Proposed Implementation Plan for the New Pupil Transportation Funding System

Report to the Quality Education Council

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State Superintendent of
Public Instruction

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September 2009

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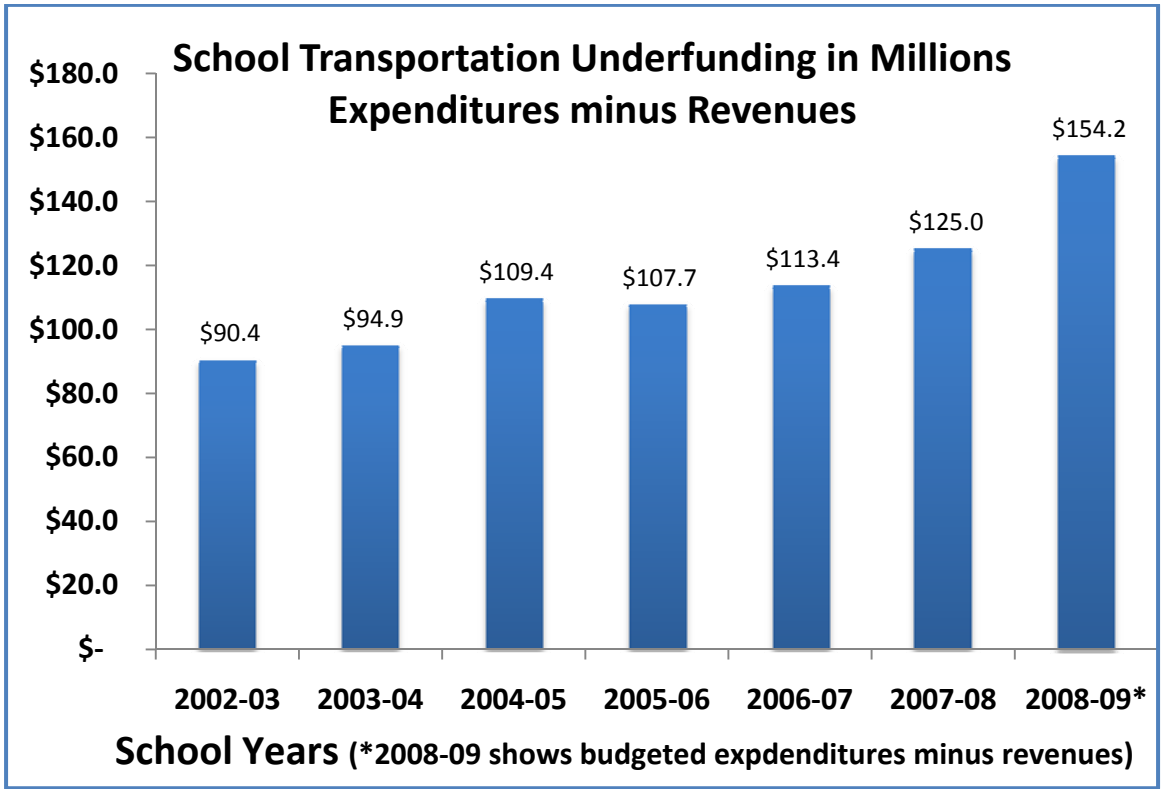
Executive Summary

In 2005 the state directed the Joint Legislative Audit and Review Committee (JLARC) to determine whether or not the state was fully funding school districts to transport students to and from school. JLARC concluded that the current funding formula drove inadequate funding and that the formula was fundamentally flawed; even if funding factors were improved, the formula could not be modified to provide appropriate funding for districts of all sizes and characteristics.

In 2007 the Legislature authorized and funded a study to determine two options for a new funding formula for basic pupil transportation. A consultant hired by the Office of Financial Management (OFM) designed two possible formulas. An advisory committee identified the formula that provided more appropriate funding for districts and promoted efficiency.

Graph 1 displays the amount that districts subsidize basic education transportation with local funds. In the 2007-08 school year, districts subsidized "to and from" basic education transportation by $125 million, or about 33% statewide.



Graph 1. School Transportation underfunding (expenditures minus revenues) per school year. The 2007–08 school year was the first year when accounting rules required school districts to isolate to-from transportation costs. The graph shows actual expenditures minus actual revenue for years 2002–03 to 2007–08. 2008–09 shows budgeted expenditures minus actual revenue.

The 2009 Washington State Legislature enacted Engrossed Substitute House Bill (ESHB) 2261 which provides the framework for Basic Education Reform, including a new pupil transportation funding formula to be implemented beginning no later than the 2013 School Year. The new formula required in ESHB 2261 is based on the formula recommendation of the OFM advisory committee.

In order to ensure that the new funding formula could be adopted in an orderly manner, without suddenly forcing costly new data collection or operational requirements on districts, ESHB 2261 requires the Quality Education Council to develop an implementation plan related to the new transportation formula. The Office of Superintendent of Public Instruction (OSPI) has conducted an analysis of requirements in cooperation with regional transportation experts.

Implementation Feasibility Findings

The primary data elements required by the new funding formula are the number of basic and special program students transported. Secondary data elements include the average distance from bus stops to the school or learning center, the number of destinations served, and "as many other site characteristics that are identified as being statistically significant" by the OSPI. The additional site characteristics identified as statistically significant by the consultant during the formula development process were all relatively static data elements (such as the school district's land area) or simple numerical values (such as the number of kindergarten routes).

A Geographic Information System (GIS) is required to determine the shortest road distance from bus stops to school in order to calculate a district's average distance from all school bus stops to schools. Fortunately, such systems are available in the marketplace and their integration into the formula's infrastructure is relatively straightforward. As a result, required development time is not extensive. A system will be required to convert the GIS and other data through the calculations to determine allocation per district. The same system will provide efficiency evaluations of school district transportation services (as required by ESHB 2261, Section 310) and will provide the ability to review transportation service structure without requiring on-site visits.

The Superintendent concludes that the new transportation formula can be implemented with little disruption and cost to school districts, and therefore, can be fully implemented by the system in the 2011-12 school year. In addition, eliminating stop-by-stop student counts increases student safety.

Therefore, this proposal recommends that the 2010 Washington State Legislature provide $670,000 in funding for development of the funding system's infrastructure. During the 2010-11 fiscal period, OSPI would deploy the new GIS system. This will allow the new funding formula to be implemented at the start of the 2011–12 school year without placing a significant new workload burden on school district transportation staff. This proposal provides adequate time for

school districts to develop walk areas around each school (as required by ESHB 2261, Section 305) and to restructure routing for improved efficiency.

In short, the new pupil transportation funding system can be implemented beginning with the 2011–12 School Year. The only requirement is that the 2010 Legislature provides $670,000 for development of OSPI's required technology infrastructure during 2010-11. There is no technical or preparatory need to delay implementation of the new formula beyond 2011-12. Furthermore, there is no technical or preparatory need to phase-in full funding of the new formula over time.

I. Purpose

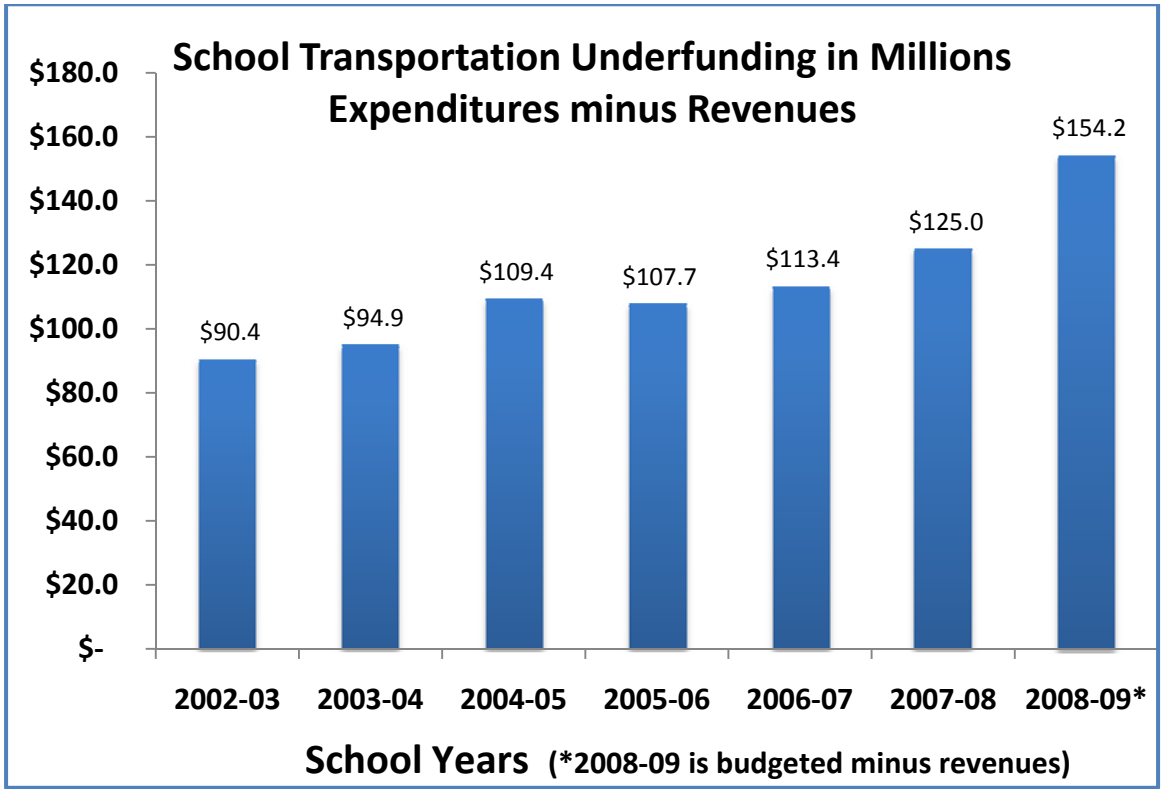
The 2009 Washington State Legislature passed Engrossed Substitute House Bill (ESHB) 2261 providing for a new funding system for pupil transportation, with implementation beginning "no later than the 2013–14 school year" (Section 311(1)). Section 114 places oversight of the implementation process for the pupil transportation funding system with the Quality Education Council (QEC) and requires an initial report to the Washington State Legislature on January 1, 2010. Included in the requirements for this report is "a recommended schedule for phased-in implementation of the new distribution formula for allocating state funds to school districts for the transportation of students to and from school, with phase-in beginning no later than September 1, 2013."

This document provides an implementation plan for the new pupil transportation funding system for the consideration of the Quality Education Council.

II. Background

The current pupil transportation funding system has been in place since the early 1980's. Since that time there have been several modifications, but no substantial revisions. In the 2005–07 Operating Budget, the 2005 Legislature provided funds for the Joint Legislative Audit and Review Committee (JLARC) to perform a study of Washington State's pupil transportation funding system. This report (JLARC Report 06–10) was submitted to the Legislature on November 29, 2006.

JLARC's findings indicated a range of underfunding for school transportation of between $92 and $114 Million for the 2004–05 school year. This continuing underfunding, as evidenced by the difference between revenues and reported expenditures, is shown in Graph 1.



Graph 1. School Transportation underfunding (expenditures minus revenues) per school year. The 2007–08 school year was the first year when the accounting rules required school districts to isolate to-from transportation costs. The graph shows actual expenditures minus actual revenue for years 2002–03 to 2007–08. 2008–09 shows budgeted expenditures minus actual revenue.

JLARC reported that there were between 65 and 70 districts (primarily small rural districts) that were receiving full funding, while the statewide average for funding was approximately 65 percent of expenditures (based on 2004–05 school year data). The report indicated that the current funding system was unable to be adjusted to adequately fund most school district transportation systems.

In response to the 2006 JLARC report, the 2007 Washington Legislature passed Engrossed Substitute Senate Bill (ESSB) 5114 which required the Office of Financial Management (OFM) to hire a consultant to develop two options for a new pupil transportation funding system and to report those options to the Legislature in December 2008. The consultant worked with the Advisory Committee of stakeholders required by ESSB 5114 and delivered two models (Unit Cost and Expected Cost) to OFM in November 2008.

The language implementing the new pupil transportation funding system included in ESHB 2261 implements the Expected Cost Model. This model was the Advisory Committee's preferred choice. This system uses a statistical method (regression analysis) to calculate an "expected cost" of a school district's transportation service based on a number of significant site characteristics.

The development of a student transportation funding formula is complete. An example of the funding calculation for a hypothetical school district using the new system is provided in Appendix A using the coefficients developed by the consultant. The model coefficients were calculated using the existing dataset of AM only student counts and average distance from school bus stops to destinations in radius miles. The coefficients for site characteristics will need to be recalculated after the initial data collection process under the new system is complete (October 2011). The adjustment process for coefficients involve a set of straightforward calculations and similar adjustments are an integral part of the routine maintenance of the new funding system.

III. System Requirements

For the purpose of this report, the IT infrastructure required to implement the new pupil transportation funding system will be referred to as the Student Transportation Allocation Report System (STARS[1]). STARS includes a website interface on the existing secure Education Data System (EDS) for school districts to report data elements, a GIS component to provide calculations of school bus stop to school distances, and a computer program to determine formula coefficients and provide calculations of funding amounts (with associated supporting routines) and a website to review and edit submitted data and verify calculations. STARS will be used in this report to refer to the entire report, review and calculation system.

The primary system requirement for implementation of STARS is a Geographic Information System (GIS) to provide OSPI with the ability to calculate the average distance from school bus stops to destinations in roadway miles from the school district submitted school bus stop location information. As shown in Appendix A, calculation of allocation amounts from submitted data elements is straightforward (although determination of site characteristic coefficients is a more complex statistical process).

Data Elements and Infrastructure Requirements

The technology infrastructure OSPI currently uses to calculate school district transportation funding is a 15 year old mainframe computer running a 25 year old COBAL program. This program calculates funding based on student counts at bus stops in each radius mile increment from data submitted by school districts on modified Excel spreadsheets. There is little in common between how the data currently submitted is processed and the processing of the same data elements by STARS. Even if the programming language of the existing system met modern IT standards, modification of the existing program would not be an appropriate approach. A new IT system is required to manage the revised data elements, calculations, and reports.

The good news is that the largest data component that school districts will have to submit in the new system is essentially the same as in the existing system: the location (in latitude and longitude) of each school bus stop associated with a school destination. School districts will not have to develop collecting methods for additional data elements. After development of STARS programming language and web-based interface, but prior to the start of the 2011–12 school year, district transportation staff will be able to review school bus stop locations (based on the 2010–11 school year report using the current system), make adjustments to stop locations and download the corrected location data in preparation for the initial report of the new system in October of 2011. (School districts using transportation routing programs will only be

[1] STARS is a draft term for the use of this report and is not an official designation.

required to maintain current data in their program in order to meet OSPI data requirements for school bus stops.)

The site characteristics specifically required for the funding formula regression analysis identified in ESHB 2261 are:

- The number basic program students transported,
- The number of special program students transported,
- The average distance between each school bus stop and the corresponding school or learning center,
- The total roadway miles within the school district boundaries,
- The total land area of the school district (in square miles), and
- The total number of locations served.

The additional data elements determined to be statistically significant by the consultant and expected to be included (but not specified in statute) are:

- The number of kindergarten trips per week.
- If a school district does not have a high school, do they provide transportation for students to attend high school in another district?

School district staff will log onto STARS to enter data and upload school bus stop location information (see Illustration 1).

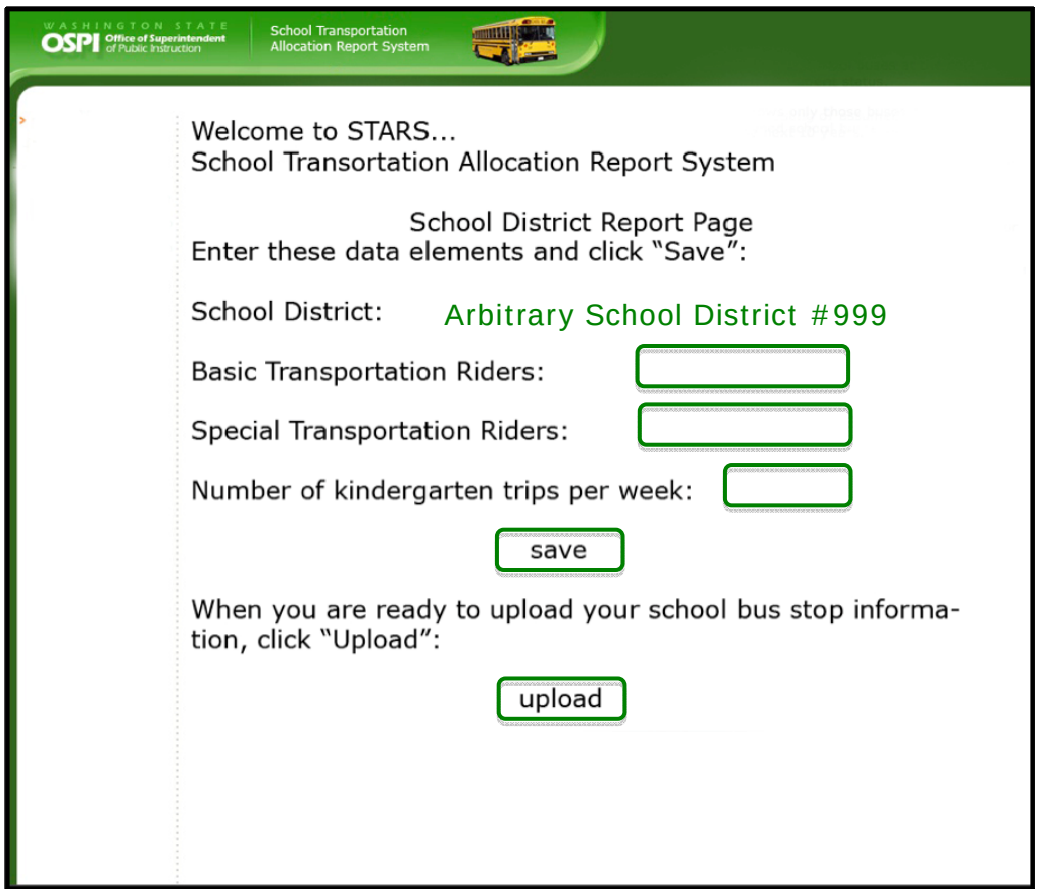


Illustration 1: A proposed interface for school district staff to enter district required data elements and to upload school bus stop location files.

A number of the required data elements are relatively static (i.e. school district land area) and will be collected from other than school district sources. Additional discussion of the data elements and associated collection and verification processes is provided in Appendix B.

While the current system provides funding based on the number of students boarding the school bus at each AM stop (and multiplies that count by two), the new funding system requires AM and PM counts of students transported (but does not require stop-by-stop counts). Student counts will be done at school loading zones. This not only minimizes the workload associated with stop-by-stop student count calculations (a source of significant audit corrections), but **increases student safety by not distracting school bus drivers during the load/unload process** (when national statistics indicate most student transportation fatalities occur).

ESHB 2261 (Section 310) requires OSPI to use "a linear programming process" to determine comparative efficiency ratings for each school district's transportation operations. The Educational Service District (ESD) regional transportation coordinators are required to review any school district transportation operation rated at less than 90 percent efficiency. This statistical analysis tool was developed by the funding system consultant in response to legislative concerns for ensuring efficient use of public resources (particularly in light of the current formula's reward of inefficient operations for many small to medium size school districts).

The linear analysis efficiency evaluation tool will be included in STARS. Fortunately, the same dataset used to calculate the operations allocation in the new funding system can be used for the calculation of the efficiency ratings.

Special Funding Processes

OSPI is required to identify an adjustment process (if necessary) to ensure adequate funding for the following transportation system types:

- Low enrollment districts (the consultant identified a natural break point in the statistics for the 2006–07 school year at 109 students)
- Non-high districts
- Districts participating in transportation cooperatives
- Educational Service District's (ESD's) operating special transportation cooperatives

Until OSPI can evaluate the actual allocations resulting from the new system for each district or ESD in these categories, is not possible to identify an appropriate adjustment process. In some small districts, measures to increase efficiency may result in enough savings to offset the underfunding exhibited in the model calculations based on existing expenditure data. Or, there may be additional data elements OSPI can identify as statistically significant to enable adequate funding levels for these district without use of an additional process.

System Adjustment Requirements
The STARS calculations will be able to be adjusted (without programming) as the regression analysis coefficients associated with the site characteristics vary over time. For instance, as school districts move towards full day kindergarten, the number of midday kindergarten routes will drop. As the number of routes decreases, at some point, their statistical impact will no longer be significant and they will be eliminated from the calculation. In addition, STARS will be able to have additional site characteristics added when OSPI is able to identify additional factors that are statistically significant. STARS will also have the ability to adjust final allocations based on the results of any special funding adjustment process.

Data Review Processes
The following sections discuss processes to be provided by STARS to enable school districts and other individuals to view school district submitted student counts, route data, and the resulting calculations (the district's transportation allocation and efficiency ratings).

A. School District Review
STARS will provide school districts with a web interface to view and verify submitted route information. This is necessary to ensure that the GIS system accurately maps the shortest route distance from school bus stops to destinations. Additionally, many school districts use legacy locations for bus stops generated by low-resolution, handheld Geographic Position System (GPS) units. These school bus stop locations of may be improperly located by over 100 feet. This much variation of location may result in inaccurate distances to school from the bus stops. School district staff will need to have the ability to visually verify that school bus stops are accurately placed in order for the system to calculate an accurate bus stop to school distance.

STARS will provide school district staff with a system to be able to verify the area around each school that falls within one roadway mile. This will ensure that districts have good information on what areas need to be evaluated during the walk area process.

B. Regional Transportation Coordinator Review
The regional transportation coordinators will need to review school district submitted changes to route linkage determined by the GIS system. For example, a bridge with a maximum weight rating of 10,000 lbs. would not be usable for school buses but the GIS system may use the related roadways for calculation of school bus stop to school distances. School districts will need to identify these barriers and have them approved by the regional transportation coordinator and then eliminated from future efficiency analyses.

In order to accomplish efficiency reviews in a timely and cost effective manner, STARS will provide the regional coordinators with a means to review the routing structure used by each school district. Review of exact routing data by the

regional transportation coordinators is particularly important because many student transportation requirements are essentially inefficient.

The best example is the transportation of a single student requiring a special program only available outside the home school district (for instance, special programs required for vision or hearing impaired students). If the transportation provided is viewed on an isolated basis, this is very inefficient use of resources and a small school district with just one of these students may have their efficiency rating significantly lowered as a result. However, viewed from an overall educational system basis, transportation of this student to a distant program location offering appropriate service is much more efficient than duplication of the specialized program in each school or district having a student requiring such service. The regional transportation coordinator will review the overall transportation system for a school district to determine if such factors may have generated a lower efficiency rating. Another example of a possible low efficiency rating outside school district control is a rural district with low student density. Routing a school bus up a long, isolated valley may not be efficient, but the district is required to provide the transportation service.

Web review of route systems would allow the regional transportation coordinator to determine (in many cases) if the low efficiency rating is a result of school district choices or a result of factors beyond district control.

C. State Auditor Office Review

The State Auditor's Office (SAO) will need the ability to review school routing systems, school bus stop locations and walk areas to determine where to focus auditor efforts to ensure compliance with reporting requirements. One of the current areas of attention for auditors is the calculation of reported modes or averages from student counts at individual school bus stops. The new system will eliminate these calculations but will require school districts to isolate students receiving any school bus service within established walk areas. STARS will allow the SAO to review school bus stop locations to ensure that student counts from such stops have been properly recorded. Either the regional transportation coordinators or the SAO will also need to review how school districts establish walk areas to determine if an appropriate process was followed.

Valued Added Benefits

The report earlier covered the safety benefit of eliminating student counts at school bus stops and instead performing counts at school load zones. The following sections discuss a number of "value added benefits" that STARS may provide elsewhere in the public domain.

A. Public Value Added Benefits

STARS will provide school districts with text fields associated with school bus stops. Districts will have the ability to provide a range of information with school bus stops: from a school district phone number to exact stop times and bus route numbers. Individual school districts will determine what information (if any) associated with their school bus stops is provided to the general public. Some

districts freely post such information on their websites. Other districts are cautious about posting school bus stop details out of security concerns.

Most school districts do not provide public posting of bus route information for special programs. These routes typically change frequently and (since they are usually set up on a door to door basis) the location of school bus stops provides home locations for many special needs students. Typically, parents and schools would rather not have this data available to the general public on websites.

Realtors and other business interests are interested in school attendance boundaries. STARS will include a public website to provide information showing details of school district boundaries. While school attendance boundaries are not required by the reporting system, there is a high degree of correlation between the location of school transportation service with attendance area.

B. Value Added Benefits for Educational Agencies

The GIS component of STARS will allow OSPI to act as a centralized data warehouse for school district boundary information and related data. Boundary data is currently maintained by other agencies. Having OSPI maintain school district boundary information may result in ease of access for all agencies dealing with school district boundaries. Once OSPI's system is in place, this policy concept will need to be evaluated for implementation.

OSPI is also attempting to create and maintain an accurate facilities inventory of school buildings in Washington State. This information is useful to the Legislature for long-range planning and predicting costs of upgrading school buildings and construction of new schools. Having this information integrated with STARS will increase the usefulness and accuracy of the inventory system.

C. Emergency Management Agencies

Agencies with responsibilities for emergency management sometimes struggle to get accurate information regarding the location of school facilities. Having this information available on the STARS website will be an invaluable source of current, accurate information.

It is also important for non-school district agencies to quickly be able to determine school bus route information during various law enforcement actions and emergency situations.

D. Department of Social and Health Services

The Washington State Department of Social and Health Services (DSHS) maintains an inventory of the location of school bus stops. This is done in association with siting requirements for some DSHS programs. Having accurate school bus stops already in a GIS system will reduce workload requirements associated with this responsibility.

IV. Proposed Implementation Timeline

General Comments

The plan for the phase in of the new pupil transportation funding system needs to address these primary development concerns:

- Time for OSPI to hire a contractor to develop and test STARS.
- Time for school transportation routing program vendors to modify existing software packages to provide data in a format compatible with STARS.
- Time for school districts to collect and evaluate roadway information, plus time to establish and communicate the walk areas for each school.
- Time for school districts to evaluate and modify program bell times and transportation operations towards maximizing efficiencies.

Implementation of STARS can be achieved by September 2011. The crucial element to ensure implementation with the beginning of the 2011–12 school year is for the 2010 Legislature to provide funding for development of the system. This proposal provides enough time to minimize the transition workload on school district staff and ensures adequate time for development and testing of the new system.

School Transportation Routing Software Vendors

Data elements and formatting requirements will be provided to school transportation routing software vendors in December 2009. This will provide adequate time for the companies to modify their programs to provide school districts with the ability to export required school bus stop data in a flat file format that will upload to STARS. OSPI has made preliminary contact with the large companies providing routing software. Notification in the December 2009 timeframe allows appropriate lead time (for a 2011–12 School Year implementation) for companies to identify program modifications, develop and distribute software updates to program users and provide training in the use of new program elements and reports.

Establishing Walk Areas

The current transportation formula establishes eligibility for funding based on the location of school bus stops more than one radius mile from the school of enrollment. Funding for required transportation services within the first radius mile is based on the number of kindergarten through fifth grade students living within that distance. The new formula changes the basis of student eligibility for transportation funding from one radius mile to a safe walking route of less than one mile.

School districts are not restricted in what level of transportation service they provide. However, the new system will require school districts to establish “walk areas” for each school and to identify the exact count of basic program students boarding school buses at stops within the established walk area (and subtract these students --- if any --- from the total reported basic rider count).

The Safe Routes to School (SR2S) office at the Washington State Department of Transportation (WSDOT) is currently revising the *School Administrator's Guide to School Walk Routes and Student Pedestrian Safety*. This guide provides a community based, multi-agency approach to establishing safe walk routes. This process ensures that walk areas are established that maximize student safety and encourage walking to school when safe walk routes are available. OSPI is proposing that if a school district follows the process established by the SR2S Guide, the walk areas established will be accepted for the basis of funding.

There is an existing requirement for walk routes to be determined for all elementary schools (WAC 392-151-025). The process of establishing walk areas for all schools can build off the walk routes already determined for elementary schools. If the 2010 Legislature supports implementation of STARS in the 2011–12 school year, school districts will have in excess of one full school year to develop appropriate processes and determine walk area boundaries.

Hold Harmless Provision and Phase-in Process

ESHB 2261 Section 311(2) provides for the following hold harmless and phase-in processes:

> "During the phase-in period, funding provided to school districts for student transportation operations shall be distributed on the following basis:
> (a) Annually, each school district shall receive the lesser of the previous school year's pupil transportation operations allocation, or the total of allowable pupil transportation expenditures identified on the previous school year's final expenditure report to the state plus district indirect expenses using the state recovery rate identified by the superintendent; and
> (b) Annually, any funds appropriated by the legislature in excess of the maintenance level funding amount for student transportation shall be distributed among school districts on a prorated basis using the difference between the amount identified in (a) of this subsection and the amount determined under the formula in RCW 28A.160.180."

This language ensures that no school district will receive less funding than they received the prior school year (unless the district was funded in excess of expenditures). It also provides a process to ensure equitable distribution of funding during the budget adjustment process to the new funding system. This is required due to the inability to precisely predict the statewide allocation prior to the initial submission of school district data in the fall of 2011.

Appendix C provides a detailed timeline in text. A graphic depiction is provided here as Table 1.

Month (FY)	Event	Details and Comments
Jan-10	QEC Report to Legislature with a recommendation for 2011-12 implementation	Develop RFP for IT Infrastructure
Feb-10		
Mar-10	Supplemental Budget with $670K for IT system	
Apr-10	OSPI issues request for pilot districts; notification regarding establishing walk areas by 2011 school year; efficiency incentives in new formula	School Districts Determine Walk Areas and modify school bus service (as determined by the local board) No later than Sept 1, 2013
May-10	Identification of pilot districts review with pilot districts of RFP for IT infrastructure	
Jun-10	Release of RFP for IT Infrastructure	
Jul-10	Evaluate received RFPs for development of new system	Contract for development and support through deployment of new system infrastructure
Aug-10	Contract in place for successful RFP	
Sep-10	Initial meeting of pilot districts with RFP vendor	Pilot districts meet with system developer during 2010-11 SY
Oct-10	Meet with State Auditor staff to review new system requirements and recordkeeping requirements	
Nov-10		
Dec-10	Status report to Legislature	
Jan-11		
Feb-11		
Mar-11	IT Infrastructure development and testing completed	
Apr-11	Pilot districts collect new system data	
May-11	Pilot districts submit May Report	
Jun-11	School district routing information (2010-11 School Year) available for review and corrections	Review and correction of school bus stop locations
Jul-11	Meet with State Auditor staff for final review of reporting process	
Aug-11		
Sep-11	Initial report data collection through October 15th	
Oct-11	Initial report due	
Nov-11	Determination of initial coefficients	
Dec-11	Status report to legislature on coefficients and projected allocation	
Jan-12	School districts notified on allocation and initial efficiency rating	Districts review efficiency ratings and evaluate changes
Feb-12	Second data collection results due	
Mar-12		
Apr-12		
May-12	Third data collection results due	
Jun-12		

Table 1. Implementation timeline for the new pupil transportation funding system.

V. Conclusion

The new pupil transportation funding system can be implemented beginning with the 2011–12 School Year. The determining factor is if the 2010 Legislature provides funding for development of OSPI's required technology infrastructure.

Appendix A Funding Calculation Example

This example provides details for the calculation of a hypothetical school district. Because the coefficients will be recalculated using actual reported data (and actual road miles for the average distance from bus stop to school), determining actual allocations under the new system to individual school districts is not possible until after the initial report under the new system. While OSPI currently receives all the data required for these calculations, STARS will provide the system to calculate average road distance to school from the location of a district's school bus stops.

Formula calculation example:

(adapted from the consultant's report)

Using data from the 2006–07 school year and the existing (radius mile based) school bus stop data, the regression analysis provided the following coefficients for the identified significant site characteristics for school districts in Washington State:

Basic Program Riders	0.69011
Special Program Riders	0.09854
Land Area	0.10259
Average Distance to School from bus stops	0.08828
Roadway Miles	−0.0001838
Number of Locations Served	0.01364
Non-high district not providing high school transportation *	−0.19377
Non-high district providing high school transportation *	−0.33122
Number of midday kindergarten trips per week	0.00177

* Non-high transportation is a binary (yes or no) value.

The regression analysis constant term was 7.58326.

For a hypothetical school district with the following characteristics:

Basic Program students transported:	1,500
Special Program student transported:	100
Average distance between school bus stops and school:	5 miles
Land area of school district:	150 sq. miles
Number of miles of roadway:	400
Number of locations served:	10
Number of mid-day kindergarten trips per week:	20
Transportation Expenditures (prior school year):	$1,645,921

The calculation is as follows:

Compute the natural logarithms (ln) of basic riders, special riders and land area:

ln(Basic Program Riders) = ln(1,500) = 7.31322
ln(Special Program Riders + 1) = ln(101) = 4.61512
ln(Land Area) = ln(150) = 5.01064

These results (and the values for the other site characteristics) are then multiplied by the regression analysis coefficients for each of the significant site characteristics:

ln(BP Riders):	0.69011 x (7.31322)	= 5.04693
ln(SP Riders +1):	0.09854 x (4.61512)	= 0.45477
ln(Land Area):	0.10259 x (5.01064)	= 0.51404
Avg. Distance:	0.08828 x (5)	= 0.44140
Roadway miles:	−0.0001838 x (400)	= −0.07352
Number of locations:	0.01364 x (10)	= 0.13640
Non-high transporter:	−0.19377 x (0)	= 0
Non-high non-transporter:	−0.33122 x (0)	= 0
Midday K trips:	0.00177 x (20)	= 0.03540

Sum of the above products:	= 6.55542
Add the regression analysis constant term:	7.58326
	= 14.13868

This provides the natural logarithm of the expected cost for the school district.

$$e^{14.13868} = \$1,381,499$$

To this is added a 10% buffer factor to obtain the allocation value of $1,519,649.

The formula makes a final comparison against the school district's actual reported to/from transportation expenditures ($1,645,921 in this case) to ensure the state was not allocating funding in excess of expenditures.

The actual allocation for this district would be $1,519,649.

Appendix B Submission and Verification Processes

This section provides additional comments regarding the submission and verification processes proposed for the new funding system. These elements are all currently collected … either by school districts as part of their current transportation report, or by other government agencies. Each data element will be subject to review by school district staff to ensure accuracy.

1. **Required data element:** Basic program student count.

Data submitted: Total number of basic program students transported to and from school. Districts will count students at school load zones departing the school bus in the AM and boarding the bus in the PM (at the end of the student's academic day). Districts will be required to subtract the count of any students provided with transportation service to or from a stop within the walk area.

Submission interface: Data entry via keyboard on a STARS web page (see Illustration 1, page 8).

Review process: School districts will be able to review the correct student count was submitted on a STARS public access web page displaying school district transportation report values.

2. **Required data element:** Special program student count.

Data submitted: Total number of special program students transported to and from school. Districts will count students at school load zones departing the school bus in the AM and boarding the bus in the PM. Special programs include special education (transportation listed as a required related service in the student's Individual Education Plan (IEP) or special services required under a Section 505 plan). Other special program categories are: transportation required by the McKinney-Vento Act for students experiencing homelessness, students participating in gifted programs at a centralized location that is outside their local school attendance area, and students participating in bilingual programs in similar centralized locations. (Route types will be reported in association with school bus stop information.)

Submission interface: Data entry via keyboard on a STARS web page (see Illustration 1, page 8).

Review process: School districts will be able to verify the special program student count on a STARS public access web page displaying school district transportation report values.

3. **Required data element:** Average distance from school bus stop to school.

Data submitted: Location of each school bus stop in latitude and longitude. Submitted using one of two methods: using a set of (modified) OSPI Form 1022A's showing school bus stop locations for each route, or using commercial school transportation routing software packages that provide an upload of GIS data from the school district's system to STARS.

Submission interface: From the STARS web page used for data entry of the basic and special program student counts an upload process will be provided to transmit files for processing (see Illustration 1, page 8). Files will consist of

multiple Microsoft Excel spreadsheets (one for each school bus route) for districts without transportation routing programs. For districts using transportation routing programs, a single flat file will be generated by the routing software for export to STARS. Route reports will include the route type (including sub-type for special program routes) and scheduled start and stop times.

Calculation process: STARS' GIS module will calculate the shortest roadway distance between each school bus stop and the destination school or learning center. This is a standard feature of current GIS programs.

Calculation process review: STARS will display each school district's routing information. School districts may select the route for any school or learning center… and review the street linkage used to calculate the distance from each school bus stop. This will allow districts to verify the average distance calculation and verify that STARS is not using inappropriate routing between stop and school (i.e. not routing across a bridge with weight restrictions). While the initial review may take some time, this will only be required during the initial implementation. The other times when distance calculations will need to be reviewed are when roadway conditions change (a bridge washes out) or a new bus stop is added (in rural locations). In most cases, the stop-to-school distance value for bus stops will be straightforward. STARS will provide school districts with a secure connection providing the ability to drag and drop roadway linkage corrections. Corrections will be submitted and reviewed by the regional transportation coordinator who will accept or modify proposed changes.

Review process: School districts will be able to view the average distance calculated value on a STARS public access web page displaying school district transportation report values.

4. Required data element: Number of kindergarten trips.

Data submitted: Total number of kindergarten routes operated mid-day in support of half-day kindergarten programs.

Submission interface: Data entry via keyboard on STARS web page (see Illustration 1, page 8).

Review process: School districts will be able to review the count of kindergarten trips operated on a public access web page displaying school district transportation report values.

Comment: The consultant identified this data element as statistically significant. While not included specifically within the language of ESHB 2261, OSPI will include this data element in funding calculations after re-evaluation of statistical significance.

5. Required data element: Number of locations served.

Data submitted: No separate data entry required by school district. STARS will count separate unique values of school or learning center locations entered on the school bus stop locations report required for the calculation of average distance from school bus stop to school of attendance.

Submission interface: STARS school bus stop location file upload process.

Review process: School districts will be able to verify the number of locations served value calculated by OSPI's system on a STARS public access web page displaying school district transportation report values.

6. Required data element: Number of roadway miles

Data submitted: No data entry required by school district.
The total number of roadway miles within the school district boundaries as reported by the Office of Financial Management (OFM).

Submission interface: OSPI data entry via keyboard or file upload on a STARS web page.

Review process: School districts will be able to review the total number of roadway miles within the school district boundaries on a STARS public access web page displaying school district transportation report values.

7. Required data element: Area of school district in square miles

Data submitted: No data entry required by school district.
The total land surface area of the school district.

Submission interface: School district boundary information will be kept up to date in STARS which will provide land area values.

Review process: School districts will be able to verify the total land surface area value on a STARS public access web page displaying school district transportation report values and verify accuracy of school district boundaries.

8. Required data element: For non-high school districts, does the resident (non-high) district provide transportation service for high school students?

Data submitted: Yes or No answer.

Submission interface: Data entry via keyboard on a STARS web page. (similar to that shown in Illustration 1, page 8.)

Review process: School districts and regional transportation coordinators will be able to review and verify the submitted "yes" or "no" response entered on a STARS public access web page displaying school district transportation report values.

Comment: The consultant identified this data element as statistically significant. While not included specifically within the language of ESHB 2261, OSPI will include this data element in funding calculations after re-evaluation of statistical significance.

Appendix C Timeline Details

Timeline Assumption
This timeline is based on one underlying assumption as described in the second item (January – March 2010). This assumption is that the 2010 Legislature allocates $670,000 for the development of the STARS system.

December 1, 2009
Report to the Washington State Legislature on required reporting elements (ESHB 2261 Section 311 (3)).
Notification to transportation routing software companies of the required flat file format for data elements for export to STARS. Data provided by the routing software will include the location of all school bus stops and associated schools and learning centers.

January – March 2010
2010 Legislative Session allocates funding for OSPI to develop the funding system infrastructure (STARS) with implementation in the 2011–12 school year.

April 2010
OSPI memorandum for request for volunteer districts to represent stakeholders and for volunteer pilot districts during the development process.
OSPI bulletin regarding the process for implementing the new funding system and the requirements for school districts. In particular, emphasis on the development of walk areas to ensure that school district processes for determination of the walk distance exceptions (locations with hazardous conditions) complies with the funding system requirements by September 2011. The bulletin will also address the efficiency evaluation process and emphasize that school districts plan for the adjustment of routing and bell times to maximize efficiency.

May 2010
Workshop at the Washington Association of School Business Officials (WASBO) conference on the new funding system and initial meeting of school districts that have been selected as stakeholders and pilot districts during the development process.
Stakeholder input on interface concepts and the wording of the Request for Proposal (RFP) for STARS.

May 2010 – June 2010
Develop and release STARS RFP.

July 2010 – August 2010
Evaluate the RFPs submitted and put contract in place.

August 2010
Stakeholder meeting at Washington Association for Pupil Transportation (WAPT) conference.

Workshops at the WAPT conference regarding the new report process and the requirement regarding development of the walk areas.

August 2010 – September 2010
Development begins on STARS.

September 2010
Annual Ridership Training Workshops
During the training workshops for the 2010–11 school year (the normal workshops associated with the report due under the existing system), training will be provided on the new report requirements and guidance as to how districts may prepare for the 2011–12 report under the new system. STARS developer meets with districts during training session to receive stakeholder input.

September 2010 – August 2011
School districts establish walk area committees and determine walk areas in accordance with the School Administrator's Guide to School Walk Routes and Student Pedestrian Safety.
School Districts evaluate bell times and scheduling changes to go into effect with the 2011–12 School Year to maximize efficiency of transportation service.

December 2010
Status report to the Washington State Legislature.
Review of STARS development.

March 2011
Initial development and testing STARS complete.

April 2011
Pilot STARS with volunteer districts.
Corrections to STARS based on results of pilot.
Meet with State Auditor's Office regarding new reporting processes. Ensure that school district record keeping will be appropriate for auditor review. Plan required training for new field auditors (for audit work beginning in 2012–13 School Year).

May 2011
WASBO Conference. Workshop on new report process via STARS and review of April pilot report. Emphasis on establishing the walk areas and review of school bus stop placement. Training on review of routing methods for maximizing efficiency.

May 2011 – August 2011
STARS website is launched with existing school district stop and route information. School district transportation staff are able to access STARS and view route information and make corrections to stop locations. After corrections, districts may download route information into formatted reports. (For those districts not utilizing transportation routing software.)

June 2011
Training Workshops
Statewide workshops provided by the regional transportation coordinators on the report process for the 2011–12 school year. Emphasis on establishing the walk areas and review of school bus stop placement. Training on review of routing methods for maximizing efficiency.

August 2011
Training workshops at WAPT conference.
Training on walk route requirements, STARS website interface and review and verification of submitted data.
School district review of routing methods for maximizing efficiency.

September 2011
Regional transportation coordinators provide training on STARS.

September 2011– January 2012
Funding is distributed based on 2010–11 school year allocation amounts (as determined by the existing funding system).

October 2011
School Districts submit initial reports under STARS.

November 2011
Evaluation of full STARS report dataset and determination of coefficients using regression analysis.

December 2011
Report to the Legislature on the results of the October 2011 STARS report and allocation amounts to school districts based on revised coefficients. Included are the efficiency ratings for school districts and initial evaluation of the funding for low enrollment, non-high, transportation cooperatives and educational service districts providing specialized transportation services.

December 2011 – June 2012
School Districts evaluate changes necessary to maximize efficiency based on review of initial efficiency ratings. Focus on adjustment of bell times for the 2012–03 School Year.

January 2012
School Districts receive initial notification of allocation amounts based on new funding system and efficiency ratings.
Regional transportation coordinators perform initial STARS screening of efficiency rating results from October report (for districts with efficiency ratings less than 90%).
OSPI evaluates funding for low enrollment, non-high, cooperatives and ESDs.
Determination of process for adjustment of funding.

Workshops provided by regional transportation coordinators on understanding STARS and the resulting allocation. Focus on the efficiency ratings and what actions are necessary in individual district cases to maximize efficiency.
Legislative review of OSPI proposed process to adjust funding for low enrollment, non-high, cooperatives and ESDs.

February 2012
Revision of transportation operations allocation to funding based on STARS October report.
Adjustment of allocation for low enrollment, non-high, cooperatives and ESDs.
Phase in Process (Section 311)
School districts submit second STARS report.

March 2012
Re-calculation of ridership based on February 2012 STARS report.

May 2012
WASBO Conference: workshops on understanding STARS, the new allocation system, how the efficiency ratings are determined and methods of maximizing efficiency.
School Districts submit May STARS report (prior to May 15th).
OSPI re-calculation of ridership based on May STARS report.

July – August 2012
Training workshops for auditors regarding the new funding system reporting requirements. Emphasis on review of walk area process and isolation of riders within the walk area from reported basic program riders.

September 2012 – August 2012
Second year under new funding system.
First year of audit review of school district STARS reports.