AN EXAMINATION OF A SINGLE TIER VERSUS DOUBLE TIER ROUTING STRUCTURE

SOUTHERN CAYUGA CENTRAL SCHOOL DISTRICT

AURORA, NEW YORK

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INTRODUCTION

Transportation Advisory Services (**TAS**) was engaged by the Southern Cayuga Central School District (hereafter referred as "School District") to perform a review of the possibility of changing the existing two-tier transportation program to a one-tier program. The purpose of this study is to provide the School District with a third-party perspective of what would be involved in whatever changes may be possible and/or desired as well as the cost projections for the changes. Two one-tier options are being reviewed. One option is the existing school building locations, and the other option is all students on a single campus. The School District's liaison for the project was Brett Johnson, Transportation Supervisor. Louis J. Boffardi of **TAS** served as the Project Consultant.

STUDY PROFILE:

The Southern Cayuga Central School District is located in Cayuga County in Central New York State. The School District is a component of the Cayuga-Onondaga BOCES. According to the New York State Education Department's Transportation Formula Aid Output Report (TRA), the School District is 163.613 square miles with a public school enrollment of 5.445 students per square mile based upon the fall 2006 public school enrollment of 891 students (2006 is the latest year for which this information is available from the State.). The School District's 2008-2009 public schools enrollment is 833 for Grades PK-12 students. The School District has a State Share Ratio for Transportation Aid of 79.6% (which considers the rural nature of the School District through a sparsity factor of 04.8%) of approved eligible expenses. This puts the School District in the top fifth of eligible State transportation aid (The minimum in New York State is 6.5% and the maximum is 90.0%).

The School District consists of three school buildings, one for Grades PK-4 and a common campus Grades 5-8 and for Grades 9-12. The Elementary School and the High School/Middle School are 1.8 miles apart.

A Profile of the School District's transportation program is shown in Appendix A of this report.

The transportation program operates on a two-tier system with students in Grades 5-12 (the Middle School and the High School) being transported in the first tier and students in Grades PK-4 (the Elementary School) transported in the second tier.

According to the School District, all students in Grades PK-12 in the School District are eligible for transportation services. School building information and the distribution of students are as follows:

Table 1					
Location	Grades	School Hours	Length of School Day	Number of Students	Location
High School	9-12	7:45 am – 2:31 pm	6.46	274	2384 Route 34B, Aurora NY
Middle School	5-8			217	2384 Route 34B, Aurora NY
Elementary School	PK-4*	8:50 am – 3:45 pm	6.55	342*	2892 Route 34B, Aurora NY
Total	PK-12			833*	
NOTE: The number of students was provided by the School District and is taken from the October 2008 BEDS data. * Includes students in a Universal Pre-Kindergarten program.					
Source: School District provided information.					

The School District operates 26 vehicles of which nine 60-plus student passenger buses are used to transport students to the High School/Middle School and the Elementary School, and two additional 60 plus student passenger buses are used to transport students to the High School/Middle School only. In effect, there are 11 High School/Middle School buses and nine Elementary School buses. Again, the nine buses are part of the 11 buses.

The distribution of the use of all 26 vehicles is shown in the following table:

Table 2					
Student Passenger Capacity	Route Vehicles	Sports	Sports Shuttle	Space Vehicles	Comments
65/66	11	1	2	1	
60	2			1	
48	1				Parochial School Route
22	2				Special Education and Alternate Education
7 + 2 WC	1				Special Education Route
16	1	1		1	Special Education Route
4	1				Special Education Route
Total	19	2	2	3	
Source: School District provided information					

In order to facilitate the review and use of this report, it has been prepared in sections that represent the various aspects of the transportation program to be reviewed. This identifies more clearly the various issues, and enhances the on-going use of the report as a resource for the Board of Education, School District Administration, and other School District personnel.

Everyone involved in this review was extremely cooperative and provided all information that was requested. All those individuals who cooperated in the study are thanked for their assistance.

METHODOLOGY

The procedures used by **TAS** in this review are those which are standard in any examination of an operational program and those which **TAS** has found to be successful in the past. These include the use of **TAS**' extensive experience and knowledge of the student transportation industry, to ask for specific information, and to review this information for completeness so as to gain an understanding of the School District's transportation program. This initial review is usually followed by telephone, e-mail, and fax contacts to seek additional information and/or to clarify information received. For the Southern Cayuga School District, the database contained within the School District's routing software was copied to identical software possessed by the **TAS** Project Consultant for review and as a source of information.

Once a base line of information about the present transportation program was provided, the **TAS** Project Consultant began to revise the existing transportation program design to reflect a single tier structure, and a cost analysis of the revised transportation program had to be developed.

The following information was utilized as a part of the analysis of the School District's transportation program:

Student, route, and vehicle information contained within the School District's routing software and information provided by the School District as well as the routing software's map of the School District with school locations and route structures (NOTE: The School District's routing software is Transfinder from Schenectady, New York.).

Printed route sheets and route maps from the routing software

Enrollment information by grade level at each Southern Cayuga school from the routing software and information provided by the School District

In-School District school time schedules

The School District's Transportation Formula Aid Output Report (TRA) was reviewed in order to gain some information on expenditures and State Aid claims.

Miscellaneous School District-prepared reports, correspondence

In addition to the above, telephone contacts were held with the following during the course of the study for the School District:

Martha Stevermer, Business Administrator
Brett Johnson, Southern Cayuga Transportation Supervisor

These contacts enabled the **TAS** Project Consultant to gain a perspective of the present transportation program as well as the possible change as seen by various individuals who are involved in the transportation service.

Throughout the entire study, continual contact was made with Brett Johnson who helped substantially to provide needed information.

Implementation: It is recommended that this report be reviewed by the appropriate School District Administrators and the Board of Education.

This document constitutes the final written report to the School District. A copy of this report should be provided to the appropriate School District representatives, including Administrators and School Board Members. This report is intended to serve as an advisory document and resource for the School District, and as such it should be reviewed and evaluated by the School District for its applicability to the circumstances at the time of review.

This report does not recommend the implementation of any of the transportation program options nor does it recommend a continuation of the existing service levels. This is a decision that properly belongs with the Board of Education. It presents information and recognizes that it is within the purview of the Board of Education to discern what would be best for the Southern Cayuga School District.

PROJECTED ONE-TIER TRANSPORTATION PROGRAM

The goal of this engagement was to see if the School District's transportation program could be reconstructed into a one-tier (single tripping) system. There are many issues involved in a single-tier system, and it may be helpful to list some of the advantages and disadvantages. This is not intended to be a complete list of all potential benefits and problems, and these are not listed in any order of priority.

Advantages:

1. All children in the same household would be transported to/from school at the same time and thus reduce a need for child care when one or more children are transported to school in advance of other children. The same principle would apply in the afternoon when one or more children are transported home in advance of other children.

2. With start/end times the same or close together for each school it would be easier to have shared teachers since there would not be a significant length of time between the start/end times of the work day for the teachers in each school. This is especially true of special area teachers who are often shared between two or three schools.

3. Because the start/end times of the teachers' work day would coincide or be close together, teachers from one school can be available to the students in another school for coaching and other after school or extracurricular activities.

4. There may be a perception by some people that some in-School District buses are not operating at capacity or efficiently. Some people feel that placement of Grades PK-12 students on the same bus could possibly increase the ridership, and the buses would therefore be used more cost-effectively.

5. The change to a one-tier system will require total rerouting. This will give the School District the opportunity to move away from any existing historical routing structure and possibly create greater efficiencies.

6. The buses are currently operating twice in the morning and twice in the afternoon. The move to a single tier system will result in the buses being used once in the morning and once in the afternoon. This will provide a perceived opportunity to lower the per bus cost for the operation of the in-School District transportation program through reduced fuel usage, less wear and tear on the buses, and reduced labor costs.

7. If both school complexes are retained, it will be possible to retain the existing length of the instructional day for the High School/Middle School and only slightly modify the Elementary School.

Disadvantages:

1. The number of buses plus the time needed to transport students to/from school would increase since the students are no longer spread over two-tiers.

2. With an increase in the number of buses, the School District would require no less than a corresponding increase in the number of drivers. Depending upon the number of mechanics and their work assignments outside of the maintenance of buses, there could be a needed increase in the number of people for this position. Given the general driver shortage and the rural location of the School District these additional people may not be available. The same may be true of the mechanic positions.

3. The need would increase for space to park the additional buses and the cars for the additional personnel. Does the School District have this?

If the buses have to be parked outdoors, there may be a need for additional exterior electrical outlets for engine block heaters.

4. Concerns ordinarily exist by parents because pre-kindergarten and primary school students would be riding the bus with intermediate school age students, middle school students, and high school students. These concerns deal with exposure to inappropriate language and bullying.

While the concerns may be real, the problems do not ordinarily take place or do not take place to the extent anticipated. School districts that have a single-tier structure place these younger school age students in assigned seats in the first few rows of the bus, and their presence ordinarily has a mitigating affect upon the older students with a decrease in inappropriate language and "rough housing."

Video and sound recording devices on school buses have often been very effective in monitoring and reducing inappropriate behavior. This is especially true if video cameras are in the back as well as the front of the bus.

The use of school monitors has been somewhat successful, but this generates another on-going cost.

5. With the change in school hours, there may be some issues that require discussion and agreement with representatives of the bargaining unit representing teachers, clerical personnel, classroom aides, custodians, etc.

This issue should be discussed with the School District's labor counsel.

6. The increase in the number of buses would create problems with the parking of buses for student disembarkation in the morning and parking of buses for the embarkation in the afternoon. There may be insufficient areas to park the additional buses. While this problem may not be too extensive in the morning due to buses arriving and departing at different times, it could be more problematic in the afternoon since all buses are at the same location at the same time.

7. Any perceived savings in the amount of fuel used or "wear and tear" on the existing buses for a single tier operation as opposed to a double tier operation would be offset in part or in totality by the additional buses needed.

8. Finally, mentioned to the reader is an issue of labor equity. The 11 drivers who are presently transporting students from/to their home to/from School District schools will have their hours reduced by approximately 50% due to a change from a double tier to a single tier transportation program. If they remain "whole" in the amount of wages they receive, they will, in effect, be receiving the same amount of money for less hours of work then the other 13 drivers. Unless they are given other types of work assignments related to their job title, this could also have an impact upon other members of the bargaining unit who work in other departments and must complete their entire work schedule.

Because additional buses will be required, it is possible that many of the other 13 drivers who drive BOCES, special education, and private/parochial school routes will seek these driving assignments in order to secure the same pay for fewer hours.

All of the above advantages and disadvantages apply to the Southern Cayuga School District in varying degrees. Some may apply specifically to the School District. What issues are more or less important than the other issues is a decision that would have to be determined by the School District.

The assumption made for the purpose of this report includes the existing student enrollment in each of the grades in each of the two buildings. This information is shown in Table 1 of page 2 of this report.

In order to develop an efficient single-tier system, it is necessary to establish the School District building time schedule and insure that these schedules coordinate as much as possible with the time schedules of the out-of-School District schools (BOCES locations and alternate education locations) for students who are shuttled to these locations from the High School/Middle School. Failure to consider these schools could increase the number of buses required and create more dedicated buses to these locations as opposed to the present shuttle structure. Students who attend school at out-of-School District private/parochial school and special education locations will continue to receive dedicate transportation services.

In Table 3 the reader will find a school time option with the retention of two school buildings. The second option provides for all students on a single campus. Both options reduce the Elementary School day by 10 minutes. Option 1 provides for the first school drop-off and the first school pick-up for the Elementary School students. The options are not in order of priority, and there can also be variations of these options determined by the School District.

Table 3				
Option	School	School Day	Length of School Day	Comments
Option No. 1 Retain Two Campuses (Present Structure)	High School	7:45 am – 2:31 pm	6.46	School day remains the same
	Middle School			
	Elementary School	7:30 am – 2:15 pm	6.45	School day reduced by ten minutes
Option No. 2 Establish One Campus	High School	7:45 am – 2:31 pm	6.46	School day remains the same
	Middle School			
	Elementary School			School day reduced by nine minutes
Source: Prepared by TAS Project Consultant				

What do the above options mean and what do they do for the School District?

1. Although the Elementary School day is reduced by 10 minutes, a 6¾ hour school day is still longer than most Elementary School days which tend to operate for 6 to 6½ hours.

Not only is the Elementary School day reduced slightly, but it has to start and end an hour-and-twenty minutes earlier. Although current educational research states that Elementary School students should start their school day earlier than High School/Middle School students, it would be up to the School District to decide if they accept this change for the community.

2. In Option 1, the advantage of having the Elementary School students be the first drop-off in the morning is to shorten the length of time on the bus. Despite a longer period of time on the bus, the advantage for the afternoon is that the Elementary School students get themselves settled at the front of the bus and in possible assigned seats before the pick-up of the High School/Middle School students.

3. In both options the after school programs for the High School/Middle School students will not be affected.

4. For Option 1, the earliest morning pick-up time at home should be about 15 minutes earlier than what presently exists or about 6:15 am. This is to accommodate the earlier Elementary School start time. The latest home arrival in the afternoon should be between 3:20 and 3:30 pm. For the Elementary School students this is between an hour and about an hour-and-a-quarter after school dismissal. This is subject to rerouting.

5. For Option 2, the earliest morning pick-up time at home should continue to be about 6:25/6:30 am. The latest home arrival in the afternoon should be about 3:3 0 pm. Again, this is subject to rerouting.

6. The schedules for the dedicated vehicles to private/parochial schools and special education locations will remain the same.

7. Option 1 provides for 15 minutes for the buses to travel from one school to another. While the schools are only 1.8 miles apart, consideration has to be made for time for the disembarking and embarking of student from/to the buses, and at the High School/Middle School complex this is done in a two step process.

8. One of the perceived rationales behind changing from a two-tier transportation system to a one-tier system is that if the buses have to operate to pick-up/drop-off High School/Middle School students, they can pick-up/drop-off the Elementary School students at the same time. This presupposes that there is room on the buses for the extra students, and that most of the Elementary School students live in the same area or in close proximity to most of the High School/Middle School students. Because this supposition is not true, there is a need for an increased number of buses.

The routing software of the **TAS** Project Consultant, which contains the same information as the School District's routing software, pictorially shows this. Three scenarios were developed by the **TAS** Project Consultant to illustrate were students live – (1) all High School/Middle School students and Elementary School students, (2) High School/Middle School students only, and (3) Elementary School students only. In each scenario the students are color coded by school they attend. The pictorial representation clearly shows that in some areas of the School District there is a mixture of High School/Middle School and Elementary School students. These students can be picked-up/dropped-off together. In other areas this mixture does not exist. The latter creates more routes to pick-up/drop-off students.

9. The school time schedules shown are not the only option. They represent a place from which to start. If the School District wishes to go to a single-tier system, it may need to establish other school building start/end times that it feels better meet the needs of the community while accommodating the schedule of the students, teachers, and in-building support staff.

Again, whatever school times are established, the School District must consider the schedule of other schools (BOCES) with which the School District interacts.

How many additional buses are needed?

The estimate is that the School District would require a minimum of approximately four additional 65/66-passenger buses to operate a single tier system. For the in-School District Home-to-School transportation program this would be an increase from 11 to 15 buses and a total increase from 26 to 30 vehicles (Buses, vans, and sedans).

Additional costs would include the following:

1. Four additional drivers with an increased cost for pay, payroll taxes, benefits. The addition of four drivers can also add to an increase in coverage for driver absenteeism.

2. Four additional buses at an average cost in excess of $100,000 each depending upon what additional features are purchased – the assumption is that the initial cost would be bonded over five years.

These buses would be in addition to the five vehicle fleet replacements (Nos. 124, 126, 127, 128, and 130) at the end of this school year.

Based upon the October 2008 BEDS enrollment, the total number of High School/Middle School students to be transported is 491. The total number of Elementary School students to be transported is 342. See Table 1 on page 2 of this report. This gives you a total of 833 students, and for a one-tier transportation program this is an average of 55.5 students per bus using 15 buses. This is an increase from the present average number of students per bus using a two-tier transportation program.

Dropping this to 14 buses will average 59.5 students per bus. This is really not doable since all buses will not reflect this statistical average. Some will have more students and some will have less. Also, consider that some buses are traveling greater distances than others. Therefore, the number of students on a bus will be less in order to complete the route in a timely manner.

The increase in the number of buses to 30 should not cause a needed increase in the number of mechanics or the addition of a mechanic's helper unless the present two mechanics are being used extensively as substitute drivers. The industry recommended ratio of mechanics to the number of buses is 1:15 to 1:18 subject to the age, mileage, and maintenance condition of the fleet. Two dedicated mechanics should be able to handle a fleet of 30 Transportation Department vehicles plus a low number of vehicles assigned to the Buildings and Grounds Department.

If the School District's Department of Transportation **Operator Profile** is less than the 90% passing rate and is due to the mechanics being used as substitute drivers, then the addition of four buses will compound this and some assistance will be needed.

Unless the actual ridership is appreciably lower than the registered ridership, there would be approximately 342 additional students being transported on a tier that was initially dedicated to just 491 students.

Realistically, not all students enrolled in the High School/Middle School and Elementary School will be transported. Some High School Students will drive themselves and others to school, and some parents will drive their child(ren) to school. In a one-tier system some older children will driver their younger siblings to/from school. The extent of this alternate transportation is not known. However, a conservative reduction of these students from the transportation program will be offset by pre-kindergarten students using booster seats which would put two Elementary School students in a 39 inch seat in lieu of three students. Furthermore, a 65/66-passenger bus ordinarily holds only 44 high school students. Therefore, a statistical average of 55.5 Grades PK-12 students per bus using four additional buses (for a total of 15 in-School District route buses) may be the minimum needed. From this bus statistic (55.5 students per bus) approximately 42 students (5%) can possibly be deducted. These are students who drive themselves or are driven to school. This is only three to four students per bus and would not have a significant impact.

The difference between the registered ridership (number of students assigned to a bus) and the consistent actual ridership is not known. The five percent stated above is a conservative figure. It could be larger, but it is not likely to be less. To get a better number of the students who ride the bus consistently the School District should count the number of students over several consecutive days and least four times during the year. The latter will provide for changes in ridership due to seasonal variations. The School District should not increase the registered number of students assigned to a bus by the reduced actual ridership number. Rather, it should increase the registered ridership conservatively to allow for students who don't ordinarily ride the bus to begin riding for personal and family reasons.

It is clearly stated that the projected number of a minimum of four extra buses is subject to rerouting and some conservative judgments that take into account the registered vs. actual ridership. If the School District wishes to move to a one-tier transportation system, the rerouting should begin immediately and some plans should be made to count the number of students who ride the buses.

Is there room on the existing buses that can offset the increase in the number of buses?

Based upon the information provided and the conservative estimate of five percent of non ridership, the answer is "No". A review was made of the number of students assigned to the in-School District buses using the information contained within the School District's routing software. Nine out of the 11 High School/Middle School buses are appropriately full as shown in the following table. As stated earlier, a 65/66-passenger bus ordinarily holds 44 High School students (adult capacity).

To use 11 65-passengers buses for over 800 students attending the Southern Cayuga Schools plus students who ride these buses to be shuttled to their private/parochial schools will raise the average number of students per bus to somewhere between the low to mid 70 students per bus. This assumes that the number of students per bus can be balanced and the factors of distance and time can also be part of this balance.

Table 4

Bus No.	AM Registered Ridership			PM Registered Ridership	
	High School Middle School	Elementary School		High School Middle School	Elementary School
135	54	34		48	34
136	42	28		43	29
138	44	--		43	--
139	50	35		58	32
140	29	--		29	--
141	42	34		42	32
143	46	25		42	24
146	50	21		50	23
147	42	32		35	31
148	51	30		51	32
149	34	29		34	27
Total	484	268		475	264
Average per Bus	44.0	29.8		43.2	29.3

NOTE: The number of students registered to ride the High School/Middle School buses is less than the enrollment of these schools. The information in the routing software is probably not current with the enrollment information. Furthermore, to the number of High School/Middle School students assigned to ride the first tier buses it is necessary to add those students who ride these buses and are then shuttled to their perspective schools.

While a recent review was completed to remove from the routing software data base those students who are no longer in attendance, a second review should be made to add those students who are in attendance and are not in the routing software's data base.

NOTE: The Elementary School listing of students assigned to buses does not include the students in the pre-kindergarten program. There were only very recently added to the routing software student data base.

Source: School District provided information

Because the information within the routing software is not current and complete, the above chart is not exact. However, the information does show that the buses appear to be appropriately loaded with students and show full use of each bus through available capacity and numbers of buses to reflect distance as well as the location of students to be transported.

In addition to the above, each of the routes is operating in the transportation of students between 45 minutes and one hour. Even if it were possible to combine both tiers into a single tier, this would most likely increase live route time above one hour which is probably unacceptable for in-School District routing. See Appendix C of this report for the existing route time schedules.

How well does the School District compare with other school districts that use a one-tier transportation system?

A comparison was made with one other rural Central New York School District that operates a one-tier transportation program. The Information from the other school district is shown in Appendix B of this report, but the comparison is also shown in the table below.

Table 5

		2008/2009 Operating Year 2007/2008 State Aid	
		Southern Cayuga	Other Central New York School District (School District B in Appendix D)
Line	Category	Two-Tier Transportation Program	One-Tier Transportation Program
1	Total Transportation Expenses (1)	$1,036,984	$1,402,448
2	Aidable Transportation Expenses (1)	$936,704	$1,220,591
3	Contract Expense (1)	-0-	$19,601
4	Salaries and Benefits (1:3)	$685,603	$945,115
5	Total Supervisory Expenses (1)	$82,871	$91,915
6	Gross Transportation Aid (1)	79.6%	90.0%
7	Local Taxpayer Cost	$100,280	$181,857
8	Total Number of District Buses	26	28
9	Total Number of District Route Buses	19	24
10	Annual Mileage	463,720	393,146
11	Number of Students Transported	900	1,014
12	District Operating Cost (2)	$1,036,984	$1,382,847
13	Total Cost per Student Transported	$1,152.20	$1,383.08
14	Labor as a % of District Operating Cost	66.1%	68.3%
15	District Operating Cost per Student	$1,152.20	$1,363.75
16	District Operating Cost per Bus	$39,884	$49,387

17	District Operating Cost per Route Bus	$54,578	$57,619
18	District Operating Cost per Mile	$2.24	$3.52
19	Square Miles in District (1)	163.613	130.584
20	2006 Enrollment per Square Mile (1)	5.445	8.530
21	Transportation Sparsity Factor (1)	0.048	0.039

(1) TRA = Transportation Formula Aid Output Report (TRA) dated March 12, 2009, for the Southern Cayuga School District and for March 19, 2009, for School District B for the 2008-2009 Operating School Year
(2) Operating Cost = Total Transportation Expenses less Contract Transportation Expenses
(3) Salaries and Benefits do not include non-transportation coded benefits such as workers compensation, FICA, and DBL as per SED requirements.

The above chart shows that while the Southern Cayuga School District is approximately 25% larger in area, it is more rural as judged by the number of students per square mile and the transportation sparsity factor. Furthermore, the student population is only 12.6% less than the student population of the other school district, half the increase of the geographic area. Despite the increased rural nature of the Southern Cayuga School District its transportation program appears to be operating less costly as judged by the operating cost per student, operating cost per bus, operating cost per route bus, and operating cost per mile. This is determined to be due to the use of a two-tier system with fewer buses as opposed to a one-tier system with more buses.

Appendix D compares the Southern Cayuga School District with four other Central New York School Districts within the general geographic area. Three out of the four School Districts operate a two-tier system, and the Southern Cayuga School District is the least costly of the four School Districts as judged by the operating cost per mile. Two other area School Districts are contracted in part or in totality, and a comparison was not made with the Southern Cayuga School District.

What's the bottom line?

The one-tier system could create issues for the School District that don't presently exist. These include the need for more buses with associated increases in costs, some longer rides to/from school and some social issues of commingling students in Grades PK-12 on the same bus. While the latter may not be as problematic as some people may think, there will be some issues and problems that will arise. These will have to be anticipated and resolved. The cost of additional buses and drivers may be the big issues.

The decision to operate a single tier or a double tier route structure rests solely with the School District. If the School District should elect to move towards a one-tier routing system, it is strongly recommended that rerouting begin as soon as possible, that field testing of the new routes be conducted, and a program of parent, student, and staff education be conducted as to why this is taking place.

The Southern Cayuga School District Board of Education is thanked for the opportunity to provide this information.

Louis J. Boffardi, TAS Project Consultant Transportation Advisory Services
Cc. Mark Walsh, CMC, President, Transportation Advisory Services

APPENDIX A

SOUTHERN CAYUGA SCHOOL DISTRICT PROFILE

Line	Category	2008-2009 Operating Year 2007-2008 State Aid	Source
1	Total Transportation Expenses	$1,036,984	Item 177, TRA (1)
2	Aidable Transportation Expenses	$936,704	Items 162 + 170, TRA
3	Contract Expense	-0-	Item 128, TRA
4	Salaries and Benefits (3)	$685,603	Items 80 + 81, TRA
5	Total Supervisory Expenses	$82,871	Item 145, TRA
6	Gross Transportation Aid	79.6%	Item 32, TRA
7	Local Taxpayer Cost	$100,280	Item 177 – (Items 162 + 170), TRA
8	Total Number of District Buses	26	District Information
9	Total Number of District Route Buses	19	District Information
10	Annual Mileage	463,720	Items 4 + 8, TRA
11	Number of Students Transported (4)	900	District Information
12	District Operating Cost (2)	$1,036,984	Line 1 – Line 3
13	Total Cost per Student Transported (4)	$1,152.20	Line 1 ÷ Line 11
14	Labor as a % of District Operating Cost	66.1%	Line 4 ÷ Line 12
15	District Operating Cost per Student	$1,152.20	Line 12 ÷ Line 11
16	District Operating Cost per Bus	$39,884	Line 12 ÷ Line 8
17	District Operating Cost per Route Bus	$54,578	Line 12 ÷ Line 9
18	District Operating Cost per Mile	$2.24	Line 12 ÷ Line 10
19	Square Miles in District	163.613	Item 28, TRA
20	2006 Enrollment per Square Mile	5.445	Item 29, TRA
21	Transportation Sparsity Factor	0.048	Item 31, TRA

(1) TRA = Transportation Formula Aid Output Report (TRA) dated February 11, 2009, for the 2008-2009 Operating School Year
(2) Operating Cost = Total Transportation Expenses less Contract Transportation Expenses
(3) Salaries and Benefits do not include non-transportation coded benefits such as workers compensation, FICA, and DBL as per SED requirements.
(4) Includes the transportation of 833 in-School District students plus 67 students to private/parochial schools and out-of-School District special education locations for a total of 900 students.

APPENDIX B

OTHER CENTRAL NEW YORK SCHOOL DISTRICT PROFILE

Line	Category	2008-2009 Operating Year 2007-2008 State Aid	Source
1	Total Transportation Expenses	$1,392,142	Item 177, TRA (1)
2	Aidable Transportation Expenses	$1,212,455	Items 162 + 170, TRA
3	Contract Expense	$19,601	Item 128, TRA
4	Salaries and Benefits (3)	$947,514	Items 80 + 81, TRA
5	Total Supervisory Expenses	$91,915	Item 145, TRA
6	Gross Transportation Aid	90.0%	Item 32, TRA
7	Local Taxpayer Cost	$179,687	Item 177 – (Items 162 + 170), TRA
8	Total Number of District Buses	28	Secured Information
9	Total Number of District Route Buses	24	Secured Information
10	Annual Mileage	393,146	Items 4 + 8, TRA
11	Number of Students Transported	1,014	Secured Information
12	District Operating Cost (2)	$1,373,541	Line 1 – Line 3
13	Total Cost per Student Transported	$1,372.92	Line 1 ÷ Line 11
14	Labor as a % of District Operating Cost	68.9%	Line 4 ÷ Line 12
15	District Operating Cost per Student	$1,354.58	Line 12 ÷ Line 11
16	District Operating Cost per Bus	$49,055.03	Line 12 ÷ Line 8
17	District Operating Cost per Route Bus	$57,230.87	Line 12 ÷ Line 9
18	District Operating Cost per Mile	$3.49	Line 12 ÷ Line 10
19	Square Miles in District	130.584	Item 28, TRA
20	2006 Enrollment per Square Mile	8.530	Item 29, TRA
21	Transportation Sparsity Factor	0.039	Item 31, TRA

(1) TRA = Transportation Formula Aid Output Report (TRA) dated March 19, 2009, for the 2008-2009 Operating School Year
(2) Operating Cost = Total Transportation Expenses less Contract Transportation Expenses
(3) Salaries and Benefits do not include non-transportation coded benefits such as workers compensation, FICA, and DBL as per SED requirements.

(4) Information secured from the other School District

APPENDIX C

SOUTHERN CAYUGA SCHOOL DISTRICT
IN-SCHOOL DISTRICT ROUTE INFORMATION

Bus No.	AM Registered Ridership		PM Registered Ridership	
	High School Middle School	Elementary School	High School Middle School	Elementary School
135	54	34	48	34
	6:25 – 7:18 am	7:39 – 8:29 am	2:30 – 3:20 PM	3:45 – 4:35 pm
136	42	28	43	29
	6:25 – 7:14 am	7:54 – 8:46 am	2:30 – 3:24 pm	3:45 – 4:25 PM
138	44	-----	43	-----
	6:25 – 7:27 am	-----	2:30 – 3:32 pm	-----
139	50	35	58	32
	6:30 – 7:24 am	7:55 – 8:40 am	2:30 – 3:20 pm	3:45 – 4:23 pm
140	29	-----	29	-----
	6:32 – 7:21 am	-----	2:30 – 3:18 pm	-----
141	42	34	42	32
	6:40 – 7:10 am	7:55 – 8:41 am	2:30 – 3:10	3:45 – 4:29 pm
143	46	25	42	24
	6:30 – 7:14 am	7:54 – 8:40 am	2:30 – 3:15 pm	3:45 – 4:27 pm
146	50	21	50	23
	6:32 – 7:23 am	8:04 – 8:27 am	2:30 – 3:22 pm	3:45 – 4:12 pm
147	42	32	35	31
	6:30 – 7:28 am	7:50 – 8:38 am	2:30 – 3:26 pm	3:45 – 4:35 pm
148	51	30	51	32
	6:21 – 7:17 am	8:02 – 8:34 AM	2:20 – 3:21 pm	3:40 – 4:32 pm
149	34	29	34	27
	6:35 – 7:20 am	7:50 – 8:38 am	2:30 – 3:15 pm	3:45 – 4:30 pm
Total Registered Students	484	268	475	264
Average Registered Students	44.0	29.8	43.2	29.3

NOTE: The number of students registered to ride the High School/Middle School buses is less than the enrollment of these schools. The information in the routing software is probably not current with the enrollment information. Furthermore, to the number of High School/Middle School students assigned to ride the first tier buses it is necessary to add those students who ride these buses and are then shuttled to their perspective schools.
While a recent review was completed to remove from the routing software data base those students who are no longer in attendance, a second review should be made to add those students who are in attendance and are not in the routing software's data base.
NOTE: The Elementary School listing of students assigned to buses does not include the students in the pre-kindergarten program. There were only very recently added to the routing software student data base.

Source: School District provided information

APPENDIX D

OTHER AREA CENTRAL NEW YORK SCHOOL DISTRICT PROFILES

Line	Category	Southern Cayuga	School District A	School District B	School District C	School District D
		Two-Tier Transportation Program	Two-Tier Transportation Program	One-Tier Transportation Program	Two-Tier Transportation Program	Two-Tier Transportation Program
1	Total Transportation Expenses (1)	$1,036,984	$1,156,283	$1,402,448	$979.310	$717,972
2	Aidable Transportation Expenses (1)	$936,704	$1,154,976	$1,220,591	$779,219	$698,400
3	Contract Expense(1)	-0-	-0-	$19,601	-0-	-0-
4	Salaries and Benefits (1: 3)	$685,603	$870,888	$945,115	$609,840	$370,616
5	Total Supervisory Expenses (1)	$82,871	-0-	$91,915	$60,758	$55,035
6	Gross Transportation Aid (1)	79.6%	90.0%	90.0%	80.6%	90.0%
7	Local Taxpayer Cost	$100,280	$1,307	$181,857	$2 00,091	$19,572
8	Total Number of District Buses (4)	26	23	28	25	19
9	Total Number of District Route Buses (4)	19	20	24	16	16
10	Annual Mileage	463,720	415,037	393,146	424,526	196.254
11	Number of Students Transported (4)	900	1,200	1,014	950	NA
12	District Operating Cost (2)	$1,036,984	$1,156,283	$1,382,847	$979,310	$717,972
13	Total Cost per Student Transported	$1,152.20	$963.57	$1,383.08	$1,030.85	NA
14	Labor as a % of District Operating Cost	66.1%	75.3%	68.3%	62.2%	51.6%
15	District Operating Cost per Student	$1,152.20	$963.57	$1,363.75	$1,030.85	NA
16	District Operating Cost per Bus	$39,884	$50,273	$49,387	$39,172	$37,788
17	District Operating Cost per Route Bus	$54,578	$57,814	$57,619	$61,207	$44,873
18	District Operating Cost per Mile	$2.24	$2.78	$3.52	$2.30	$3.66
19	Square Miles in District (1)	163.613	96.898	130.584	80.140	43.042
20	2006 Enrollment per Square Mile (1)	5.445	11.517	8.530	12.939	23.116
21	Transportation Sparsity Factor (1)	0.048	0.029	0.039	0.025	0.000

(1) TRA = Transportation Formula Aid Output Report (TRA) dated March 12, 2009, for the Southern Cayuga School District for the 2008-2009 Operating School Year. TRA dated March 12, 2009, for School Districts A, C, and D; and March 19, 2009, for School District B.
(2) Operating Cost = Total Transportation Expenses less Contract Transportation Expenses
(3) Salaries and Benefits do not include non-transportation coded benefits such as workers compensation, FICA, and DBL as per SED requirements.
(4) Information secured from the School Districts