215) 656-7100  
Fax (215) 656-7260

**Region 4** (AL, FL, GA, KY, MS, NC, PR, SC, TN)  
61 Forsyth Street, S.W.,  
Suite 17730  
Atlanta, GA 30303  
Phone (404) 562-3500  
Fax (404) 562-3505

**Region 5** (IL, IN, MI, MN, OH, WI)  
200 West Adams  
Street, Suite 320  
Chicago, IL 60606  
Phone (312) 353-2789  
Fax (312) 886-0351

**Region 6** (AR, LA, NM, OK, TX)  
819 Taylor Street,  
Room 8A36  
Fort Worth, TX 76102  
Phone (817) 978-0530  
Fax (817) 978-0575

**Region 7** (IA, KS, MO, NE)  
901 Locust Street,  
Suite 404  
Kansas City, MO 64106  
Phone (816) 329-3920  
Fax (816) 329-3921

**Region 8** (CO, MT, ND, SD, UT, WY)  
12300 West Dakota  
Avenue, Suite 310  
Lakewood, CO  
80228-2583  
Phone (720)-963-3300  
Fax (720) 963-3333

**Region 9** (AS, AZ, CA, GU, HI, NV)  
201 Mission Street,  
Suite 2210  
San Francisco, CA  
94105-1926  
Phone (415) 744-3133  
Fax (415) 744-2726

**Region 10** (AK, ID, OR, WA)  
915 Second Avenue,  
Suite 3142  
Seattle, WA 98174-1002  
Phone (206) 220-7954  
Fax (206) 220-7959

U.S. Department  
of Transportation  
**Federal Transit  
Administration**  
Office of The Chief Counsel  
400 Seventh Street, S.W.,  
Room 9316  
Washington, D.C. 20590



## Federal Transit Administration

### Public Transportation and School Buses

#### Questions and Answers

*Federal transit laws and regulations place limitations on the use of public transportation to transport students to and from school and school-sponsored activities or trips in competition with private transportation providers. This brochure is intended to help transportation providers understand those limitations, as well as the permissible use of public transportation for school students.*

#### U.S. Department of Transportation Federal Transit Administration



400 Seventh Street, S.W.  
Washington, D.C. 20590  
Phone (202) 366-1936  
Fax (202) 366-3809

#### General Rule Regarding School Transportation\*

In general, recipients of Federal Transit Administration grants cannot provide transportation for students and school personnel if that transportation excludes the general public or competes with private school bus operators.

#### QUESTIONS AND ANSWERS

**Question 1:** Does the prohibition against providing school bus service apply to school field trips or trips to other school-sponsored activities, like football games?

**Answer:** Yes. The prohibition against school bus service applies to both home-to-school transportation and transportation for school-sponsored activities or trips. However, an FTA grantee may use buses, facilities, and equipment for the transportation of school students, personnel and equipment for incidental charter bus operations, if one of more of the charter bus service exceptions apply. These include situations where there are no willing and able private charter operators to provide the service, or when the trip involves a significant number of persons with disabilities. For a complete description of the charter bus exceptions, please refer to the charter service regulations (49 CFR 604). They are available online at <http://www.fta.dot.gov/library/legal/charterservice/index.html>

**Question 2:** Does the prohibition against providing school bus service apply to transporting children who are participating in Head Start programs?

**Answer:** No. Head Start transportation is not school bus service; it is transportation to a human service program.

\* The complete text of FTA's School Bus Operations regulations, 49 CFR Part 605, can be accessed online at <http://www.fta.dot.gov/library/legal/schoolbus/>

## EXHIBIT E (CONTINUED)

### TRIPPER SERVICE

**Question 3:** Can students going to school ride regular transit to their destination?

**Answer:** Yes. Public transportation vehicles can be used to transport students and school personnel to and from school if they ride regularly scheduled mass transportation service that is open to the general public. Such service may be designed or modified to accommodate the needs of school students and personnel, using various fare collection or subsidy systems. This is commonly known as "tripper service."

**Question 4:** I want to offer tripper service. Can I put a sign on my regular public transit buses or use the school name as the designated destination to help students figure out which bus to take to school?

**Answer:** Buses used for tripper service can only use a school name as the designated destination if the school is the final destination of a regularly scheduled mass transportation route. Further, buses used for tripper service must be marked as open to the general public, in the same manner as other public transit buses. They may not carry designations such as "school bus," "school special," "student," or any other indications that could deter the general public from using the bus.

**Question 5:** Can a bus in tripper service stop directly in front of a school?

**Answer:** Only under certain conditions. Buses may stop only at stops that are accessible to the public and that are clearly marked like all system stops as available to the public (except in the case of traditional unmarked flag stops). Stops may not be located on private property or on property that restricts access to the public. All routes traveled by tripper buses must be part of a grantee's or operator's regular service route, and must be included in the published route schedules.

### AVAILABILITY/COST OF PRIVATE SCHOOL BUS OPERATORS

**Question 6:** If a school system doesn't want to contract with any of the private bus operators in its area because the prices are too high, can a grantee provide transportation to students?

**Answer:** An FTA grantee in an urban area may provide transportation that is exclusive to students and school personnel if private school bus operators in the urban area are unable to provide adequate transportation at a reasonable rate and in conformance with applicable safety standards. However, buses, facilities, or equipment purchased with FTA assistance cannot be used to provide this service. So a grantee may use only buses, facilities, and equipment that have been purchased exclusively with non-FTA funds to transport students and school personnel to and from school or school-sponsored activities.

**Question 7:** How should a grantee determine whether private school bus operators in the area are unable to provide adequate transportation at a reasonable rate?

**Answer:** A grantee that wants to provide school bus service must place a notice in a newspaper of general circulation within the proposed geographic area of service, send a copy of the notice to all private school bus operators in the area, and provide an opportunity for a public hearing on its application for approval of school bus service.

FTA also recommends that a copy of the notice be sent to the National School Transportation Association.

### PUBLICLY OWNED AND OPERATED SCHOOL BUS SYSTEMS

**Question 8:** If a community operates both the schools and the public transportation

system, can it provide its own school bus service using public transportation buses?

**Answer:** A state or municipality that is an FTA grantee and operates a school system with its own separate and exclusive school bus program may provide transportation that is exclusive to students and school personnel. However, buses, facilities, or equipment purchased with FTA assistance cannot be used to provide this service.

### COMPLAINTS AGAINST FTA GRANTEEES

**Question 9:** How can a private school bus operator file a complaint about a violation of the school bus regulations?

**Answer:** Information concerning the service should be sent in writing to the FTA Regional Administrator. Include as many specifics as possible, such as who provided the service, date and time of the service, origin, destination, and equipment used. After consideration of this information, the Regional Administrator will make a preliminary determination as to whether probable cause exists to believe that a violation of the agreement has taken place. If probable cause exists the Regional Administrator will investigate the complaint and make a written determination of whether there has been a violation and may impose a remedy.

### SCHOOL TRANSPORTATION FOR STUDENTS WITH DISABILITIES

**Question 10:** Is an FTA grantee permitted to bid on a school transportation contract in competition with private school bus operators to provide exclusive transportation for students with disabilities?

**Answer:** No, but see Question 1 concerning charter service exceptions. In addition, a grantee may use paratransit service to transport students and others to school.

**Question 11:** Can an FTA grantee that provides paratransit or demand responsive service (such as "Dial-a-Ride" service) pick up a student and take him or her to school?

**Answer:** Yes, as long as the student qualifies for the service and the service does not exclude the general public. Such service would be comparable to allowable "tripper service" using the fixed route system.

**Question 12:** If a transportation broker wins a school district contract to provide exclusive transportation for students with special needs, can the broker subcontract with an FTA grantee for this service?

**Answer:** No. Whether the public transportation provider contracts directly with the school district or contracts with a broker, exclusive transportation of students and school personnel is a violation of the school bus regulation. However, a grantee may use such buses, facilities, and equipment for the transportation of school students (including students with disabilities), personnel and equipment for incidental charter operations, if one or more of the charter service exceptions apply (49 CFR Part 604).

### FURTHER INFORMATION ON SCHOOL BUS SERVICE

National School Transportation Association  
113 South West Street, 4th Floor  
Alexandria, VA 22314  
800-222-NSTA [www.yellowbuses.org](http://www.yellowbuses.org)

National Association for Pupil Transportation  
1840 Western Avenue  
Albany, NY 12203  
800-989-NAPT [www.napt.org](http://www.napt.org)

National Association of State Directors of Pupil Transportation Services  
6298 Rock Hill Road  
The Plains, VA 20198  
800-585-0340 [www.nasdppts.org](http://www.nasdppts.org)