

*Student
Transportation
Consulting
Services*

STUDENT BUS
TRANSPORTATION STUDY

FINAL REPORT

State of Hawaii Department of Education

November, 2012



Solutions that work... together.

November 19, 2012

Mr. Raymond F. L'Heureux
Assistant Superintendent
Office of School Facilities and Support Services
1390 Miller St., Room 319
Honolulu, HI 96813

Dear Mr. L'Heureux:

Management Partnership Services, Inc. (MPS) is pleased to present this final report in response to PS D12-152, Student Bus Transportation Study for the State of Hawaii Department of Education. The enclosed report presents our analysis, findings and proposed recommendations to improve the efficiency and cost effectiveness of student transportation service delivery in the State of Hawaii. The analysis indicates that virtually every aspect of the student transportation program in Hawaii requires some degree of reform. The proposed reforms are comprehensive, and are in direct response to our findings of the need for systemic change within the Student Transportation Services Branch. Successful implementation will require a long-term commitment of time and resources. It is our contention however, that successful implementation of the recommended reforms will transform the delivery of student transportation services, reversing the escalation in costs and vastly improving service quality.

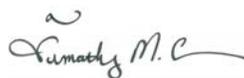
We would like to thank all of the members of the State of Hawaii school community who participated in this project. The active and willing participation of legislators, the Board of Education, the Office of the Auditor, Department of Education staff and the bus contractors was invaluable. We would also like to specifically recognize Mr. James Kauhi and the members of the Student Transportation Services Branch for their enthusiastic assistance throughout the course of the project.

We greatly appreciate the opportunity to work with the State of Hawaii on this important project. Please feel free to contact us with any additional questions.

Sincerely,



Thomas W. Platt
President



Timothy Ammon
Vice President & Project Manager

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Executive Summary

PROJECT BACKGROUND

The cost of providing K-12 student transportation services in the State of Hawaii has been escalating at an unsustainable pace. A recent report by the Office of the Auditor questions the ability of the Department of Education's Student Transportation Services Branch to adequately address the issues facing the Department. The legislature, also in an expression of concern, reduced transportation funding for 2012/13. The funding reductions resulted in the consideration and elimination of a significant number of existing bus routes. While stabilizing overall expenditures on transportation, this reduction resulted in substantial public concern and additional calls for reform.

Against this backdrop, the Department of Education issued a Request for Proposal for a comprehensive review of student transportation operations and management. In September 2012, Management Partnership Services, Inc. (MPS) was engaged to conduct the assessment. This report presents the resulting analysis, findings and recommendations. Given the significant recent attention given to the issues, the focus of the MPS review was placed on rapidly assessing the current situation and developing a viable program of improvement for immediate action.

THE CURRENT SITUATION

Student transportation service delivery in Hawaii is a large and complex undertaking. More than 35,000 students are transported using over 700 buses provided by 12 bus contractors on a daily basis. This program is managed by 14 Department of Education employees within the Student Transportation Services Branch. Approximately \$60 million will be expended in 2012/13 for regular home-to-school and special education transportation services. Current annual contract costs have been calculated to be approximately \$86,500 per active route bus, and approximately \$1,750 per transported student. In the experience of MPS these far exceed national norms, and are comparable to the most expensive student transportation operations MPS has worked with throughout North America.

This review has found the entire student transportation services program to be in need of systemic change. Every aspect of the program from the statutory underpinnings, procurement of bus contractors and contract management methodologies, through the day-to-day operational practices of the Student Transportation Services Branch will require comprehensive revision. Particular emphasis must be placed on improving the contracting process and STSB's contract management philosophy and approach.

Key findings from the assessment include:

- The challenge inherent in geography is a real but manageable constraint on efficiency.
- Dramatic increases in bus contractor costs are apparent in the four fiscal years from 2006 to 2010, with the primary cause being increases in the rates paid to contractors.
- The contracted service model is fundamentally sound, but structural problems exist with current procurement and contracting practices.
- The organization structure of the transportation program is misaligned relative to its responsibilities.
- There is an absence of the basic technological tools required to support an efficient and effective transportation program.

Executive Summary

THE PATH FORWARD

The core recommendation resulting from this study is to retain the current contracted service model but with major revisions to virtually every associated business process. This heavily revised business model will be reliant on three interdependent principles:

- *Contracted service provision* – There is no need or solid rationale for the State to assume the significant costs, risks, and operational burdens associated with owning and operating a fleet of school buses. Instead, significant improvements to existing procurement, contracting, and contract management methodologies will achieve the necessary gains in efficiency, effectiveness, and sustainability.
- *Centralized planning and information management* – The contracted service model can never be allowed to relieve the Department of Education of full responsibility and accountability for the performance of the system. The foundation for this must be the awareness and control provided by centralized planning and the coordination of all data and information related to the program.
- *A functionally oriented transportation services organization structure* – Success requires a technology-enabled, functionally oriented organization that distributes responsibilities appropriately, establishes properly trained positions in key locations, and facilitates the development of the specialized expertise required in critical functions such as route planning, contract performance management, and operations.

Implementation will require a structured and deliberate plan for managing the transition. The proposed approach is focused on three critical components:

1. A clean break with the current business model to enable substitution of the revised approach;
2. A substantial pilot program followed by a rolling implementation schedule that ensures a deliberate transition and mitigates risk; and
3. A means to facilitate the continuation, and eventual winding-down of current operations during the implementation of the revised model.

These three elements must work together and in parallel to ensure a successful transition. A reengineering effort as large and complex as the one proposed and described throughout this report can initially seem like an overwhelming prospect. The State and the Department of Education must accept that there is a great deal of institutional and operational risk inherent in committing to the change. However, it is the firm assessment of MPS that the State and Department of Education are both committed and able to undertake this critical transformation.

The first required step is one of commitment to a long-term program of change. No stakeholder in this process should be under any illusion that this will be a short or simple process. It will require a multi-year commitment of both time and resources. With the commitment in-hand this transformation will, in the assessment of MPS, result in substantial cost savings and service improvements to the K-12 student transportation program in Hawaii.

Introduction

STUDENT TRANSPORTATION SERVICES IN HAWAII

Student transportation in the State of Hawaii is a large, complex enterprise. At the time of this review, more than 35,000 students were transported daily using more than 700 route buses on 5 islands by 12 different Hawaii Department of Education (DOE) contractors. This transportation service was being managed by a total Student Transportation Services Branch (STSB) staff of 14 located throughout the islands and with a central office on Oahu. Collectively, the student transportation system operated by the DOE is among the largest in the United States.

PROJECT BACKGROUND

Student transportation in Hawaii has been the subject of frequent discussions and analysis over the previous three years, primarily as a result of its performance within the constraints imposed on it. The STSB has been the subject of a number of internal assessments by legislative, executive and external reviewers. The most recent example is an August 2012 report released by the State Office of the Auditor that identified a number of concerns regarding the management of the transportation program.

A near doubling of transportation expenditures over the previous three years was the predicate for this and other reviews. Prior to the 2012/13 school year, student transportation funding was dramatically reduced by the State legislature as part of an effort to better control the growth in transportation costs and to establish a more detailed understanding of the causes and departmental responses to the expenditure increases. The funding reductions resulted in the consideration and elimination of a significant number of existing bus routes. The proposed and actual reductions resulted in substantial public concern and calls for action on multiple fronts to reform the structure and operations of the student transportation services program.

In May 2012 the Department of Education released a Request for Proposal for consulting services to conduct a Student Bus Transportation Study. In September 2012, the DOE engaged Management Partnership Services, Inc. (MPS) to conduct this assessment. MPS proposed a methodology that combined a quantitative assessment of cost and service parameters with a qualitative assessment of operating practices. The work plan contained three distinct but interrelated components. The first component of the project focused on establishing a baseline array of costs and service indicators for comparison to other operations around the nation. The second component of the project focused on using the baseline values to assess alternative service models. The third component focused on evaluating the organizational and operational structure in the context of both current operations and what might be necessary to support any recommended changes to the service delivery model.

In order to gain an understanding of the geographic, political and operational constraints of the State of Hawaii, MPS conducted a multi-day site visit to meet with critical student transportation stakeholders. This included meetings with legislators, the Board of Education, Office of the Auditor staff, Department of Education administrators, bus contractors, and STSB staff. The goal of these discussions was to ensure that the quantitative and documentary analysis conducted previously could be placed in proper context. Additionally, efforts were made to understand how the unique characteristics of Hawaii would impact any proposed alternative model.

Following the site visit continuing efforts focused on reconciling cost and service data and analyzing alternative service models for the department. Conversations with staff continued for the purpose of clarifying understanding, and data analysis continued. This report details the results of the MPS assessment.

Introduction

ORGANIZATION OF THIS REPORT

This report is designed to allow the reader to quickly gain a general understanding the results, including the rationale and expectations for the proposed reengineering effort, in summary form. This summary is followed by the detailed assessment of current operations and description of the comprehensive strategy for improvement. Finally, a series of appendices relate further detail in support of the overall findings and recommendations. These report sections begin immediately following this introduction and are described briefly here:

- *Findings and Recommendations In Brief* – This section of the report is designed as an overview of the complete results, inclusive of sufficient detail for the general reader to gain an understanding of the rationale for change and the expectations for the recommended improvement approach.
- *The Current Situation* – This portion of the report provides the detailed observations and findings concerning the current organization and operation of the transportation system. The section begins with an overview of the constraints imposed by the operating environment as established in legislation, regulation and the geography of the State. This is followed by a description of the operating practices of the department. Finally, the rationale for change is described as an introduction to the recommendations.
- *The Path Forward* – This section of the report provides detailed recommendations and a plan for revising the organization and operations transportation services. Recommended revisions to existing practices and the likely impacts of those changes are detailed. A proposed implementation strategy that is designed to provide stakeholders with a foundation upon which a detailed implementation plan can be developed is also provided.
- *Appendices* - A series of appendices that provide greater detail on observations and analyses highlighted in the report are included at the end of the document.

Findings & Recommendations in Brief

CHALLENGES & OPPORTUNITIES FACING THE DEPARTMENT

Hawaii presents a number of challenges relative to the effective and efficient management of student transportation services. The most obvious are the decentralized nature of services driven by geography, and the isolation of the competitive market resulting from the lack of proximity to the mainland. There is no question that these factors must influence the organization and operation of Department of Education's (DOE) Student Transportation Services Branch (STSB). However, they do not present an insurmountable challenge nor should they excuse management practices that currently fail to encourage effectiveness or efficiency in the accomplishment of the transportation mission.

The current organization and operation of the STSB is an historical anachronism. The absence of a strong business-centric approach to this critical education support function has resulted in a severe escalation of cost that far exceeds any rational inflationary explanation. Reactionary efforts to control this escalation have resulted in reductions to service without a proportional effect on cost. There is ambiguity in the role, responsibility, and authority of the STSB. This combines with unreasonable constraints on, and a poorly executed procurement process to become the root cause of the cost escalation and the resulting pressure for corrective action.

Despite, or perhaps as a result of these challenges the State and the Department of Education have a unique opportunity to fundamentally reshape nearly all aspects of student transportation and to reposition this critical function for long-term success. It is the assessment of Management Partnership Services, Inc. (MPS) that structural improvements are eminently achievable. It is also our assessment that foundational changes are critical lest further degradation in service and higher costs become the norm. It is the recommendation of MPS that the State and the DOE undertake a comprehensive redesign of the STSB and its transportation mission. The summary rationale for this assessment and recommendation is as follows.

ASSESSMENT OF CURRENT OPERATIONS

There is a lack of consistency or comparability in the transportation cost data available to statewide decision-makers, which disguises the actual year-over-year trends and their causes. Nevertheless, it is clear that the aggregate cost of student transportation services has increased dramatically. Using data provided by the STSB, MPS has determined that the aggregate cost of school bus contracts increased by 151.6 percent during the four years following 2005/06. The count of school buses in use during that same period rose 12.5 percent, well below the rate of the overall cost increase.

MPS has determined that the primary cause was an increase in the rates paid to contractors as these contracts were rebid and renewed. The data indicate that over a seven year period there were 30 instances where the average price per day more than doubled when a replacement contract was issued. Furthermore, it should be noted that the price increases have not relented in recent years even though the overall expenditures on transportation have leveled. Costs on a per-bus basis have continued to increase even as the number of route buses in service has declined.

Current annual costs have been calculated to be approximately \$86,500 per active route bus, and approximately \$1,750 per transported student. In the experience of MPS these far exceed national norms, and are comparable to the most expensive student transportation operations MPS has worked with throughout North America. However, also in the experience of MPS, student

Findings & Recommendations in Brief

transportation costs are not an input, but rather an outcome based on a series of controllable and uncontrollable factors.

In the case of Hawaii, the operating environment plays a distinctive role. The geographic constraint imposed by the islands and their lack of proximity to any mainland neighbors is an important constraint, particularly on the contracting approach but one that is manageable. The statutory construct whereby the state and school district share a common political boundary provides a unique policy and oversight challenge. It is, however, also a manageable challenge. Otherwise, when broken-out into its component parts and functional responsibilities on a tactical level, the student transportation mission in Hawaii faces the same constraints and is responsive to the same requirements as any other similar operation across North America.

It is in the organization and operation of the function where the true issues arise. Put simply, it is not the structural operating environment factors that are to blame. Rather, over the years the State, DOE and the STSB have failed to evolve and adapt to changing circumstances and service requirements in a shifting competitive marketplace. Of particular concern:

- Procurement rules, processes, and contracting practices are not aligned to the distinctiveness of the operating environment, best industry practices, or the competitive market in Hawaii;
- The organization structure and associated mission responsibilities of the Student Transportation Services Branch are misaligned relative to the contracted service delivery structure and associated customer service requirements;
- Student Transportation Services Branch staff are poorly trained relative to its management and oversight requirements for a \$60 million annual business; and
- Student Transportation Services Branch staff are poorly equipped technologically to properly execute their responsibilities.

RECOMMENDED CORRECTIVE ACTIONS

The changes required are systemic, but eminently achievable. They should begin with revisions to the enabling statutes and regulations most affecting student transportation services. They should continue with a fundamentally different philosophy regarding the approach toward, and process followed in procuring transportation services from the State's vendors. A structural reengineering of the organization, operations, technology tools, and operating practices of the STSB will also be required to ensure that the resulting contracts are properly administered and managed. A customer-responsive, business-centric, and data-reliant STSB should be the ultimate goal.

Specifically, the following recommendations represent the critical success factors:

- The State should retain the current fully-contracted service delivery model as the most expedient and lowest-risk alternative;
- The State and the DOE must then implement fundamental changes to the manner in which the contracted service delivery model is organized and executed in the areas of:
 - ✓ Transportation contract specifications, procurement process, and management methodologies;

Findings & Recommendations in Brief

- ✓ Transportation planning, accountability, and information management philosophy; and
- ✓ Student Transportation Services Branch organization and operations.
- To support these changes and provide a realistic prospect for successful implementation, the State must consider updates and changes to related statutes and regulations, particularly in the area of service procurement.

CHANGE MANAGEMENT

The case for immediate action is compelling. The need for substantive change is apparent. The issues identified reveal a systemic problem within the current STSB business model. Only a systemic solution will address the underlying structural, organizational, and operational concerns that combine to produce the current results.

Implementation of the revised business model will not be achieved easily or quickly. There is a tremendous amount of organizational inertia to overcome together with structural impediments such as the extended term of some existing contracts. The timeline for implementation must recognize that the current situation was not reached overnight. Rather, it is the result of an evolutionary process over a period of years. It would be unreasonable, indeed irresponsible to attempt a rapid turnaround. It is the recommendation of MPS that three critical components be considered to ensure a successful implementation:

- A. Cease perpetuating the current business model to enable substitution of the revised approach;
- B. Plan for a rolling implementation schedule that ensures a deliberate transition to the revised model over time; and
- C. Facilitate the continuation of current operations during the implementation transition.

These three elements must work together and in parallel to ensure a successful transition. The State and the DOE must accept that there is a great deal of institutional and operational risk inherent in the proposed approach. The most effective way to mitigate this risk is through comprehensive planning and a realistic assessment of the timeline required. A methodical, deliberate approach to the implementation is recommended. Success will not come quickly, but will be achieved if the State and the DOE commits to the long-term plan of implementation outlined here in three steps:

1. Execute a revised competitive procurement model with a targeted implementation beginning for contracts taking effect in the 2014/15 school year.
2. Utilize a substantial pilot program beginning in the 2013/14 school year as a proof-of-concept and test-bed for the revised business model.
3. Execute a phased-implementation of the revised model with final completion targeted for the 2015/16 school year.

An in-depth exploration of the findings and recommendations summarized above begins with *The Current Situation* report section that immediately follows, and continues with *The Path Forward* following that.

The Current Situation

TRENDS IN COST AND SERVICE

Key Findings:

- There is a lack of comparability in the summary transportation cost data available to statewide decision-makers, which disguises the actual year-over-year trends and their causes.
- Dramatic increases in bus contractor costs are apparent in the four fiscal years from 2006 to 2010, with the primary cause being an increase to the rates paid to contractors.

The most logical place to begin an assessment of the current situation in the Student Transportation Services Branch (STSTB) is with an examination of trends in the scale of services managed by the Branch and the associated cost of providing those services. A relentless escalation in those costs has resulted in the current impetus for change. Better understanding the trends is therefore a necessary first step toward providing critical context for any corrective action proposed.

The examination of trends must not focus solely on the aggregate cost of service. Rather, it should be understood that cost is an outcome. The outcome is dependent first and foremost on a series of decisions related to the extent and type of service provided. Subsequent to these policy-based decisions, the efficiency and effectiveness with which the policies are implemented operationally will also substantially influence the cost outcome. This section of the report therefore focuses on achieving two preliminary objectives:

1. Clarifying the actual trends in cost from 2006 through 2012; and
2. Determining the underlying factors that most influence the cost trends.

Taken together, achieving these two objectives will provide the context required to better understand the assessment of operations that follows and the resulting recommendations for change.

We begin with a cautionary discussion regarding the availability, quality, and reliability of the data used in the analysis. We then present the overall results of the analysis. Appendix A to this report contains more detailed information, tables, and charts that further explain our concerns, the analysis, and our conclusions.

DATA QUALITY & AVAILABILITY

Accurate, complete and comparable historical cost summaries of Hawaii's student transportation program were not readily available for analysis. Current DOE accounting systems and processes work against the aggregation of cost data in any detailed, comparable, or readily auditable format. Indeed, the first key finding of this assessment is the lack of comparability in any of the summary cost reporting made available for review. Following a series of interviews with DOE staff and associated collection of data and information, MPS set about compiling and analyzing what the project team considered to be the best data available: the annual cost computation worksheets provided by the STSB.

These worksheets provided contract-by-contract compilations of cost, and facilitated the aggregation of these data into a series of comparative tables. No other comparable data source was readily accessible. Short of working from transaction-level detail in the DOE accounting system MPS determined that this was the most effective path to follow given the time and scope limitations of the study. However, there are several cautionary notes that must be considered by the reader.

The Current Situation

First, the schedules were similarly but not identically structured due to changes in management within the STSB. Although each computation arrived at a grand total, the differing formats did not lend themselves to ready cross-checking of the data for completeness, mathematical correctness, or for comparison between years. Thus, the utility of our analysis was somewhat limited by this incongruence. In all cases, however, MPS was able to provide fair estimates that closed the year-by-year gaps in the data and provide for consistency in the resulting comparisons. It should be noted, we have not attempted to confirm and cannot readily ascertain whether the computation *Excel* schedules are preliminary versions of the cost estimates, or revised versions, or retroactively adjusted versions. We believe that some were earlier versions and others were heavily modified for changes in bus counts or contract finalizations. During our compilation process, these and a variety of additional data integrity issues were noted. We have attempted to note the most significant issues here. Detailed explanations of the other issues identified, and how they were managed in the analysis are included in the introduction to Appendix A – Cost & Service Statistics.

Second, because these worksheets provide data only on the cost of the vendor contracts, our analysis did not include the operating or administrative costs borne directly by the STSB. Thus our work is not intended to reconstruct all costs associated with student transportation, but rather to encapsulate the bulk of these costs – the payments made to bus contractors – and to illustrate the underlying trends related to those costs alone. We believe this offered a reasonable approach given that, in the experience of MPS, these vendor contract costs represent between 90 and 95 percent of all transportation costs in an organization such as the STSB.

Finally, the costs illustrated on these worksheets apparently do not represent audited, actual payments made to contractors in each of the years covered. However, they are highly suitable for the purpose of analysis and illustrating cost trends due the general consistency of structure and level of detail. By normalizing and aggregating all of the costs in a consistent manner, direct comparisons within contracts are possible and relative comparisons across contracts are also possible. The *relative* comparison in particular provides the necessary context to move on to the identification of any corrective actions required.

With these cautionary remarks as background, MPS was provided with the student transportation vendor contract computations as *Excel* data files for every school year since and including 2005/06. At a minimum these computation schedules provided a listing of vendor contracts, bus counts by type, and pricing information; most also contained Consumer Price Index (CPI) rates and escalation factors. The route miles information existed in some but not all schedules, and was too often left blank for these particular data elements to be of any value in our work. Over 150 vendor contracts were referenced in these eight *Excel* schedules, with the number of in-force contracts ranging from a low of 79 in 2005/06 to a high of 123 in 2009/10.

The Current Situation

OUTCOMES & CONCLUSIONS

The adjusted island by island data were recapped and extended using 180 regular education school days and 210 special education school days to arrive at the estimated contracted costs for each school year¹. A summary of the analytical results are shown in Figure 1 below.

Figure 1: Summary Costs, Contract Rates, and Buses in Service

Total Estimated Contracted Costs		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Annual Regular Ed	\$ mil	15.1	21.1	25.5	33.5	38.1	37.5	39.3	32.8
Annual Special Ed	\$ mil	10.8	12.5	20.0	22.1	27.0	27.4	27.7	29.3
Total	\$ mil	25.9	33.6	45.6	55.6	65.1	64.9	67.1	62.0
Estimated Daily Rates		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Regular Ed Avg / Bus / Day	\$	176	\$ 223	\$ 265	\$ 344	\$ 392	\$ 400	\$ 421	\$ 431
Sped Ed Avg / Bus / Day	\$	194	\$ 221	\$ 338	\$ 372	\$ 436	\$ 438	\$ 443	\$ 473
Total Avg / Bus / Day	\$	182	\$ 223	\$ 290	\$ 354	\$ 407	\$ 414	\$ 429	\$ 448
Bus Counts		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Regular Ed Bus Count		477	524	535	541	541	520	519	422
Curb-to-Curb Bus Count		266	270	282	283	295	298	298	295
Total Bus Count		743	794	817	824	836	818	817	717

The compiled data reveals a dramatic increase in contracted costs from 2005/06 to 2009/10, followed by a leveling in costs through 2011/12, then the beginning of a decline in 2012/13. The total contracted costs increased 151.6 percent during the four years following 2005/06. Bus counts during that same period rose 12.5 percent, well below the rate of the overall cost increases. The core conclusions from this summary presentation are that:

1. Contract costs increased dramatically, and that this increase occurred over a four-year period extending over the 2006-2010 fiscal years before stabilizing at the current level.
2. The relative proportion of expenditures and bus counts for regular education and special education has remained similar from 2005/06 to 2011/2012. The increase of proportional special education buses and expenditures is directly related to the significant cuts in transportation funding imposed in 2012/13.
3. Particularly notable expenditure changes in 2006/07 and 2008/09 for regular education services and 2007/08 for special education services are not correlated to similarly significant increases in bus counts.
4. The bulk of the cost increase cannot be attributed to normal inflationary factors or to growth in the scale of services being provided.

The reason for these expenditure changes will be explored further throughout the balance of this report. As a prelude to the exploration of contractual, procedural, and operational factors we begin by first examining the expenditure data in more detail here.

¹ It is recognized that the total number of actual school days in 2010 were less than 180. However, for purposes of this analysis the day count was standardized in order to provide consistency across the full eight year period.

The Current Situation

ASSESSMENT OF TOTAL CONTRACT COSTS

The significant increase in transportation expenditures is the major concern of many student transportation stakeholders. Recognizing that every dollar spent on transportation is a dollar that cannot be spent on direct educational activities, it is incumbent on the transportation operation to design and manage the operation to promote the greatest degree of cost effectiveness possible. In contracted operations such as the State of Hawaii's, cost effectiveness is best achieved through rigorous management of the number of assets used and rates paid for services.

In analyzing expenditure increases in contracted operations there are four critical variables that must be considered: the number of vehicles, the daily rate, the number of days, and the cost escalators (i.e., CPI). The computational spreadsheets used to conduct the analysis – despite their noted deficiencies – provided a reasonable basis to analyze these variables in an effort to determine the leading causes of the dramatic cost increases.

For purposes of analysis the number of service days was normalized across all the schedules, which eliminated the effect of this factor on the analysis. The impact of CPI changes was also analyzed and quickly identified as a minor contributor to the overall increase. Changes in bus counts are apparent in Figure 1. These contributed to higher expenditures, but the count of additional buses cannot account for the majority of the increase.² Given these factors, it was quickly determined that the primary cause of the increased expenditures could only be attributable to sizeable pricing increases that occurred with the awarding of new contracts.

A more refined understanding of this impact necessitated a more detailed assessment of individual contracts. Using the computational spreadsheets, an eight year history for each vendor contract by island/region and regular education and special education was developed. It was again noted that CPI had a minor impact on year-over-year totals as the changes were generally limited to a single digit percentage increases. However, per bus costs were increasing by double digit percentages or more when the contract number changed, presumably evidencing a new contract. The data indicates that **over a seven year period there were 30 instances of the average price per day having more than doubled when a new contract number appeared.**³

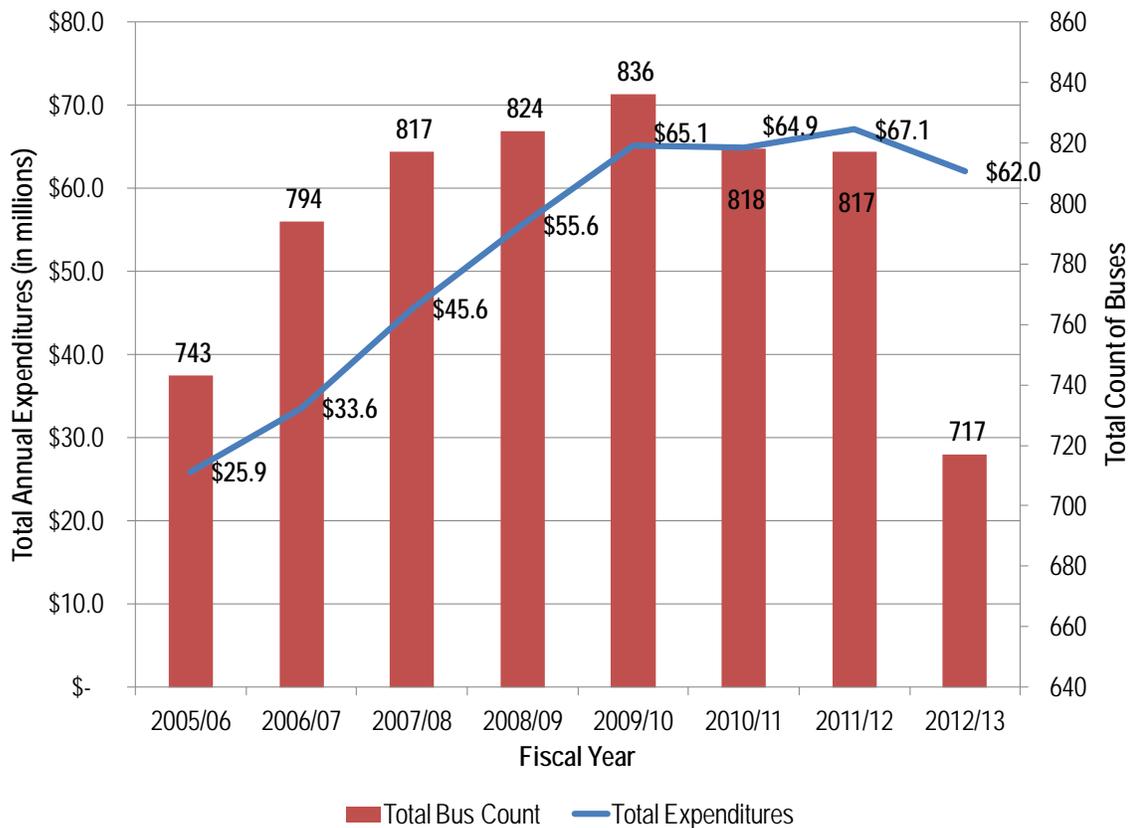
Furthermore, it should be noted that the price increases have not relented in recent years even though the overall expenditures on transportation have leveled. Costs on a per-bus basis have continued to increase. The leveling in overall expenditures has been garnered through reductions in service delivery as measured by a reduction in the total number of buses providing service in recent years. Figure 2 illustrates this dynamic. This is not a sustainable cost-control strategy. For sustained improvement, significant efforts must be made to better control contract rates and promote competition.

² It should be noted that the computational spreadsheets did not identify the management rationale for the additions to the total number of buses in use.

³ See the Appendix A – Contract Cost Trends for a summary of the historical costs per day as calculated from our revised versions of the computation schedules.

The Current Situation

Figure 2: Comparison of Total Expenditures and Total Bus Counts



CONCLUSIONS

From this analysis, MPS concludes that:

1. The increase in rates paid as new and replacement contracts were established is the primary source of the dramatic increase in annual expenditures from FY 2006-2010; and that
2. The increase in rates has not subsided in FY2011-2012; rather, any leveling in overall transportation expenditures has been won at the expense of service delivery, as measured by the number of active route buses in service.

Neither the computation schedules nor on-site interviews with staff, legislators, or contractors identified a specific cause for these price increases. It is our presumption that a combination of factors all combined to produce the results experienced over the past several year, including:

- Risk management on the part of the contractors in the face uncertainty in the procurement process;
- Lack of competition resulting primarily from the constraints of the procurement process itself; and

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- Ineffective management practices on the part of the DOE and the Student Transportation Services Branch, particularly related to contract oversight and performance management.

If the Student Transportation Services Branch is to gain any control over the expenditures related to transportation in the future, it must first be able to capture, quantify, and analyze its actual, fully burdened costs of operation. The development of the computational spreadsheets has been the STSB's attempt to track and manage contract costs. However, the inconsistencies in format and method, the inability to reconcile the data captured on the spreadsheets with actual expenditures, and the lack of organizational focus on creating a perpetual structure that would allow for rigorous analysis of expenditures has greatly limited the STSB's ability to recognize and act on the source of expenditure increases or establish strategies to arrest the increases. Instituting a systematic approach to contract data management and the reconciliation of related expenditures is a lynchpin task that must be acted upon in the immediate future.

Contract management is a related but distinct task when compared to expenditure management. Fundamentally, an effective contract management process focuses on monitoring operators to ensure compliance with the terms and conditions of the contract and assessing operator performance relative to a set of defined performance indicators. However, the STSB must also establish internal processes whereby they can provide assurance for themselves and other stakeholders that the number of buses they are contracting for is appropriate. The lack of documentation supporting a nearly 13 percent increase in the number of buses in service in the five year period between 2005/06 and 2009/10 is evidence that the STSB has not had adequate procedures to oversee the assignment and allocation of assets. Creating procedures that regularly assess the efficiency of bus routes and establish a process for justifying the addition of buses will be an important component of future expenditure management strategies.

The structure and long-term nature of the contracts that the Department of Education engages in for transportation services have also negatively impacted the ability of the State to control expenditures. This topic is addressed in detail in *Contracts* section below. Revisions to both the scope and requirements of the contract are required to increase competition and minimize the long-term impact of the dramatic rate increases demonstrated in the analysis above.

OPERATING ENVIRONMENT

Key Findings:

- The challenge inherent in the geographic location of the State is a real but manageable constraint on efficiency.
- Existing State statutes and regulations do not impose any undue constraints on transportation efficiency, but there is a need to clarify requirements and service expectations to support other improvement recommendations.
- The utility of the fee for service methodology is questionable, but a clear assessment of its impact is not possible in the current environment.

There is no question that the operating environment in the State of Hawaii is different from any other state or school district. The geographic constraints imposed by the islands and their lack of proximity to any mainland neighbors; the statutory construct where the state and school district are the same entity; and the relatively

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closed market with limited to no outside competition all create an environment that is unique when examined in the aggregate. However, when the operation is broken-out into its component parts and functions, on a tactical level it faces many of the same constraints and is responsive to many of the same requirements as any other student transportation operation across North America.

The primary similarity is with the mission itself: the provision of safe, reliable and effective transportation to students, and the manner in which that mission is satisfied: with scheduled transportation service on dedicated school buses. Also, while the DOE operates on several islands in fact, many local districts similarly operate on islands in principle. Widely separated school buildings and population centers create natural clusters for transportation planning and natural constraints on efficiency in many environments throughout the country, not just in Hawaii. Therefore, efficiency initiatives undertaken in other organizations to address problems related to policy, cost effectiveness, routing efficiency, technology, or many others are well within the realm of the feasible for Hawaii.

Nevertheless, the issues and recommendations identified and addressed throughout this report must be placed in the context of the local operating environment. This environment is influenced by geography and topography as well as the statutes and regulations that govern service eligibility and operations. The effects these factors have on student transportation efficiency in Hawaii are addressed here.

GEOGRAPHY & TOPOGRAPHY

The geographic isolation of the State and the separation of its constituent parts on neighbor islands do have an impact on operations that must be considered when assessing current performance and developing recommendations for change. While these constraints insurmountable are in no way, they do require recognition of their likely impact. Operating practices that mitigate any negative impacts should be key components of any effective and efficient program.

The first and most significant geographic constraint is on the time required for standing-up a contracted operation. There are no other student transportation operations proximal to that operated by the DOE. Whereas in most of the country a contract provider of student transportation services can readily leverage nearby operations for staff, assets, and support, this is not possible in Hawaii. The primary implication of this geographic isolation is to raise the barriers to entry for a potential supplier.

The primary remedy available to mitigate this concern is time. The constituent parts of the State system are large enough to garner the economies of scale necessary to entice competition. But any potential provider, whether from the mainland U.S. or even, to a lesser extent, from a neighbor island will be loath to commit to a rapid startup on an island where they do not already possess a significant operational presence. Sufficient time must be provided to ensure that staffing, infrastructure, and assets can be acquired and placed in operation. For Hawaii, this timeline must be measured in years rather than months. Whereas six months may be sufficient for a mainland provider to respond to a competitive solicitation and begin operating in a neighboring region, for Hawaii this timeline must be doubled or even tripled.

It is the assessment of MPS that the current lack of competition being experienced, and the escalation in contractor rates, can be explained at least in part by a failure of the DOE to adequately address this time problem. In a number of instances, decisions regarding whether to renew or extend a contract were made well beyond the period when it would be feasible for a full and open

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competition to occur for the route. Consequently, contracts were necessarily renewed with much higher rates than were previously paid because no viable alternative existed. Remedying this situation will require DOE to establish strict procurement procedures whereby contracts are identified for extension or rebid well in advance of the required start date.

Even with the timeline constraint satisfied, a potential competitor is faced with two challenges related to its investment in the Hawaii market. The first is the high cost associated with the operational infrastructure required. This relates both to the base of operations and to the buses themselves. This is, however, the easier of the two primary issues to manage as these higher costs will simply be passed-through in the form of higher rates. Given that the capital investments required represent a minority of overall student transportation costs, the impact should be manageable. They are a structural reality for Hawaii in any case and so must be borne as part of the service.

The more difficult question is the risk factor for a potential contractor in that their capital investment lacks liquidity. With the advent of diesel engines the standard school bus life is approximately twelve to fifteen years. The competitive situation on the mainland is such that contractors amortize these assets for a period of at least ten years to a residual amount in order to give their clients the lowest possible capital cost. The underlying assumption is that should a contract be lost the buses can be utilized for a new client and/or, if new enough, used as fleet replacements for older buses under contract elsewhere. Therefore the contractor assumes that sufficient opportunity for re-deployment exists which allows for a cost basis that aligns with the life of the vehicle and not the shorter contract term. The opportunities for re-deployment of these specific use buses are very limited in the Hawaiian market. The limitations on re-deployment and the lack of a secondary market for school buses or bus depots in Hawaii results in related concerns for potential vendors, and a reluctance to enter the market. However, it is the assessment of MPS that addressing these concerns in a practical way within the procurement specifications is an achievable remedy.

STATUTES & REGULATIONS

Geography can be defined as an uncontrollable environmental constraint in that the State has little to no control over where the islands are located or how far they are from the mainland. Statutes and regulations are controllable constraints and have a significant impact on the operating environment for student transportation in the State. Unlike geography, the State has almost full control over the rules and regulations it imposes on the transportation program. Examining how the DOE has interpreted and implemented the requirements imposed by statute and regulation indicates that while much of the structure is sound, changes can be made to allow for improved efficiency and cost effectiveness.

The legal framework that establishes the most basic guidance and constraints for the student transportation program is the Hawaii Revised Statutes Sections 302A-406 and 407. These statutes authorize the creation of the student transportation program, outlines a structure for school bus contracts and the creation of a revolving account for the funds received from school bus fees. The primary concern associated with these authorizing statutes is the specificity of Section 302-407 related to school bus contracts. It is atypical to have specific contractual requirements set forth in statute, particularly as they relate to compensation requirements. To the extent that the DOE desires to change any of those items as part of an effort to increase the efficiency of operations, a change to

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both the form of the contract and state law would be required. We believe this is an inefficient and unnecessary constraint on transportation contracting.

An additional statutory concern not specifically located in the authorizing language for transportation but directly related is Section 103-55 of the Hawaii Revised Statutes. This section requires that anyone bidding for services must pay employees at a rate similar to that “paid to public officers and employees for similar work.” The most direct impact of this statute is to establish a floor for bus driver salaries. Similar to the contract language above, it is atypical for this to be included in statute and carried over to the services contract. More typically the establishment of a minimum rate will be set forth in the request for proposal document for transportation services. This allows the issuer of the request for proposal greater flexibility in determining the values as market conditions evolve.

The primary source of guidance for the design of the student transportation program itself is the Hawaii Administrative Rules (HAR). It is within HAR that basic requirements for service eligibility are established, minimum fare amounts are defined, and school bus safety expectations are established. The HAR presents a unique concern in that the State is both overseer and school district. Therefore, we would expect to see a more extensive array of regulatory requirements than might otherwise be the case. The current scope of the rules is otherwise appropriate and provides the necessary guidance to the DOE on system design.

One particularly unique aspect of the legislative and regulatory structure of Hawaii's student transportation program is the fare-based requirements for service. Under current law and regulation, a student must live a specific distance from school *and* pay a required fare in order to receive services. The state has established a number of exemptions from both the distance requirement and the fare paying requirement to address specific hardship concerns. This approach is unique in that it combines the two requirements of distance and payment. More typically, students beyond a certain distance are eligible for free service and those paying fares are students who are otherwise ineligible but pay a fee for the purpose of receiving a ride to school. The rationale for combining the two is not well defined in statute, regulation or DOE procedure.

Administration of this requirement has evolved to a shared responsibility between the schools, the Student Transportation Services Branch and other DOE central services (primarily information technology and accounting services). Two primary concerns in the management of the program are evident. The first is that the schools lack any consistent method of determining whether a student meets the distance eligibility requirement. The lack of mapping technology in place at the school sites or in the department cannot provide any assurance that the distance requirement is being implemented fairly and equitably across the school system. The second concern relates to the technical and administrative infrastructure developed to administer the fare program. In addition to the participation of the school-based personnel, DOE has developed a custom web-based program to manage student applications and cash management. Significant time and effort went into the development of the application and it remains a maintenance requirement for technology staff.

OUTCOMES & CONCLUSIONS

Geography and statutory concerns are real constraints and must be considered in the structure and planning of Hawaii student transportation services. However, the impact of geography on the final cost of providing services, while significant and notable, does not plausibly account for the disparity

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that currently exists relative to national norms or the disproportional year-over-year increases recently experienced. We conclude that contracting procedures and methods can create an operating environment that permits the State to mitigate the real and perceived impact of geography.

The scope of existing statutes and regulations are not overly burdensome but can be revised to better support the delivery of more cost effective services. The primary changes recommended focus on narrowing the scope of the legal requirements in order to provide the department greater flexibility in how it manages the transportation program. In the examples identified above, the narrowing is not intended to remove the current expectations established by the legislature and executive but to more properly place those expectations in an appropriate context. For example, contractual obligations should be resident in the contract between DOE and its contractors not in statute. We believe the flexibility provided by these changes will allow the DOE to more effectively manage both the contracting process and the contractors.

The State should also reconsider the use of the combination distance-based and fare-based eligibility criterion. Historically, the school bus fare fund has provided a highly limited (less than five percent) proportion of the funding for school bus services. Given the relatively limited impact of the revenues received, the significant number of exemptions provided and the cost of the administrative infrastructure necessary to manage the program, MPS does not believe that it is in the long term interest of the state to retain this combination distance and fare-based program. Transitioning to a purely distance-based system that is administered by the Student Transportation Services Branch through its transportation officers and is supported by a fully implemented transportation management information system would provide more value and consistency across the program. This would also reduce the administrative costs of managing eligibility that are currently not well defined or accounted for.

ORGANIZATION AND OPERATIONS

Key Findings:

- A complete reengineering of the organizational structure is required in order to properly align responsibilities and better define expectations.
- The department must develop operational procedures to better structure the management and administration of the transportation program.
- Training programs for Transportation Officers must be established to reflect the changes in the organizational design.
- STSB lacks even the most basic technological tools to support its efforts and must reinitiate its effort to acquire and implement transportation management software.
- Contracting practices must be redesigned to encourage competitive pricing, clarify expectations and improve contract management.

Given Hawaii's geographic profile, the design and structure of the Student Transportation Services Branch is of critical importance to its ability to deliver cost effective, efficient and reliable services. Consideration must be given to both the scope of the organization and the scope of responsibility for each individual within the organization to ensure that technical and administrative tasks are properly addressed and supported.

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Additionally, the establishment of a technological infrastructure that supports the site-based management requirements of each transportation officer and the systemic assessment requirements of department management is essential for efficient operations. Finally, the department must have a well structured and comprehensive array of operating procedures to ensure that all of the oversight, administrative and management functions are occurring on a reasonable and properly considered schedule.

ORGANIZATION

Transportation management in the State of Hawaii is a distributed function across the schools, the department and the bus contractors. While this is not unusual, the level of participation by non-Student Transportation Services Branch entities is more significant than in most other organizations MPS has worked with. While this is likely the result of the evolution of the transportation program within the department and across the state, it has resulted in a diffusion of, and confusion about responsibility for the management of services.

In all student transportation programs it is necessary to clearly define who is the custodian of the data used for planning purposes. In most organizations, the custodian is the school or enrollment office personnel because it is their responsibility to ensure that student information is entered completely and accurately. In this aspect of management, Hawaii is not much different than anywhere else MPS has worked. Where the state diverges from virtually every other organization, particularly large transportation operations, is that it then allows the school staff to determine both eligibility and student assignments to bus stops and runs. These assignments are performed in the absence of any technology tools, internal procedures or established expertise to verify those decisions. Consequently, the department is accountable for service decisions made outside of its organizational control. The allowance for school-based staff to determine eligibility and student assignment must be restructured as part of a broader effort of redesigning the bus route development and management process.

The Student Transportation Services Branch is properly located within the Office of School Facilities and Support Services of the Department of Education. The number of positions and the general structure of organization (i.e., a management function, administrative function and field managers) are reasonable for an organization as decentralized as this. As a basic framework, the present overall structure and reporting relationships are reasonable and provide the *opportunity* for adequate oversight of the STSB's functions. However, the evolution of practices and operational necessities has limited the effectiveness of the basic structure.

The geographic separation of the islands necessitates the placement of a Transportation Officer on each island for direct management and oversight of operations. The Transportation Officers' job description adequately describes the expectations of the position and properly places the focus of the position on managing the efficiency of the designated area. However, these expectations have been undermined by the realities of the daily administrative activities of the department. The lack of technology support for route management, an absence of structured procedures for route and contractor management and an absence of a centralized support structure greatly increase the difficulty of the Transportation Officer position.

At the time of the review, the STSB was in the process of adding eight administrative positions to the organization. These were reclassified, not new positions. The function of these positions is to support

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the Transportation Officers by removing many of the administrative burdens currently being addressed and allow the Officers to focus more on contractor management. The creation of more structured management procedures, the reallocation of responsibility for route design, the implementation of technology to support route design and management and the creation of a more rigorous contract management program should reduce the administrative burden present in current operations. While we concur that additional administrative support in the short term would be useful for the STSB, we do not believe that these positions represent a long term solution to any of the STSB's concerns. We believe that the need to add these positions is a symptom of the problem, not a solution. Therefore, we would recommend that these positions be structured in such a way that allows them to be transitioned to other functions as the need arises during the recommended restructuring of the STSB.

OPERATIONS

Departmental operations are necessarily decentralized on each of the islands, but there is a lack of well considered centralization for certain critical functions. These include: budget development; data system setup and administration; and personnel management. To the extent that they do exist, these functions are limited and focused primarily on administrative rather than strategic management requirements. Necessarily decentralized functions that should be supported by a centrally developed set of procedures are also not well structured.

Of particular importance is the oversight and management of the bus contractors. The STSB has not developed any specific guidelines, expectations or procedures that would ensure the consistency and integrity of contractor oversight within and between the islands. This does not imply that there is no oversight, only that the oversight is inconsistent and developed by each Transportation Officer absent any central guidance on what items are important. The absence of guidance results in contract reporting requirements and compliance with terms and conditions of contracts being interpreted differently by the individual Officers. Given the centrality of contracted costs to overall transportation expenditures, and the findings relative to the escalation in contract rates, creating a structured program of contract compliance and performance monitoring is an absolute requirement.

The STSB also lacks an even minimal array of technology tools to support the administration of the transportation program. The use of transportation management technology should be considered an absolute requirement to manage and administer a program as substantial and complex as present in Hawaii. A previous attempt to implement this type of technology was unsuccessful and has not been revisited. Efforts should be made to determine whether the existing product can be re-implemented to meet both the current needs of the program and the expectations of the proposed organizational reengineering.

Transportation Officer training is inadequate for the expectations of the position. Currently, there is no structured approach to the management of training services to ensure either a baseline or desired set of skills. Each Transportation Officer has been generally required to establish their own process for increasing their individual knowledge and skills. The lack of formalized training exacerbates the effect of the shortcomings in procedural documentation, logistical planning, organization and business processes.

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CONTRACTS

The high costs of service demonstrated in the *Trends in Costs and Service* section of this report provided an initial indication that the contracting process, not just the contracts, requires revision. The function of the contracting process must allow the State to acquire sufficient transportation resources at a reasonable price with reasonable flexibility to maximize the use of the resources that have been purchased. These assets must then be overseen in a manner that ensures the State is receiving the services it has contracted for and that those services are being delivered in a manner consistent with expectations.

In the context of school bus operations, obtaining a fair and equitable price for service must recognize the conditions of the operating environment and how the conditions must impact the procurement process. A critically important condition is the capital intensive nature of transportation operations resulting from the need to purchase land, buses and facilities. This translates into a requirement to consider the length of contract term in the development of specifications, and the length of the solicitation and selection in the procurement process. A second major condition is the competitive landscape. Generally, the more players available the greater the competition and the more aggressive the vendors will be in pricing. Creating a competitive environment must consider how many potential firms are in the market, the barriers to entry for new participants, and the potential rewards. A final major condition is the clarity and stability of operations. To the extent that vendors know the types of services they must provide the more aggressive they can be in pricing.

The existing contracting process adequately addresses, at best, one of these concerns.

The historical approach to contracting for transportation services has been route based. Under this methodology vendors were invited to bid on a fixed geographic area and a designated number of buses as requested by the department. The department used an Invitation for Bid methodology where the lowest price vendor would be awarded the contract and the price was set for somewhere between 6 and 10 years. The benefit of this approach was that it provided the DOE with some degree of pricing stability while also offering the vendor revenue stability. Given that purchasing school buses and associated infrastructure is a capital intensive enterprise, providing that degree of revenue stability was helpful in the financing process, which resulted in a stable vendor community.

While relatively simple in its approach and useful for providing both parties stability in price and revenue, as a *method* of contracting this approach greatly disadvantages the State. The primary disadvantage of these contracts is that the scope of the agreement is so narrow in that it is focused on a specific route or route grouping. This language limits the department's ability to reallocate assets throughout the system to meet changing demographic or service profiles. Consequently, consolidation activities that would normally occur during the long term of the agreement are not incentivized because the vehicles cannot be easily reassigned and the contract requires payment for buses that had been idled, albeit at a reduced rate.

In addition to a poor methodology that does not promote the effective allocation of assets, the specific terms, conditions and structure of the contract minimizes the role that STSB can have in promoting efficient contracting or service delivery. One particularly notable aspect of the contract is that it details a significant involvement of the bus contractors in the route development process for curb-to-curb (i.e., special needs) students. Decisions about stop locations, student transfers, ride time length and notification of parents are all more traditionally the purview of the transportation

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operation, as is the case with regular transportation in the State now. As part of the reengineering effort the DOE should begin bringing all responsibility for routing in-house.

Other clauses of the contract that cause concern and the reason for the concern are listed below:

- The small proportion of the daily fee associated with the liquidated damages clause and the lack of overall contract oversight greatly limits the usefulness of this enforcement mechanism.
- As was noted in the recent Office of the Auditor report and is again noted here, there appears to be confusion regarding the requirement for contractors to pay general excise tax on services provided to DOE. This issue should be reconciled prior to the release of new contract specifications.
- The current practice of submitting two invoices per month is a generous allowance to the working capital requirements of contractors but creates unnecessary administrative burdens for the State. The use of a once per month invoicing process is far more common across the transportation industry.
- The rationale for the formula for adjusting wage rates associated with changes for public officers and employees per 103-55 of the Hawaii Revised Statutes is unclear. Currently, the change to the wage rate is being increased by 20 percent. No data or rationale is provided for the additional percentage increase.
- The fuel cost adjustment clause does not appear to adequately account for the States exemption from federal excise tax. The adjustment formula uses the AAA Daily Fuel Gauge report, which establishes an average *retail* price for fuel. According to the website, "The AAA Fuel Gauge Web Site is derived from credit card transactions at more than 120,000 stations around the country. Prices shown are combined averages of the last card swipe of the previous day..."⁴ Nowhere in the formula or the contract is there an accounting for the excise tax reimbursement.
- The annual adjustment formula provides for an inflation factor to be applied to the depreciation costs of a bus. This is highly unusual and would appear to have a limited rationale at best.
- Each contract has a maximum total dollar value for the term of the agreement. Interviews did not indicate that DOE conducts any reconciliation to determine whether contract amounts have been exceeded.
- The allowance to pay compensation for routes that have been lost due to consolidation may be necessary due to the closed nature of the current market. However, as currently written the contract requires DOE to pay these costs for the duration of the contract. The requirement to pay consolidation-related costs for the duration of a 6 or 10 year contract is excessive.

Significant restructuring of the both the bidding document and the resulting contract must be part of the reengineering effort. The revisions must focus on the method of contracting and the specific contractual relationship that is established with the vendors. The guiding principle of the contract

⁴ <http://www.fuelgaugereport.aaa.com/>

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revision process should be to acquire the minimum number of assets required in a manner that provide the department the maximum flexibility that is fair and equitable both parties.

Once a contract has been executed the contract compliance and performance management process should begin. As was previously mentioned, the STSB has a very limited and unstructured approach to contract management. Of particular import is the inconsistency with which the STSB enforces, and the contractors comply with contract Section VI – Required Reports. Interviews and review of available documentation demonstrated that despite the potential usefulness of the data that is required for submission for basic performance measurement and compliance, it is rarely collected in a complete or comprehensive manner. Additionally, the route reporting requirements (including stop lists and times) are also not collected on a regular basis. This lack of both contract management and operator compliance makes it almost impossible to conduct any meaningful analysis of operational performance.

OUTCOMES & CONCLUSIONS

The operations of the STSB must be fundamentally remade in order to better control the cost of transportation services. The organizational structure must be redesigned, revised operational practices must be developed and implemented, technology products must be acquired and implemented and the contracting process must be completely revamped. This can initially seem like an overwhelming prospect but it is absolutely achievable if the State and DOE commit to a structured program of reengineering. No stakeholder should be under any illusion that this will be a short or simple process. It will require a multi-year commitment of both time and resources. Additionally, it will require the State, the DOE and the STSB to revisit some long held approaches to program management.

The redesign of the organizational structure must focus on more properly aligning both the number of personnel and their organization. Determining the scope of services that should be centralized, the services that require decentralization and the most appropriate way to manage these allocations will be a critical first step. After those decisions are made job descriptions must be revised and training programs established to support the new organizational design.

Support of the new organizational design will also require the acquisition of new technology tools and the development of internal operating procedures. A critical initial step will be revisiting the transportation management software application previously purchased and reconsidering its implementation. Concurrently, procedures related to student data transfer; route design and development; and reporting must be developed early in the transformation process.

Finally, an entirely new approach to contracting must be established. This approach should focus on how best to structure the bidding and the contracting process to encourage competition and allow for the maximized use of available resources. The new contracts must be overseen following a detailed contract compliance and performance measurement program.

THE CASE FOR CHANGE

As illustrated in Figure 1 earlier, there are two factors that influence the total cost of providing student transportation services: the number of buses in operation (i.e., the quantity of service provided); and the cost for each unit of service (i.e., the daily cost per bus). It is clear from this analysis that the rate of increase in the

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average cost per bus far exceeds any rational or readily explainable metric in the years from 2005/06 to 2009/10, with year-over-year increases of 30, 36, 22 and 17 percent, respectively. Compounding the problem in those years was an increase in the quantity of service provided with the addition of 93 route buses (51, 23, 7, and 12 in each year respectively) for an aggregate increase of 12.5 percent.

Since 2009/10 the average cost per bus has continued to increase, albeit at a reduced and more readily explainable rate. Service, meanwhile, has been curtailed to the point where the data indicate a smaller number of route buses in operation for the current year than were in place for 2005/06. MPS suspects, however, that this does not account for the final route “add backs” that occurred after the start of the current school year.

Regardless, the analysis gives the impression of a faulty cost control strategy. Basic indicators of cost effectiveness further illustrate the comparative high cost of the State’s operations. Based only on the contract costs and students in the STSB database the average cost per student is approximately \$1,756 and the average cost per bus is \$86,520. These costs are substantially higher than most operations with a traditional route structure similar to Hawaii. Only in instances where there are significant magnet or center programs that require large proportions of low density routes are the costs comparable.

Lacking any ability to control the rate of increase in unit costs, the State has defaulted to cutting service instead. This approach undermines the integrity of the program and the policy objectives of the School Board while failing to address the underlying cause of the problem. The systemic problems indicated in the operational findings above will require a comprehensive, systemic solution. Only in this way can balance be reestablished between efficiency and effectiveness in the delivery of transportation services.

The absence of complete data on route information and costs prevents any detailed estimate of the potential cost savings that will be achievable with improved structure and process. However, similar broad-based reengineering efforts have resulted in savings as high as 15 to 20 percent of expenditures. This would equal approximately \$9 to \$12 million of potential. While we do not believe savings of this magnitude can be realized immediately, the potential for savings in Hawaii are real and substantial. Implementation of the plan proposed in the next section, *The Path Forward*, will allow the State to begin capturing the potential savings available with increased efficiency.

The Path Forward

A SYSTEMIC SOLUTION

Key Recommendations:

- **A fundamental redesign of the Student Transportation Services Branch and the State's business model for the provision of student transportation services is the only viable path to regain system effectiveness and operating efficiency.**

The case for immediate action is compelling. The need for substantive change is apparent. The issues identified reveal a systemic problem within the current STSB business model. Only a systemic solution will address the underlying structural, organizational, and operational concerns that combine to produce the current results.

The proposed path forward is necessarily comprehensive as there are numerous factors that interact with one another within the current system. For example, the current approach to contracting cannot be sustained if competition is to be encouraged and control of the routing solution returned to the DOE. The DOE, meanwhile, cannot execute the routing function effectively in the absence of appropriate technology and functional control over eligibility determination and assignment of students to routes. Even with this, in the absence of robust contract oversight there is no feedback mechanism to ensure that the contractors are executing the routes as designed and, in turn, invoicing for their services accurately. This one example of the interrelationships and complexities that exist within the system illustrates the need for a systemic approach to any corrective action.

The approach recommended by MPS therefore focuses on the design and implementation of a revised business model for the STSB. As described, the current approach to service delivery has evolved to the point where it is no longer efficient, effective, or even functional. The subsequent sections of this report describe the development of a revised business model that:

1. Considers the current state of affairs as a necessary starting point, and does not discount the requirement to maintain service delivery during the transition;
2. Recognizes the distinctive operating conditions in the State while also acknowledging that the mission of the STSB and its operations at a tactical level are not substantially different than in peer organizations throughout the mainland United States; and
3. Fundamentally addresses those negative factors most influencing the current results.

We begin by describing a series of feasible business models. Each of these is utilized effectively in other locations, examples of which are included in Appendix B to this report. Our purpose in presenting and summarizing these alternatives is to provide context for the approach recommended by MPS, the description of which follows the comparison.

COMPARING ALTERNATIVES

There are a number of feasible business models that can be functional and achieve the efficiency and effectiveness goals of the DOE. We briefly present a series of four alternatives here. It should be recognized, however, that this does not represent a finite list. Rather, elements of each can and are combined into other viable approaches. We present these by means of illustrating the range of alternatives available to the DOE and to provide context for the recommended path forward that follows.

The Path Forward

DISTRICT OWNERSHIP & OPERATION

In the United States about 70 percent of all school districts own and operate the bus fleets serving their transportation needs. The key characteristics of this model include:

- Adequate facilities for bus storage, maintenance, and dispatch;
- An adequate fleet of school buses, with a regular program of replacement on a 12-15 year cycle;
- Skilled, experienced operations management and associated technology to achieve satisfactory levels of service and to control costs; and
- Associated maintenance management, technicians, and fleet cost control systems.

Of most significance, the support organization required to achieve and maintain an adequate driver force is extensive. A typical operation will experience a daily driver absentee rate of 10 to 15 percent, necessitating an extensive corps of both regular and standby drivers. The turnover in the driver corps will typically be as high as 20 percent annually, necessitating on-going recruiting, screening, and training. The cost of this driver corps, and associated on-board attendants, will represent the majority of system-wide expenditures. It is also very common that the benefits granted the drivers will be the same as other district staff, with the attendant costs and personnel required for support.

Risk control is another critical function. General liability, property, collision, and workers' compensation insurance are the responsibility of the district. In order to mitigate these costs, administrative procedures together with safety and training programs must be robust.

For the majority of school districts operating under this model, investments in the property and facilities required had typically occurred many years ago, thus easily perpetuating this as an ongoing approach to service delivery. The extensive up-front capital expenditures required when converting from a contracted model to a self-operated model are often prohibitive, making such a conversion untenable in many cases. That said it is not infeasible. MPS has conducted several feasibility studies for this type of conversion, and has assisted in the implementation of one.

Far more typical, however, is a conversion from a self-operated to a contracted model. In the experience of MPS the most common catalysts for such a conversion occur when the district fails to invest in fleet replacement, creating a backlog of capital expenditure needs, when the personnel costs of maintaining public-sector benefits packages become overwhelming, or when gross inefficiency points to contracting as a potential cure-all.

DISTRICT OWNERSHIP & CONTRACTED OPERATION

As an alternative to a comprehensive district-owned and operated system, a number of school districts retain ownership of key infrastructure while outsourcing the operation of school buses to private contractors. Most typically, districts will acquire and retain operating facilities as a method of assuring competition in situations where land and building options are scarce and/or highly expensive. Essentially, the specifications for operating contracts require that the successful respondent pay a nominal lease and at the end of the contract term return the facility in the same condition as found. Terms vary with regard to the upkeep of lots, fences and the like. Responsibility for compliance with environmental regulations usually remains with the district. Unless the required

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facilities are already within the district inventory, the initial capital outlay and determining the proper location for the facilities represent very real challenges.

It is less common, but not unheard of for a district to also retain ownership of the bus fleet in this model. There are relevant examples of this approach at the statewide level, and also within some individual school districts. In all cases, this has been a legacy approach whereby, in the case of state ownership, the model has been in place for an extended period of time or, in the case of individual districts, the fleet ownership is a legacy resulting from a prior transition to a contracted model from a completely self-operated model. MPS is not aware of any instance whereby a school district has purchased a fleet for the express purpose of making it available to a contractor to operate.

While providing a level playing field for contractors to compete, few other advantages are afforded by the district owning the buses that are operated by the contractors. The greatest drawback is ensuring sufficient capital outlays are available to replace the fleet as required. Another is assuring that the fleet is maintained in the proper condition that would allow a succeeding vendor to assume maintenance responsibility without charging a significant refurbishment cost. The factor most typically noted by those local districts that have retained ownership after transitioning operations to a contractor is the need to own the fleet so that the operation can be re-transitioned back in-house should the contracting model fail.

COMBINATION DISTRICT & CONTRACTOR OPERATION

A number of school districts utilize this “mixed” model for service delivery. Typically, the service is divided between regular and special education or between service provided to schools within the district and that provided to programs outside the district boundaries. There are also many relevant examples where service delivery system-wide is split between district-owned and operated, and contractor-owned and operated buses.

This can be a viable business model in two key scenarios:

- The district retains the service that is deemed the most stable and contracts for service where greater flexibility to meet volume changes or program needs are required; or
- The district utilizes the contracted portion of the system to leverage wage and operating cost concessions, or as a competitive benchmark against which to measure the cost of the self-operated portion of the system.

It has been the experience of MPS that a mixed model tends to evolve over time. It generally starts small, either to meet one of the two scenarios outlined above or, more typically, because contracting a portion of the system becomes an expedient to meet a particular budgetary challenge or emergent need. Examples include when a district outgrows its existing facilities, or when hard caps are placed on approved levels of district staffing. MPS is not aware of any situations where this model has been introduced as a deliberate strategy on a large scale. We would expect many of the same challenges and constraints to be in place in such a strategy as are prevalent in converting from any contracted to self-operated model.

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CONTRACTED SERVICE DELIVERY

This is the current model employed by the DOE, and by approximately 30 percent of school districts throughout the United States. This model is executed with varying degrees of success. In the most successful examples, substantially all of the direct service delivery is provided through contracts with private-sector companies. In these contracts, the providers are responsible for all of the infrastructure, bus fleets, and operational staffing required for efficient and effective service delivery. In these successful examples, the responsibilities of the school district are to:

- Provide an effective procurement process to ensure cost control and high quality service delivery;
- Provide for robust contract compliance monitoring and performance management to hold the providers accountable to the terms of their contracts;
- Provide the contractors with the information and guidance they need to operate effectively and efficiently; and
- Remain accountable for the overall performance of the transportation system.

As described extensively in *The Current Situation* section of this report, it is not the DOE business model that is flawed, but rather the execution. Properly managed, continuation of this model should provide the DOE with the greatest flexibility to balance the competing demands for service and cost control and minimize the risks associated with the implementation of the corrective actions being recommended.

THE RECOMMENDED SERVICE DELIVERY MODEL

Key recommendations:

- **Retain the current fully-contracted service delivery model as the most expedient and lowest-risk alternative.**
- **Implement fundamental changes to the manner in which the contracted service delivery model is organized and executed in the areas of:**
 - ✓ **Contract terms, procurement, and oversight**
 - ✓ **Planning and information management**
 - ✓ **Branch organization and operations**

Shifting the State from its current contracted service delivery model to any alternative whereby the State is required to procure, maintain, and replace significant quantities of infrastructure and capital fleet assets is, in the opinion of MPS, untenable. Such a shift would require a massive capital outlay or bond issue. It would add significantly to the State's ongoing facility maintenance challenges, and create an ongoing capital replacement challenge to retain a fleet of school buses that is safe, reliable, and effective. Meanwhile, there would be a significant impact on the local communities where the current contractors operate, and would greatly complicate the reorganization and operational changes that will be required within the DOE.

The challenge would be redoubled for any shift in strategy that includes a plan for DOE operation of the school buses. To contemplate staffing changes that would add more than 700 new driver positions plus the

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associated support positions and all of the associated costs and operational challenges is daunting. This is particularly true if we were to couple these requirements to the associated infrastructure investments that would be required.

In the experience of MPS *all* of the business models described previously can be organized and operated to provide for efficient and effective transportation services. **There is no fundamental advantage to any one approach.** Rather, each of the costs that are prevalent in the provision of these services must be incurred regardless of the model pursued. They will either be incurred as direct costs by the DOE or through charges levied by the DOE's contractors. Assuming that the organization ultimately accountable for the efficiency and effectiveness of the services, in this case the DOE is exerting due diligence in the manner in which the service is built and operated it will execute this responsibility successfully.

A much more relevant point is to be cognizant of the magnitude and manner of change required when the required due diligence has been allowed to degrade over time. Any logistical system thrives on stability and predictability. It is therefore critical that the point of departure become an important factor when considering the implementation of any radical changes to a large, established logistical system such as this. Where the DOE is starting from, as much as where it wants to go, must become an important consideration in the design of any program of improvement.

For these reasons, MPS strongly recommends that the State retain the current model of contracted service delivery, and focus its efforts on correcting the flaws that exist in how this model is planned and executed. We believe that this will provide the surest path toward substantive improvement in the overall efficiency and effectiveness of the State's student transportation operations.

While the core recommendation of MPS is to retain the current contracted model, there is going to be a significant and disruptive change required within the State, the DOE, and the STSB to turn the tide and return the operation to a place where it is accountable and providing for effective and efficient service delivery. Success will require a realignment of the entire organization, and a sea-change in the underlying structure of, and methodology for service delivery. As a result, a successful implementation will take an extended period of time, will require a sustained commitment on the part of the leadership within DOE and the State, and the application of the resources required to ensure a successful conclusion.

We begin with a description of the "new world" following a successful implementation. This heavily revised business model can best be described as reliant on three interdependent components, much like the three legs of a stool:

1. Contracted service provision;
2. Centralized planning and information management; and
3. A functionally oriented STSB organization structure.

The recommended characteristics that will cause these three legs of the stool to result in a stable, effective, and efficient student transportation operation for the DOE are described as follows.

CONTRACTED SERVICE PROVISION

The key characteristic of the proposed business model and the first leg of the stool is a continuation of contracted service delivery, although with a completely revised foundation for the underlying methodology, procurement, and contract management processes. There is no need or solid rationale

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for the State to assume the significant cost and operational burdens associated with owning and operating a fleet of school buses. Undertaking such a transition in an environment where the tradition is one of contracted services poses inordinate risk. Rather, the answer is to improve the current approach rather than substitute a new one.

CONTRACTUAL METHODOLOGY

MPS is recommending significant changes to the contractual documentation that underlies the operating relationship with the DOE service providers. The shortcomings in the current approach were described earlier in this report. The key characteristics recommended for all future contractual relationships for the provision of student transportation services would include:

- *Service Unit* – A basic unit of service that is predicated on the unrestricted use of a bus for a specified period of time each day, with appropriate cost adjustments when that time is exceeded. Typically, this would be structured as a daily charge for a fixed number of hours with an hourly surcharge if those hours are exceeded. This allows the contractor to recapture overhead and investment costs with minimal concern for volume fluctuation. It also allows the contractor to pay a minimum guaranteed daily rate to the driver which contributes to driver force stability.
- *Volume Range* – The flexibility to increase or decrease the total number of buses in use within a pre-defined range without the need to renegotiate contract terms. The contractor will base pricing on a minimum number of buses to be provided. By providing a minimum and maximum number of buses to be utilized DOE can take advantage of route consolidation and/or reduction opportunities and, conversely, meet unforeseen growth without disrupting the customer-vendor relationship.
- *Pricing Mechanism* – A critical component of the contract is a pricing strategy that is non-restrictive and allows vendors to make best-value business-case proposals for service. The pricing mechanism should replicate the nature of the service provided and reward the efforts and innovations of the vendors. The ultimate benefit for DOE is in providing a rewarding path for the vendor to follow in serving the transportation needs of the schools.
- *Contract Obligations* – As stewards for the tax payers of the state DOE must retain full management control and accountability. This accountability must be balanced against protecting the vital business interests of the contractor. The contract should provide clear assurances that protect a vendor from arbitrary or malicious action by the DOE, but that also retain freedom of action for DOE management to best serve the needs of the student population and the State's taxpayers. In this fashion, The DOE can expand the number of respondents by having created a positive business environment.
- *Term* – The length of service should balance the distinctive circumstances of the State's operating environment with the need to promote and retain a broad supplier base. More competitors should respond if the potential length of the contract approaches the assets' useful life. Alternatively, a clear path should be available to the provider to dispose of useful assets at the conclusion of a shorter contract term.

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- *Service Packaging* – By assembling a geographic-based grouping of services into a set of contracts the achievement of economies of scale and competition are facilitated. If the service area is too fragmented it presents a barrier to entry favoring the incumbent.

PROCUREMENT METHODOLOGY

In addition to the changes in contract terms, MPS is recommending significant changes to the procurement process itself. The shortcomings in the State's current regulations were described earlier in this report. The key elements that will be required to support the revised contractual and operational methodologies include:

- *Value* – A transition from the current cost-based bidding process to a value-based proposal process will provide needed flexibility for the DOE to select vendors providing the best balance between service quality and cost. This is not meant to imply that cost will not be an important consideration. Rather simply that by making it the only consideration the DOE is missing an opportunity to attract potential new competition to the market and to ensure the quality of services provided.
- *Timeline* – A dramatically lengthened solicitation timeline is required. This is a particular factor in the current process that inadvertently restricts the entrance of new competitors to the Hawaii market. A new approach that recognizes and accommodates the distinct operating characteristics of Hawaii, and that accommodates the additional time required for a potential new vendor to establish operations on the islands will mitigate this problem.
- *Process* – statutory and or regulatory changes are required that will place restrictions on the ability of unsuccessful vendors to hobble or otherwise undermine procurement decisions that are arrived at ethically and in accordance with the established procurement process for fairness and equity.

CONTRACT MANAGEMENT METHODOLOGY

The establishment of a contract should not be considered to be the end of the contracting process. Rather, robust contract oversight, compliance monitoring, and performance measurement methodologies are the mechanisms that will provide the DOE with the tools necessary to ensure it meets its responsibilities and remains accountable for results. As described previously, these methods are poorly defined and largely non-existent in the current organization. MPS is recommending the development and implementation of a contract performance management program. The contract management plan (CMP) is a formal, documented plan that incorporates a structured and ongoing cycle of continuous monitoring and improvement. It is the backbone of the contract management function and is comprised of four key elements:

1. *Resources*: Ensuring that there are people in place within the DOE with the appropriate skills and available time to carry out contract management responsibilities.
2. *Oversight*: Systematic, consistent, and fair mechanisms for overseeing the performance of the school bus contractor relative to the requirements of the contract.
3. *Development*: Concurrent goals of the CMP are to increase both the performance and capabilities of the bus operator over the term of the agreement.

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4. *Strategy*: Use the CMP to actively manage and encourage a healthy professional relationship between the school bus contractor and the STSB, and to encourage competition in the marketplace.

There are two foundational contract management responsibilities that, if executed properly, will ensure strong ongoing performance and encourage competition in the future among the school bus contractor community. Each of these is a critical element of the CMP, but they are very different in application. Contract management focuses on two core responsibilities:

- *Contract compliance monitoring*: Compliance monitoring ensures that the terms and conditions of the contract are met. The majority of contract requirements are binary in nature, which means that the bus contractor is either compliant or non-compliant. These elements are not subject to interpretation. The monitoring efforts are focused first on making this compliance determination for each provision of the contract, and then on taking necessary remedial actions to ensure future compliance.
- *Performance measurement*: This is substantially different from contract compliance and accomplishes several objectives: It facilitates continuous improvement relative to performance-related contractual obligations; it provides a means for the contractor to set itself apart from its competitors; and it encourages healthy ongoing competition which leads to continuous improvement in the delivery of services. Performance measurement leverages and expands upon the specific contractual requirements in order to improve effectiveness and efficiency of the operation and maximize value.

CENTRALIZED PLANNING & INFORMATION MANAGEMENT

With contracted service provision as the fundamental driver in the service model, a particular approach to the centralization and management of planning activities and information becomes the second leg of the stool. Absolutely key to successful provision of services in a contracted model is the recognition that management accountability cannot, at any time, be outsourced to the vendors. Following this logic, it is imperative that the STSB retain absolute control over all planning functions and the related flow of information. There are two critical elements to consider in this regard:

1. Technology use; and
2. Route planning and information management.

ROUTING SOFTWARE & RELATED TECHNOLOGIES

The implementation of transportation management technology will be a critical component in the STSB's ability to successfully oversee and direct system operations. The implementation of a software product that facilitates management of student data, bus stop placement, route design and reporting provides a critical locus of control for management of the transportation system. Current deficiencies in this regard were documented earlier in this report, and will not be easily or simply rectified.

Technology is a tool, not a cure-all. As such it must be chosen and/or developed with care. It should be designed to assist with achieving the desired outcome of the user. As such, the business processes and goals of the STSB will need to be defined before the selection process for routing

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software can commence. It is the strong recommendation of MPS that the DOE lead with process, not technology such that when technology is implemented the STSB staff can make the most effective use of its capabilities. This has significant implications for the implementation approach and timeline recommended later in this report.

Ancillary technology, such as GPS-based vehicle tracking, supplements and improves the use of the baseline routing software technology in the ongoing management and oversight of system performance. MPS recommends that consideration for the inclusion of these technologies be part of the overall technology adoption strategy. However, it is also recommended that it be placed on the implementation timeline in accordance with the priorities noted above.

ROUTE PLANNING & INFORMATION MANAGEMENT

Achieving efficiency and effectiveness in the system begins with the design of, and ongoing adjustments to the scheme of bus routes and schedules. There must be flexibility in the service delivery model to seamlessly adjust this scheme to meet changing circumstances, and to implement revised schema in the interest of pursuing the policy objectives of the School Board. Ceding control of this function to the bus operators runs counter to these objectives. When we consider that these vendors are also compensated on the number of buses and the length of the bus runs they operate it becomes plain to see that there is no inherent motivation to seek operating efficiencies by these vendors. These points are fundamental to the rationale for retaining control of the route planning function within the STSB.

FUNCTIONALLY ORIENTED ORGANIZATION & OPERATIONS

The final leg of the stool is an internal organization structure and staffing complement that is functionally oriented, skilled, and trained to properly execute their assigned responsibilities. The primary benefit that accrues to the DOE through the contracted service delivery model is that the preponderance of staffing, infrastructure, activity, and cost associated with student transportation services is distributed to the vendors. Meanwhile, the critical activities that define and control the overall efficiency and effectiveness of the system are retained by the DOE through the centralized planning and information management function while representing only a small minority of overall system-wide costs. This is the management accountability business model that makes the most sense for the DOE given all of the history, traditions, and unique operating conditions of the State.

To be successful, this proposed service delivery model requires a STSB organization structure that is intensely focused on the route planning, operational analysis, and contract performance management functions described above as the other two legs of the stool, but also on customer service, which implies an operational responsibility as well. The distributed nature of service delivery should couple with technology-enabled centralization of management control to create an organization with the right people doing the right jobs at the right locations. Those activities that can be centralized in one office should be; those that require ongoing personal contact with customers and service providers should be distributed. In all cases there must be a common set of operational practices and protocols that are documented and enforced via regular training, reporting, communications, and sharing among all STSB staff.

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This describes a radically different approach to the work than is current in the STSB, if not a radically different staffing complement or job titles. It is expected that there will continue to be STSB staff permanently assigned on all islands where the system operates. It is also expected that in the new model the role and responsibilities of remote staff will vary with the size and scope of the operation they oversee. Finally, it should be expected that functional specialization will become the defined approach for all work that becomes centralized at the main STSB office on Oahu.

Therefore, success requires an overall STSB organization structure that is oriented around the following four critical functional areas of operation:

1. Contract management
2. Planning & information management
3. Field operations
4. Business administration

The contract management function is critical. This is the point where the historical efforts of the STSB have broken down. There must be a focused and systematic approach, as described previously, to ensure contract compliance and that the bus contractors are providing optimal performance. There will be a necessary degree of coordination among transportation officers in the field and a core central office staff to accomplish the varied requirements of the CPM described previously.

The organizational component of the STSB that will do the strategic route planning and development, keep route information up to date and accurate, distribute this information to the vendors, and analyze system performance will be largely centralized. There will be a certain level of crossover required with the field transportation officers who will be expected to assist in maintaining routine route updates, such as bus stop changes for students. The centralized planning activities should be divided between regular and special education transportation. These are very different types of transportation and in the case of special education students, require a high level of individual attention so that transportation can be tailored to the specific needs of each student. In all cases the planning activities will utilize appropriate technology as described previously.

It will be critical to continue having line operations personnel “on the ground” at the various sites on each of the islands. Their responsibilities will now, however, have primarily an operational focus but with certain crossover functions to both contract management and route management. The transportation officers will be the operational face of the STSB, interacting with schools, parents, and school bus contractors to ensure that services are being performed in a reliable, consistent, and safe manner.

The final functional area of business administration should be a fully centralized function which entails all of the business, financial, and accounting components of the transportation program. A primary responsibility will be the ongoing oversight, monitoring, and processing of bus vendor invoices to ensure compliance with contractual rates and terms. The other activities associated with it are fairly common to almost all organizations and include providing fiscal support, coordinating meetings and schedules within the DOE, tending to personnel administrative tasks, and similar office functions.

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For the proposed organization structure and operating procedures to be effective, there must be a common set of standard operating procedures (SOP) and contractor oversight protocols that are documented, enforced, and adjusted over time. These factors are accomplished through regular staff training, standard reporting formats and requirements, effective communications, and knowledge transfer among the STSB staff.

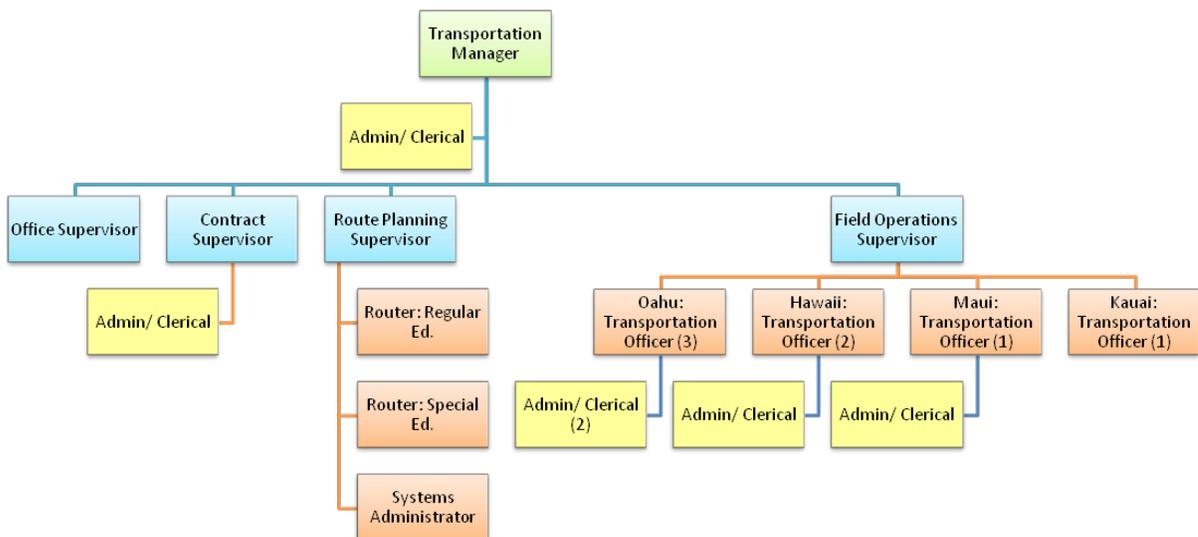
It is clear that the absence of any procedural guidance is what has caused the proliferation of individual methodologies that effectively allowed the school bus contractors operate the transportation system as they wished. Accordingly, STSB internal operating procedures need be developed which address all key components of the operation of the Department. Further, the SOPs must integrate the job responsibilities, crossover activities, and the contract management plan which will comprise the new STSB organization structure.

An important component of these procedures will be a structured routine of reporting within the STSB and up through the Department of Education and to the legislature. This is something that will be critical both to effectively managing the student transportation program and in rebuilding confidence within the STSB and outside of it.

ORGANIZATION STRUCTURE

MPS has developed a proposed STSB organization structure that meets the description of functional responsibilities described above and that accounts for the distinct geographic characteristics of Hawaii without making dramatic changes to the current staffing levels of the Branch. By establishing the four core functions, each managed by a dedicated functional supervisor, we believe that an appropriate line of accountability will be established along with a more efficient use of staff within the STSB. The complete recommended structure is summarized below as Figure 2.

Figure 2 – Recommended STSB Organization Structure



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The critical change recommended is placing the four core functional responsibilities under individual supervisors who then report to the Transportation Manager. Decision making and authority can then be appropriately distributed, with the Transportation Manager focusing on key issue management, systemic oversight and budget management. The transportation officers, with the exception of those based on Oahu will continue to be located in the field on Kauai, Maui, and Hawaii.

For this organization plan to work, the DOE will need to clearly define the procedural requirements, reporting relationships, and use of the new information technology planning and communications recommended in this report.

Briefly, the core responsibilities of the four new supervisory positions can be summarized as follows:

Office Supervisor

The office supervisor will administer the purchasing and bookkeeping tasks for the STSB coordinating internal meeting and schedules within the Department, administering personnel support tasks, and administering the city public transit bus pass program and coordinating this with the schools and transportation officers.

Contract Supervisor

This position will be responsible to ensure compliance with the terms and conditions of the individual transportation agreements, and to evaluate the bus contractors' performance. The central tool for this individual will be the contract management plan described earlier in this report. As with route planning, there is a degree of coordination and overlap with transportation officers in the field. However, placing the contractor oversight responsibility under one unit provides a separation of responsibility and cross-check with field personnel.

Route Planning Supervisor

The route planning supervisor will have the responsibility for managing the strategic route planning and development, using automated route planning software. The core team will develop the initial routes and schedules for the entire state, using the input of the transportation officers, and through them, the bus contractors. The transportation officers should handle routine route modifications and maintenance activities. Major route reengineering or realignment of bus run assignments will be under the management of the route planning supervisor.

Field Operations Supervisor

This is key position that will be responsible for ensuring that the procedures, reports, and protocols are being administered in the field by the transportation officers. On a fundamental level, this individual will be one charged to "make it happen" in achieving transportation performance and service delivery objectives. It is a centralized position, but with seven transportation officers located on four islands, it will require a good deal of travel time and presence in the field. Similarly, the field operations supervisor will interact heavily with the contract supervisor and route planning supervisor, serving as a liaison with field operators. For example, a dispute over a route assignment or the layout of a bus route with the bus contractor will go through this individual. Where a site audit by the contract supervisor reveals a compliance or performance issue with a bus contractor, the resolution will involve the field operations supervisor.

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IMPLEMENTATION

Key recommendations:

- Execute a revised competitive procurement model with a targeted implementation beginning in 2014/15.
- Utilize a substantial pilot program in 2013/14 as a proof-of-concept and test-bed for the revised business model.
- Execute a phased-implementation of the revised model with final completion targeted for 2015/16.

The revised business model described in the preceding section will not be achieved easily or quickly. There is a tremendous amount of organizational inertia to overcome together with structural impediments such as the extended term of some existing contracts. This final section of the report discusses how best to achieve the objectives described above, from the immediate starting point through full implementation of the revised business model being recommended by MPS.

There are three critical components to the implementation:

1. Cease perpetuating the current business model to enable substitution of the revised approach;
2. Plan for a rolling implementation schedule that ensures a deliberate transition to the revised model over time; and
3. Facilitate the continuation of current operations during the implementation transition.

These three elements must work together and in parallel to ensure a successful transition. The State and the DOE must accept that there is a great deal of institutional and operational risk inherent in the proposed approach. The most effective way to mitigate this risk is through comprehensive planning and a realistic assessment of the timeline required to ensure success. A methodical, deliberate approach to the implementation is recommended. Success will not come quickly, but will be achieved if the State and the DOE commits to the long-term plan of implementation outlined here.

CEASE PERPETUATION OF THE CURRENT MODEL

The State and the DOE must begin by making a difficult commitment: cease perpetuating the current business model. Current bus vendor contracts are route-specific and long-term, with a procurement process that hampers competition. This is a substantial impediment to implementation of the revised model in that the contracts are renewed or rebid on a rolling schedule, with each renewal extending the life of the current approach. There is a pressing need to “stop the treadmill” represented by the rolling contract expiration dates and the re-bidding process traditionally followed by the DOE. Coupled with the long six-year contract term, any new contracts executed under this legacy approach will severely hamper the ability to execute and implement the new business model in any reasonable timeframe.

The first and most critical step has already begun with the decision by DOE prior to the commencement of this study to avoid renewal of the vendor contracts expiring at the end of the current school year. While this was a laudable action, and is consistent with the intent of the

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implementation recommendations in this report, some modifications to this decision may be required to support all of the implementation objectives, as discussed below.

COMPETITIVE SOLICITATION PROCESS

For a successful overall implementation the DOE must immediately enable the following critical first steps:

1. A State decision to end the current procurement process as it applies to school bus service provision, to include a blanket non-renewal policy for all existing bus vendor contracts.
2. A parallel effort to negotiate extensions and/or early termination of existing vendor contracts that coincide with and serve as a bridge to the new business model.

These steps must be taken, but must also be handled in such a manner that the vendors are motivated to continue providing the required services during the transition period. It will not be sufficient to simply avoid renewing all contracts. The staggered terms for existing contracts *will not* coincide with the geographic clustering strategy for new contracts discussed below. Rather, some existing contracts will need to be terminated early.

The vendor community must be engaged in this effort. An extensive plan of outreach and inclusion is necessary. The vendors must be informed as to the rationale and need for change. They must be assured that their interests will be considered and protected in the process, and that the end result will represent an improved competitive environment for all.

State procurement regulations may need to be modified as well. The current situation is a result of many factors, one of which is the constraint placed on the procurement process by current procurement laws and regulations. The revised solicitation process described in this report demands sufficient time, and a particular approach to the development of specifications and the evaluation of vendor responses.

The initial cycle of competitive procurement must begin immediately following the vendor outreach and modification of procurement rules. As described previously, one of the truly distinctive operating conditions in Hawaii is its geographic isolation. This does not preclude the entrance of new competitors to the market. Rather, it points to the need for a rational and reasonable approach and timeline to the procurement process.

Many months are required for a new entrant to establish business operations on the islands. This implies that a selection of vendors for services to begin at the start of a fiscal year must be made no later than early in the corresponding calendar year. To support this selection deadline, a proposal-based solicitation process must begin many months prior to that. Thus, the process must begin early in the 2014 fiscal year to adequately support a FY2015 startup.

This extended procurement timeline, together with the preliminary rule changes and outreach required, implies that insufficient time exists as of the date of this report to support a revised procurement process for contracts to begin in the 2014 fiscal year. Coupling this with the numerous other operational changes recommended in this report, and the absolute requirement for near-term action on multiple fronts, points toward a substantial pilot program as the most effective means of ensuring forward progress in the short term.

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PILOT PROGRAM

The revised business model must begin with a solid design. However, many solid plans have failed in execution when due regard is not given to the complexities of changing business models. The prior discussion on competitive procurement illustrates just some of these complexities. For the DOE, the recommended revisions to the business model for transportation services represent nothing short of a radical shift in philosophy as well as operating practice. This fact argues strongly for a deliberate approach to implementation, beginning with a substantial pilot program.

Given the starting point, the demands of the planning cycle, and the extensive requirements of the new model, MPS recommends that the first step be a small-scale pilot program. However, the pilot program must have sufficient scale and scope to serve as a true proof-of-concept and test-bed for the various business processes and technologies underlying the recommended service delivery model. It needs to be large enough to serve as a true proof-of-concept while remaining small enough to mitigate risks and allow for midcourse corrections, as required. It will also need to be approached in such a way that some of the timeline constraints, the competitive procurement cycle chief among them do not stand in the way of a near-term implementation for the pilot.

This pilot program must be targeted for implementation to coincide with the start of the 2013/14 fiscal year. Anything less would risk the momentum for change that has been established, and would risk undermining the credibility of DOE in executing the improvement plan. The pilot program should be designed to incorporate the following key elements of the overall revised business model:

- *A single geographic region* – a consolidated geographic region should be selected as the pilot location. In its fully implemented form all STSB planning, operations and associated contracting will have a geographic focus. The pilot program should mimic this approach.
- *A negotiated vendor contract* – Given the time constraints on the competitive solicitation process changes required, vendor services in the pilot area should be structured on the basis of a negotiated agreement. MPS understands that this is feasible under current State procurement rules in exceptional circumstances. The negotiations should focus on establishing a short-term agreement that mimics the terms, conditions, and service requirements expected for inclusion in the first formal competitive solicitation.
- *A model organization structure* – Reengineering the entirety of the STSB organization in time for the pilot program is not feasible. However, a temporary organization structure that mimics the functional responsibilities of the recommended full-scale organization will be a necessary component to fully test and vet the operational protocols and assumptions built into the recommended business model.
- *Supporting technologies and processes* – Similarly, a full scale implementation of routing software and related technologies is neither feasible nor recommended in the time available to commence the pilot program. However, an approach that incorporates a limited-scale test of the technology and draft operational procedures will help to ensure the pilot serves as a true test-bed for the future operations of STSB.
- *Measurement, reporting, and feedback* – The key to making the pilot program useful as a first step is to constantly measure, report, provide feedback, and modify the functioning of

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the pilot. It is this constant monitoring and ability to make changes “on the fly” that will best serve the DOE as it works toward full implementation of the program.

A ROLLING IMPLEMENTATION SCHEDULE

There are many activities that must proceed in parallel for full implementation to be achieved in a reasonable timeframe. A summary of the activities required serves to illustrate the complexity involved:

- Revise State/DOE procurement rules and processes
- Develop and implement a revised competitive procurement methodology
- Analyze and determine logical geographic clustering for contract grouping and operations
- Develop and implement a new STS organization structure and Standard Operating Procedures
- Acquire and implement automated routing software and related technologies

A rational approach demands that the foundational elements proceed first, using the pilot program as a test bed and laboratory to refine the approach and tools. In parallel, a phased-implementation by geographic region will facilitate a mitigation of risk and permit a smooth transition. Thus, the following key aspects of the implementation schedule should be considered.

1. *Supporting technology, organization, and processes –*

The process for acquiring the recommended technology, revising the STSB organization structure, and defining the associated revisions to the associated operational protocol's should commence immediately, in parallel with the development of the pilot program. There is a logical sequence to this effort:

- I. Approval of the revised organization structure;
- II. Development of position descriptions;
- III. Documentation of initial operating procedures;
- IV. Acquisition of technology and planning tools for 2014/15 phase 1 implementation; and
- V. Commencement of 2014/15 competitive procurement process for services.

2. *Concurrent planning for implementation in all regions –*

With the pilot program underway and providing lessons learned, and the supporting elements in place to support the first full-scale implementation for 2014/15, the final immediate step that must be taken is to map out an implementation schedule that transitions the entire State to the new model over time. Several factors must be considered. The plan should create logical geographic groupings that:

- support a rational roll-out schedule that is supportable given resource requirements, contractual implications, and the pressure for change;
- capture appropriate economies of scale for competitive procurement;

The Path Forward

- ensure efficient and effective service delivery in each region on a stand-alone basis; and
 - coincide as closely as possible with the expiration of existing vendor contracts.
3. *Staged actual implementation by region –*

With the final plans and schedules in place, including lessons learned from the pilot program, actual implementation can commence in the first region(s) beginning with the 2014/15 fiscal year. MPS recommends that full implementation be targeted for a three-year roll-out, inclusive of the 2013/14 pilot program, with final implementation achieved with the 2015/16 fiscal year.

MAINTAINING OPERATIONS DURING THE TRANSITION

Services must continue to be provided throughout the transition period. The first step is to negotiate the necessary arrangements with the vendors as described previously. STSB operations must also be shored-up and structured in such a way that staff is as motivated as the vendors to continue providing services during the transition. This must take on the characteristics of parallel operation; as the new model ramps-up, the old structure must ramp-down. In this way a strategy for the continuance and gradual unwinding of the current operation is as critical to ultimate success as the design and implementation of the new business model.

Appendix A – Cost & Service Statistics

Preliminary Discussion

The Student Transportation Services Branch created the contract computational spreadsheets as a mechanism to support its budgeting process. The spreadsheets evolved into a partial management tool, but were never intended to fully support either process. Consequently, the spreadsheets contain a variety of data integrity concerns. Some were specific to one school year's computation whereas others pertain to inconsistencies in data from year to year. The integrity issues appear to be unintentional, isolated, non-recurring, and not material to the overall cost total bus counts or costs. However, as these computation schedules may have been the primary tool for cost projection and system-wide cost management, any deviations and errors were problematic. This is particularly true if a management objective of these tools was to assure the reasonableness of a contract's costs from year-to-year.

Given the importance of these data sources to any analysis of transportation expenditures, it is necessary to fully highlight the data integrity concerns that were identified. Examples of the concerns include:

- Instances of blank data in pricing fields in 2005-06 and 2006-07; in each instance it was the first year of a new contract.
- Instances of pricing estimates in the first year of a new contract; the second year price was very different.
- Some contracts had a special education bus included within a regular education contract; these bus counts and costs were not consistently represented within the schedules from year to year.
- Schedules extended the estimated costs using 180 regular education and 210 special education school days; others used the school days for each contract; the 2010-11 data was extended at 179 regular education school days.
- Some contract pricing information was entered incorrectly (duplicated amounts, or another vendor's prices).
- Contract pricing was calculated incorrectly by dividing by too many or too few buses.
- Recurring findings that a year's beginning pricing data was not identical to the previous year's data.
- Schedule totals had erroneous summation formulas or the formulas had been overridden with other data.
- The 2010-11 data was extended using different bus counts than what were listed in the schedule.
- We were provided two sets of 2009-10 data which did not agree to one another.
- The excise tax (GET) was not consistently portrayed; sometimes it is in the rollups, at other times not.
- The contract groupings changed over the years; Oahu was broken into three regions, then four.
- A West Hawaii contract was rolled up in East Hawaii data.

Appendix A – Cost & Service Statistics

- One 2008-09 contract (6 buses) was duplicated in Leeward and Windward.
- Data was sometimes highlighted with a color and appeared to be out of sequence or simply incorrect; it was unclear how that highlighted data was addressed in the rollups.

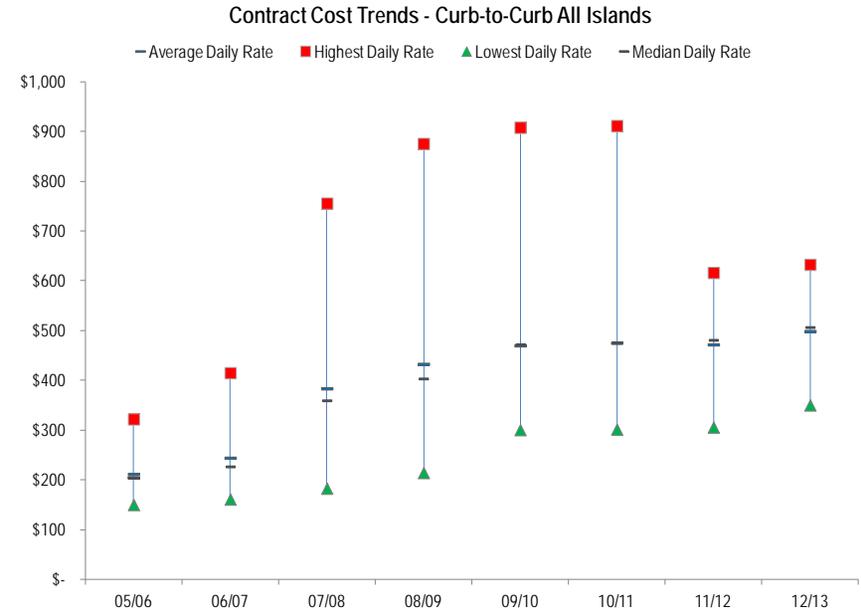
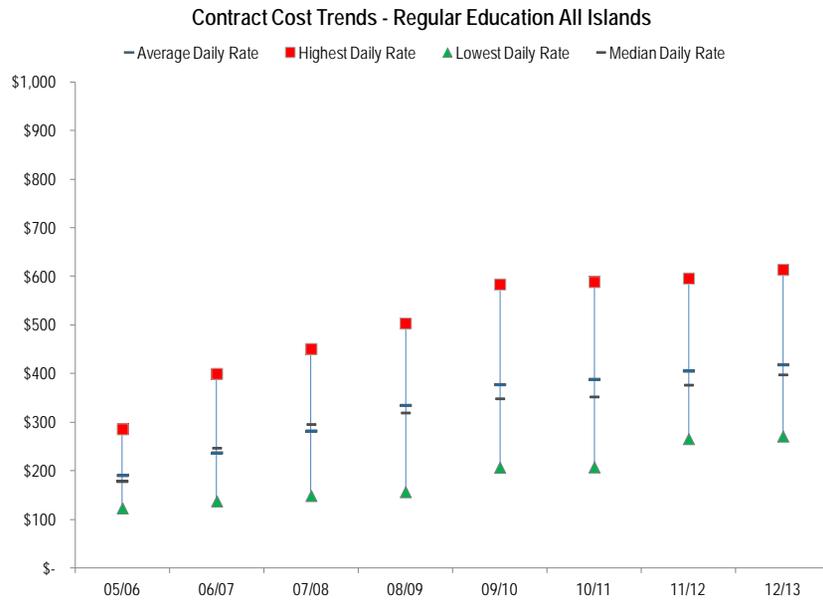
With an objective of extrapolating meaningful cost and service histories from this data, MPS started the analysis with each of the eight (nine include the two 2009-10 computation schedules) STSB-provided *Excel* schedules. We analyzed the data island by island and region by region, first examining the regular education contract recaps then the special education contracts. As evident errors in data and formulas were noted, we corrected the arithmetic and/or revised the data by referencing the information from the prior year – or subsequent year's - compilation schedule. Doing so allowed us to "frame" any irregular data such that it rolled forward from year to year. All in, some 20 data fields or computations were revised. The majority of the revisions occurred in the 2005-06 and 2006-07 data and in 2010-11 data wherein an adjustment column was added (which was interpreted to relate to bus count additions or subtractions from the prior year data). Repeating this process eight times allowed us to tally the data by bus type and by region/island and year, on a reasonably similar basis.

Our objective was to arrive at a bus count and daily service price for each island/region. Then extend that price by a standardized number of school days. As a means of checking our work, we compared each island/region's revised totals to the original computation schedules and investigated every difference in bus count, and any significant deviations in price extensions. (We did not review the entire compilation to determine if any bottom line error existed in the state's initial cost projections; said differently, we did not adjust or correct the state level rollups and cannot attest to whether the system-wide cost forecasts used for each year were accurate reflections of that year's contracted services.) We contend that the process followed should establish meaningful annual vendor contracted cost estimates, upon which trends can be measured and conclusions derived.

Appendix A – Cost & Service Statistics

Contractor Rate Trends

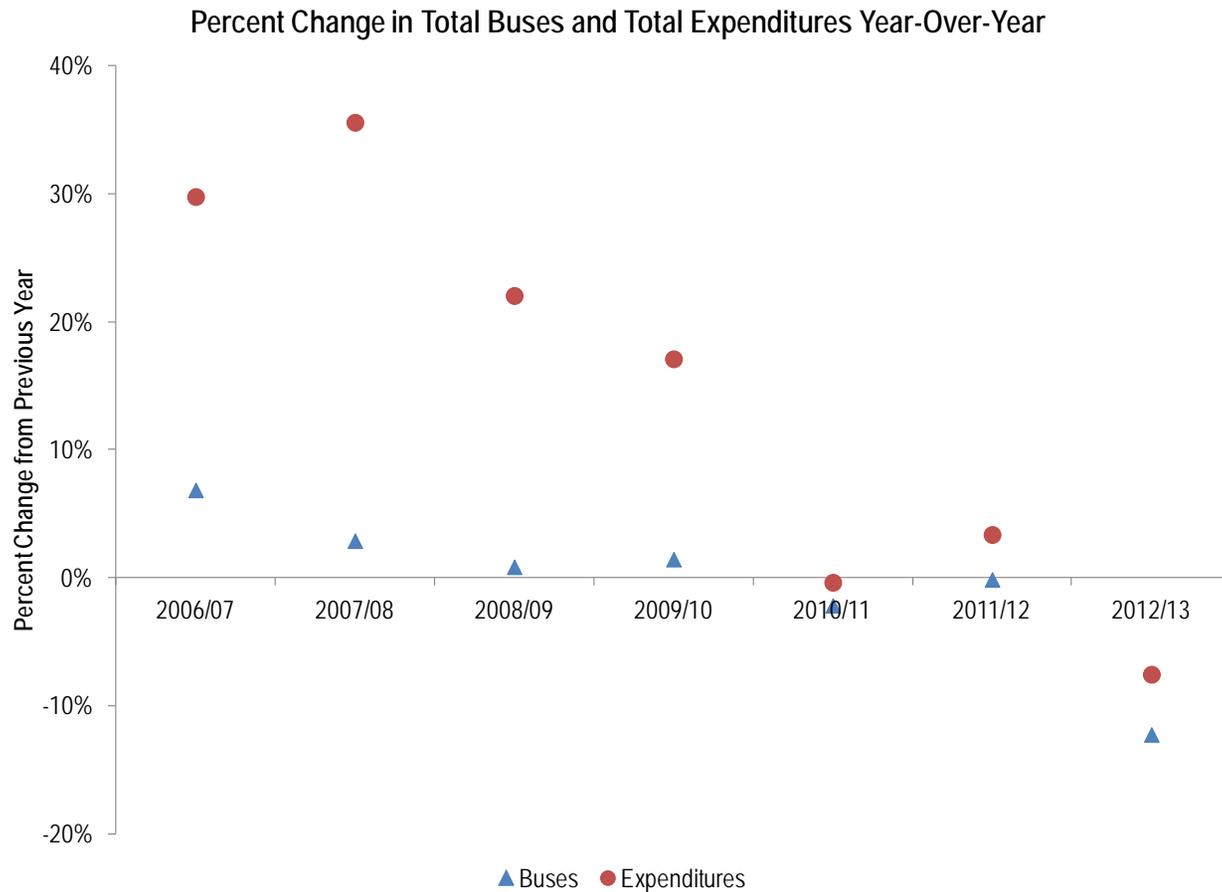
The following charts demonstrate the highest, lowest, average, and median contract cost per day for all islands for both regular education and curb-to-curb services.



Appendix A – Cost & Service Statistics

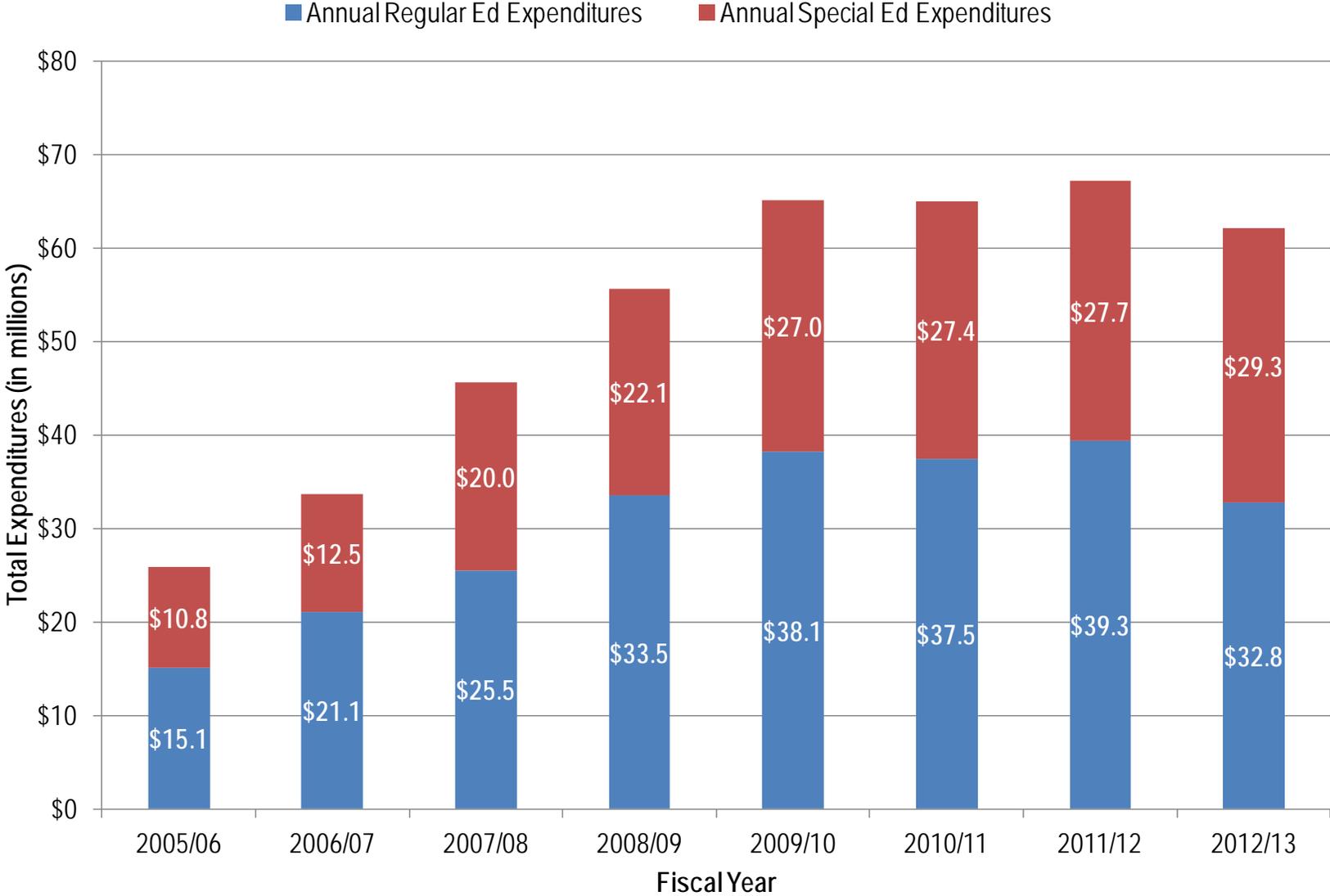
Additional Analytical Detail

The following chart compares the percent change in total expenditures with the percentage change in buses in service. This year-over-year comparison demonstrates that expenditure increases occurred at far greater rates than changes in asset counts. This further supports the premise that contract rate changes have been the critical variable influencing the increase in expenditures.



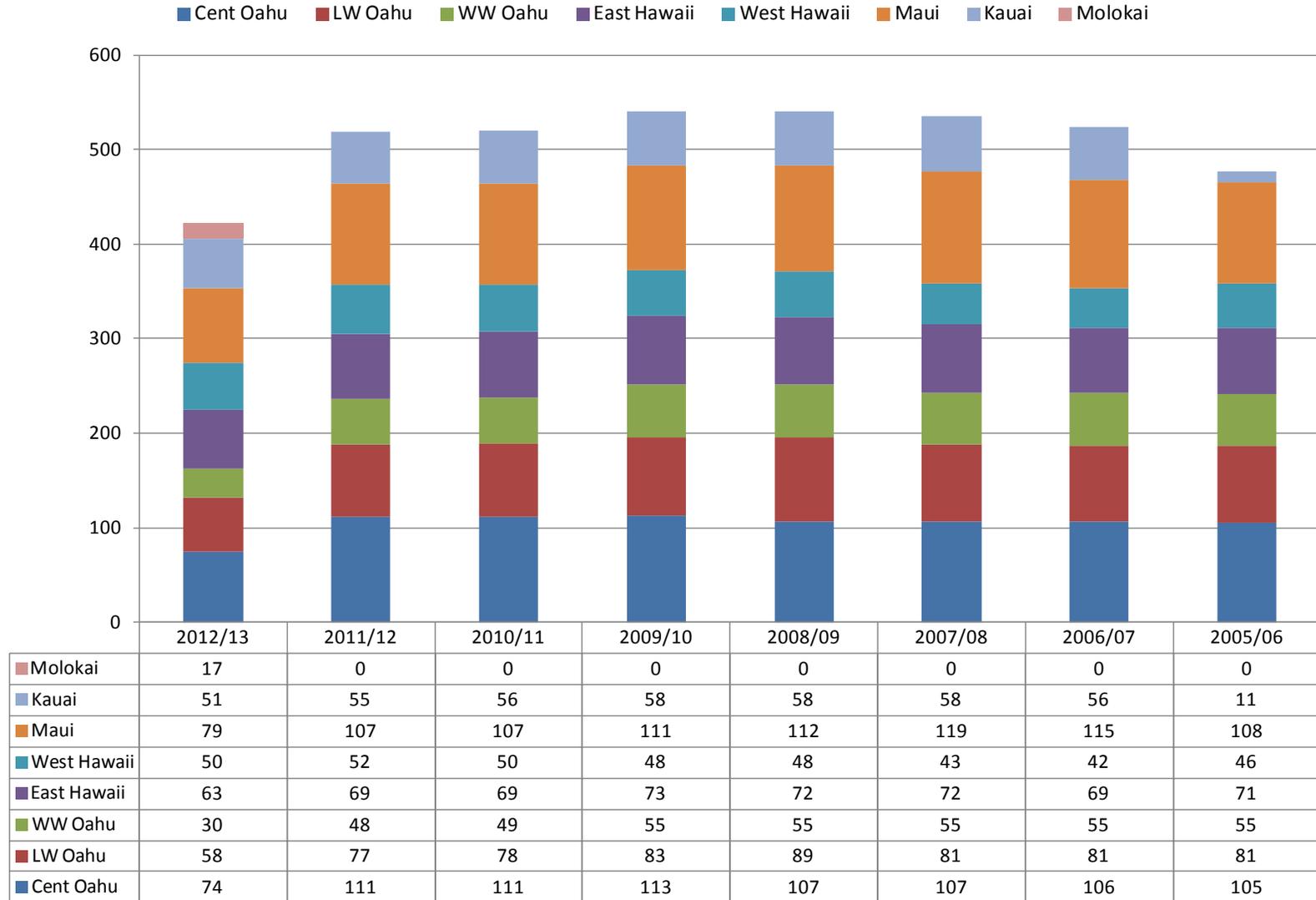
Appendix A – Cost & Service Statistics

Annual Cost of Contracted Service by Type



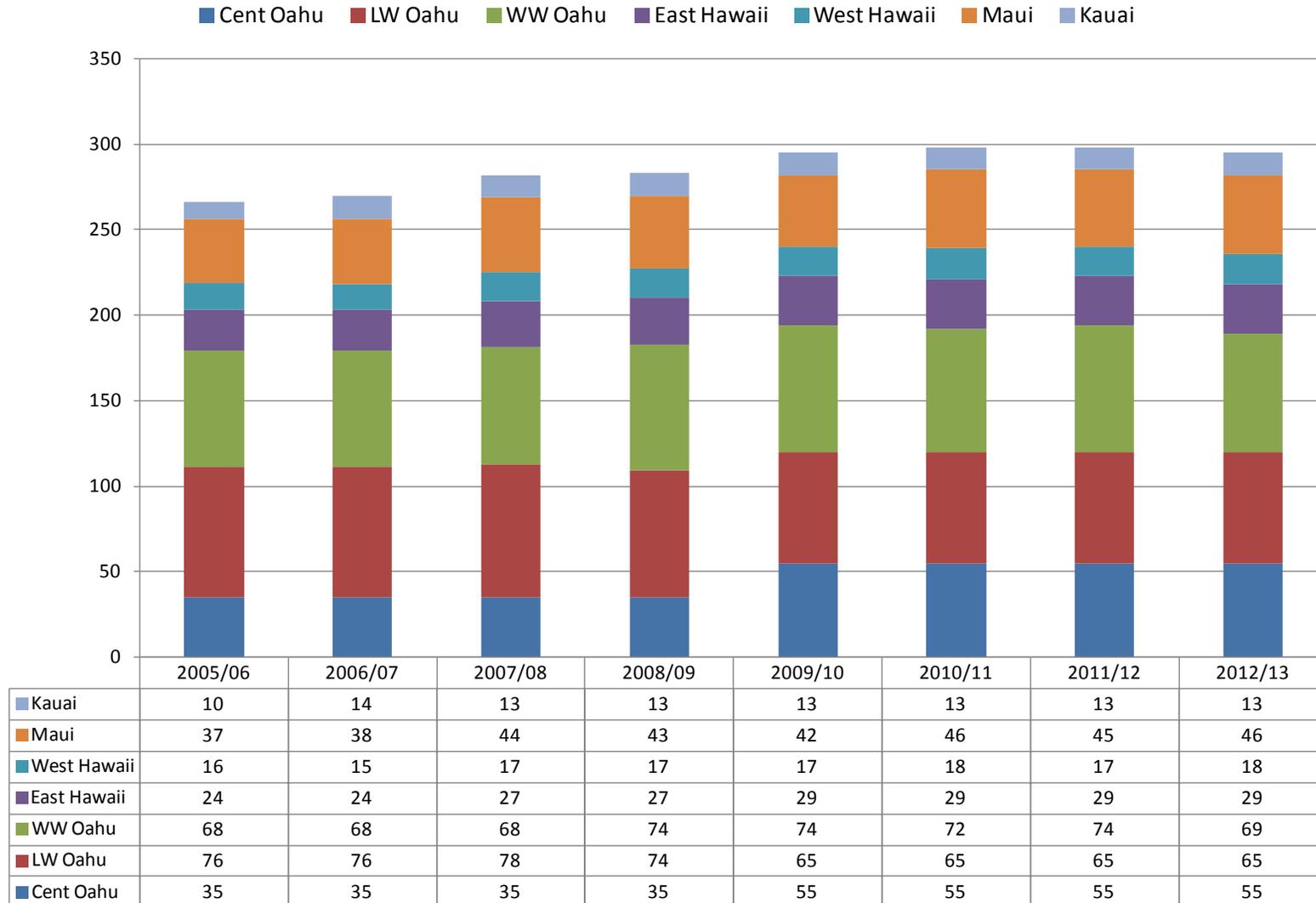
Appendix A – Cost & Service Statistics

Number of Contracted Regular Education Buses



Appendix A – Cost & Service Statistics

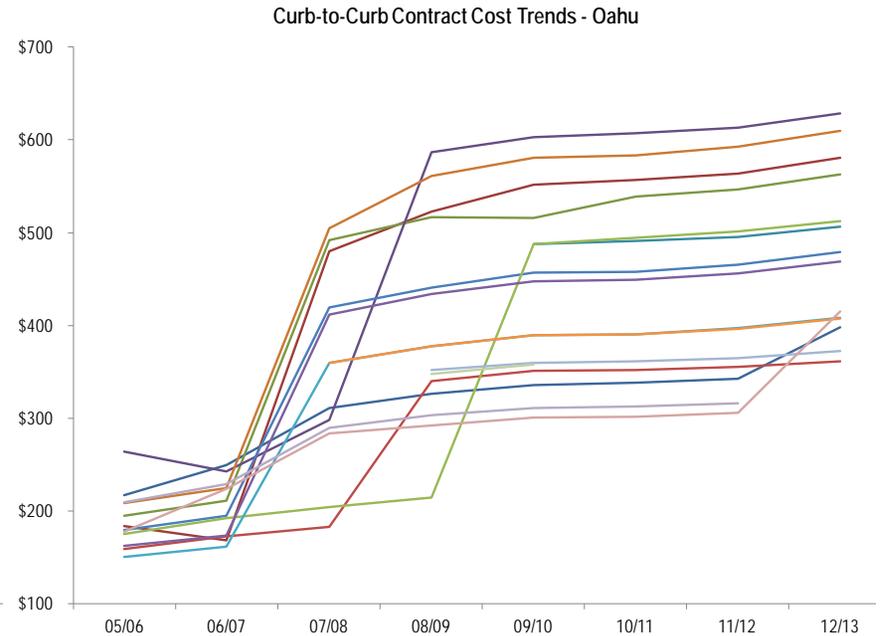
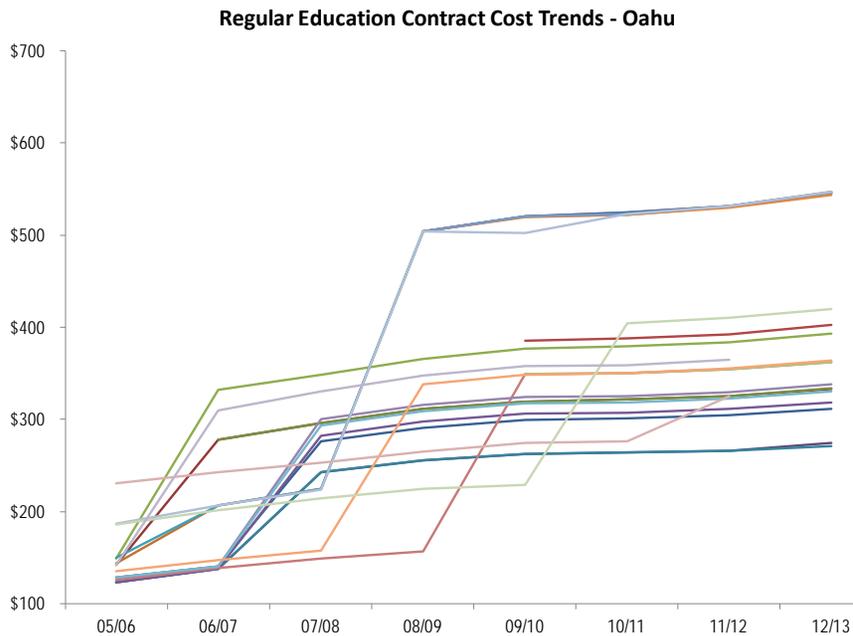
Number of Contracted Special Education Vehicles



Appendix A – Cost & Service Statistics

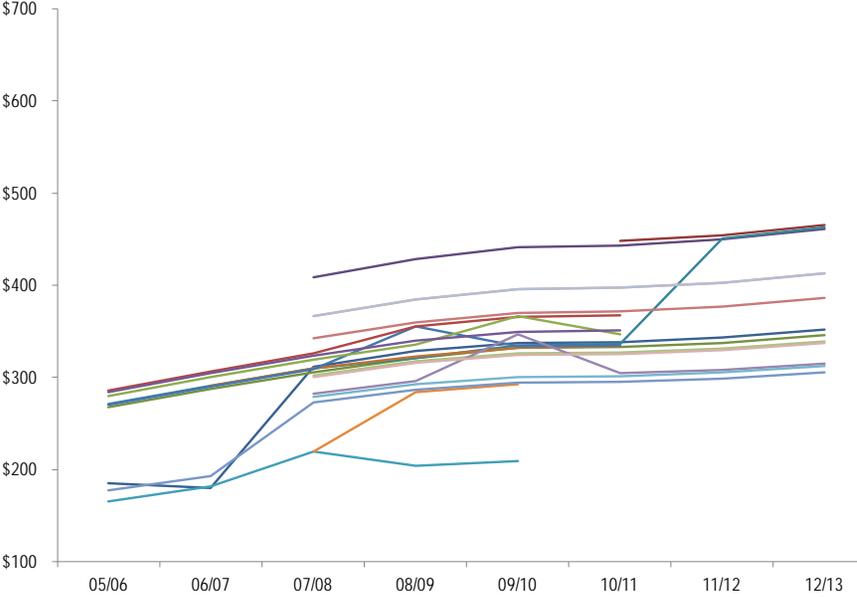
CONTRACT COST TRENDS

The following charts provide an island-by-island history of regular education and special education contract cost trends. Each line represents the per day cost history of a particular contract. Of particular note are instances where the slope of the contract cost line increases dramatically. Those are the instances where significantly higher daily rate costs began after contract renewals.

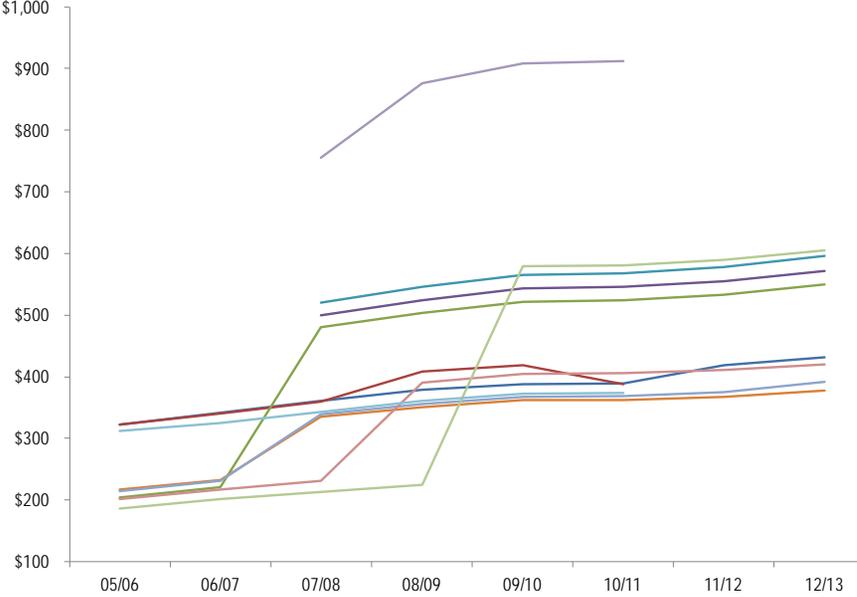


Appendix A – Cost & Service Statistics

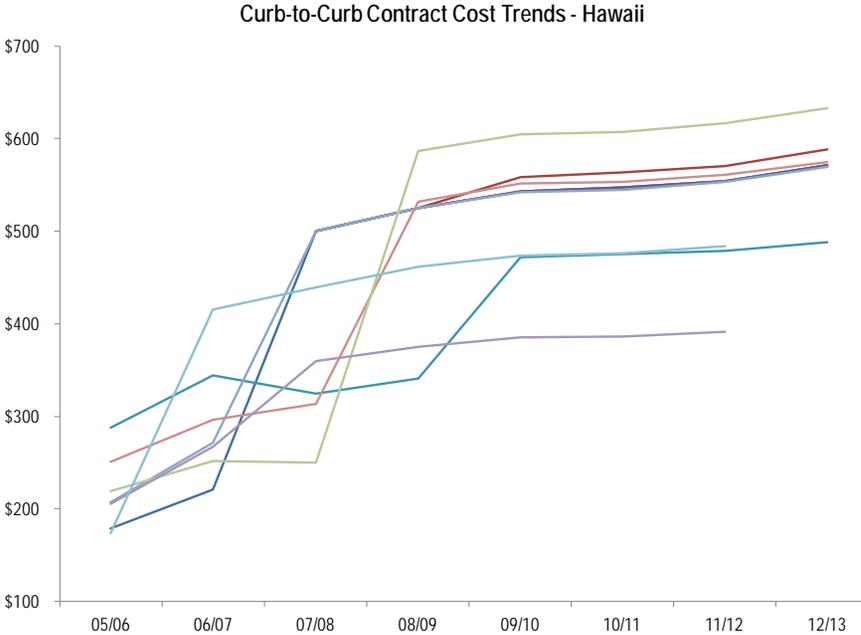
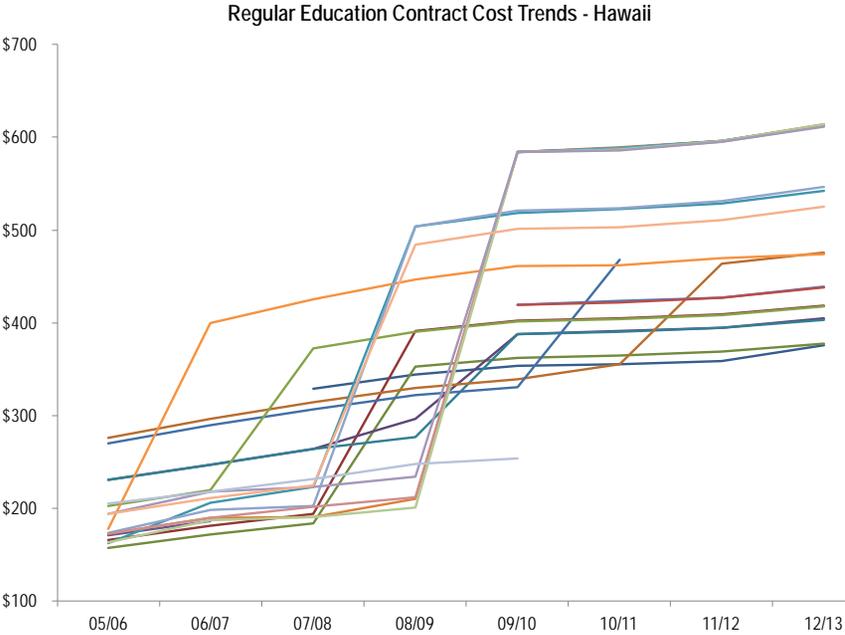
Regular Education Contract Cost Trends - Maui



Curb-to-Curb Contract Cost Trends - Maui

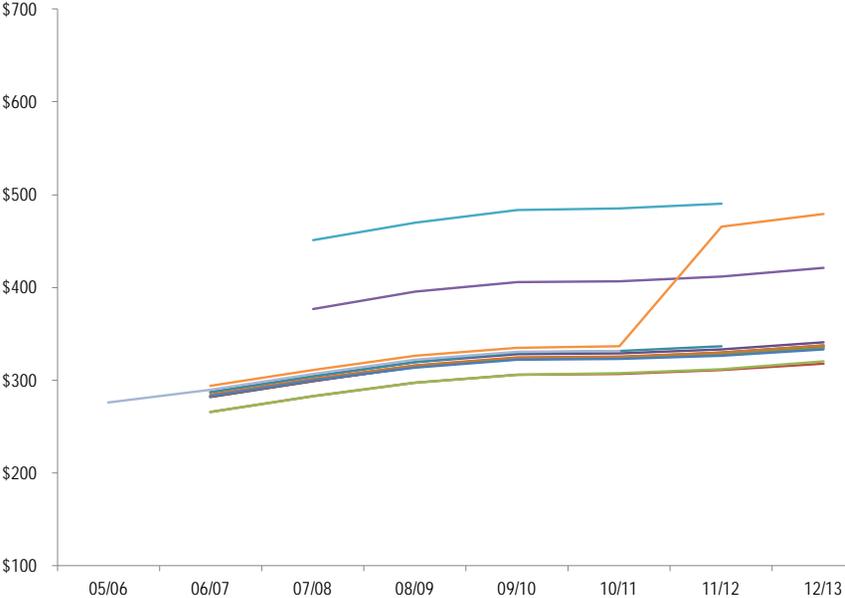


Appendix A – Cost & Service Statistics

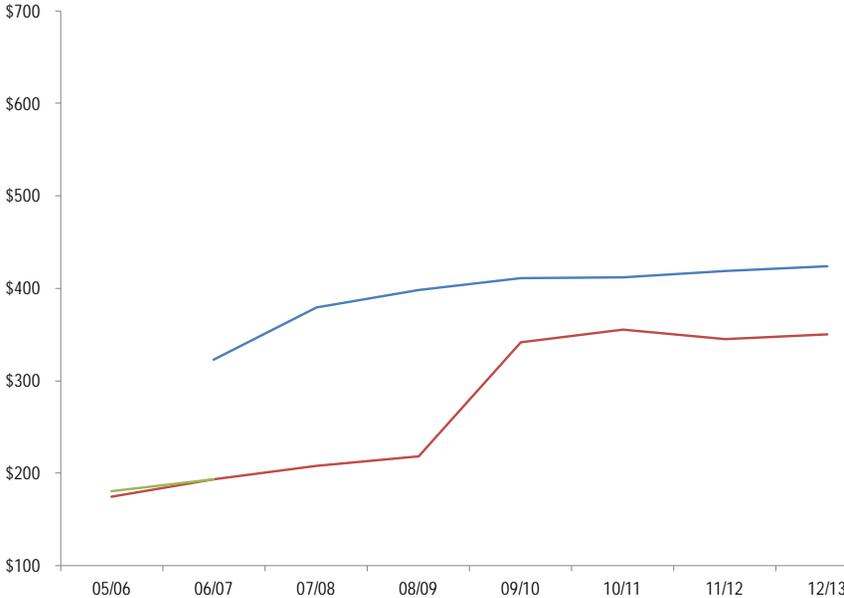


Appendix A – Cost & Service Statistics

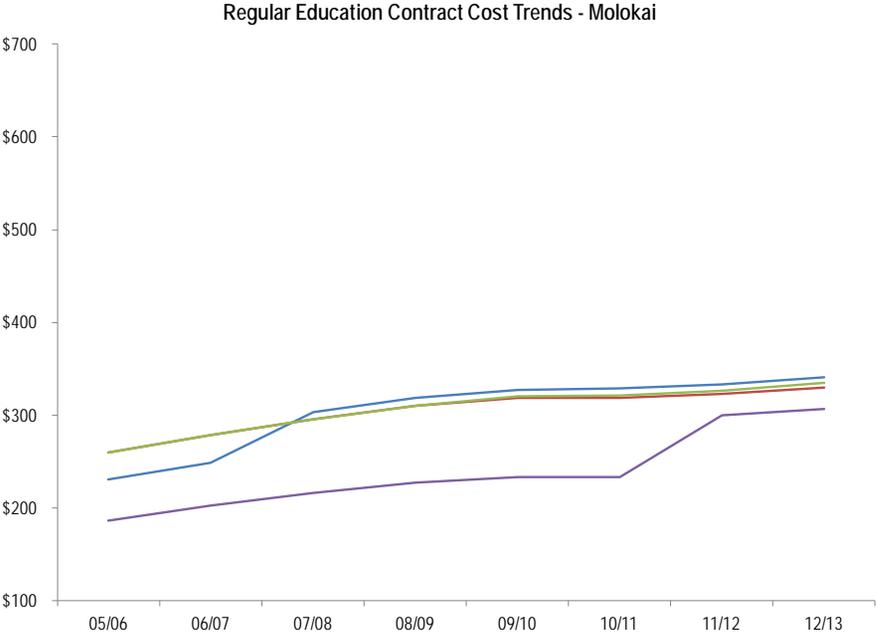
Regular Education Contract Cost Trends - Kauai



Curb-to-Curb Contract Cost Trends - Kauai



Appendix A – Cost & Service Statistics



Appendix B – Comparison District Summaries

Columbus City Schools

Operational Summary

The school district service area comprises approximately 220 square miles in central Ohio. While predominantly urban, the district also services geographic areas with lower density suburban characteristics. Transportation is provided to over 32,000 students on approximately 800 active route buses. Of these, approximately 540 are self-operated and 260 are operated by private contractors. This mixed structure evolved over time and was not a deliberate management strategy of the District. Rather, the inclusion of contracted buses was a stopgap solution to avoid constraints imposed by a hiring cap on in-house bus drivers. This mixed structure has since been ingrained as part of the transportation service delivery strategy. Service is provided to 244 educational facilities which include public, non-public, parochial, and charter schools.

Transportation services are self-managed with all managerial, operational, support, and fleet maintenance staff employed by the district. In addition to the management of in-house operations, staff is responsible for oversight of the contracted service providers. However, the primary emphasis of staff has been on the management of in-house operations. There are no regular compliance monitoring or contract performance measurement methodologies currently in place to satisfy these oversight responsibilities. The administrative organization structure consists of a Director, an Operations Supervisor, four Routing Supervisors, a router for non-public students, a field trip scheduler, a training coordinator, and two secretaries for a total of eleven employees. Technology use includes automated routing software, with in-house staff developing routes for all buses, including those operated by contractors. Operational staffing for the self-operated buses is housed at four bus depots, each of which is managed by a regional compound supervisor and supported by dedicated administrative and dispatch staffing.

Regulatory, Policy, & Funding Framework

Ohio Pupil Transportation is governed by a combination of state rules, regulations, and laws⁵ that are specific to the transportation of all students. Eligibility for transportation is based on state law as follows:

- K-8: Students who live more than two (2) miles from school;
- Grades 9 to 12: the Board may provide transportation;
- All special needs students as determined by their IEP; and
- Non-public students: must be within a 30 minute distance from the student's assigned public school.

State funding⁶ for transportation is on a reimbursed cost basis, calculated as follows:

⁵ Ohio Administrative Code: Chapter 3301-83-03 to 23 and 3301-51-10 and Ohio Revised Code: 3327- 01, 02, 10, 4511-75,76, 761, .62, 63,

⁶ Pupil Transportation Funding Formula FY10-11

Appendix B – Comparison District Summaries

- “State Share” is equal to the current expected local funding contribution or 60 percent of the average cost of the current and previous year with the larger of the two amounts provided;
- A 10 percent adjustment for meeting targeted bus capacity utilization;
- Up to a 5 percent adjustment for districts who provide high school transportation and for districts who transport grades 1 to 8 who live over 1.0 miles from school;
- Up to a 10 percent adjustment based on the number of nonpublic students transported; and
- Up to 30 percent adjustment of the difference between full funding for low wealth and low density districts.

The district generally defaults to the state requirements rather than defining a more specific local transportation policy. A School Board policy states simply that “pupil transportation management policies should be developed cooperatively by administrators and transportation personnel”. No further documentation has been developed by the administration or transportation staff. Given the challenges imposed by the absence of specific policies, the transportation system is largely unconstrained. Coupled with the District’s urban characteristics, the growth in the use of choice, magnet, and other specialized programs, and the state requirements for transportation to non-public and charter schools; results in a challenging service delivery environment.

Cost of Services

Total expenditures on transportation services for the 2009 fiscal year were \$60,375,000. This represents nine percent of the District’s annual operating budget for that year. On a unit-cost basis, these expenditures break out as follows:

Annual cost per route bus	\$85,517
Annual cost per student	\$1,546

Appendix B – Comparison District Summaries

State of South Carolina

Operational Summary

The South Carolina Department of Education is responsible for the statewide management and implementation of transportation services across the state. Each of the local school districts in the State employ their own bus drivers and supervisory staff. Local responsibilities include route development and the daily oversight of service delivery. Daily transportation is provided to approximately 655,000 students in 85 districts across the state's over 31,189 sq. miles. Service is provided using approximately 5,375 state owned buses and 318 locally owned buses (based on FY 2010) data for a total fleet of 5,373⁷ buses.

The administration of the system consists of three primary divisions; Central Office, Area Supervisors, and local bus maintenance shops. The Central Office is staffed with a Director and an administrative assistant, an Assistant Director for Business Services, an auditor, a fiscal technician, and two administrative specialists. Additional staff includes a Director of Safety and Information, two routing coordinators, a safety coordinator and a safety officer. The state is divided into five regional areas with a supervisor assigned to each area for a total of 17 Central Office and Area Supervision staff. Fleet maintenance is provided at 47 school bus maintenance facilities across the state. Each of the fleet maintenance shops are staffed by a shop foreman, clerks, and fleet technicians.

Regulatory, Policy, & Funding Framework

Transportation service parameters are determined by state level guidelines, laws, policies, and procedures⁸. Eligibility for transportation is established as follows:

- K-12: No obligation to transport student who live within 1.5 miles of their school of attendance;
- Students may be provided transportation within the 1.5 mile distance providing there is a health or safety consideration;
- Two and three year olds will be transported to their residence at the conclusion of their development programs;
- Private school students will be transported if attending a public school program under their IEP;
- Transportation may be provided to students that are considered "unescorted" and are approved;
- When funds are available, transportation may be provided to Pre-K to grade 2; and
- Special needs students as determined by their IEP.

Reimbursement for regular education service is based on the cost per minute of approved driving and preparation time. Each district receives a pro-rated share of the available funding based on the combined annualized minutes times the current minute rate for all of the LEAs in the state. Special

⁷ FY 2010 State of South Carolina - District School Transportation Financial Operating Data

⁸ Section 59-67-420 of the South Carolina Code of Laws

Appendix B – Comparison District Summaries

needs transportation is based on an allocated amount per mile to a maximum of 64 miles per operational day. Pre-school, remediation learning and alternative education transportation is distributed on a pro-rata number of total students in each of the categories from funding generated by a one percent sales tax. Based on the review of FY 2010 District School Transportation Operating Data report, the state share of transportation was approximately 45 percent. Of special note is the fact that the state purchases, maintains, fuels, and insures the entire fleet. Local districts may choose to purchase buses from local funds without reimbursement. These buses typically are for activity and athletic trips.

Cost of Services

For FY 2010 the total expenditures for regular, special needs and specialized transportation services were \$250,519,000. Approximately 55 percent or \$138,198,107 was funded by the local districts with \$112,320,992 funded by the state. The breakout of these costs is as follows:

Annual cost per route bus	\$46,626
Annual cost per student	\$705

Appendix B – Comparison District Summaries

Spokane Public Schools

Operational Summary

The Spokane Public School District is the largest district in the eastern area of Washington and the second largest in the state. District enrollment is approximately 29,300 students of which approximately 800 special needs and 6000 regular education students are transported on a daily basis. Transportation is provided to the district's 34 elementary, 6 middle, and 5 high schools plus transportation to special needs programs located in over five additional schools or centers.

Service delivery is 100 percent contracted to single service provider. Transportation services are managed by district staff responsible for the oversight of transportation services including contractor management and customer service. The administrative organization structure consists of a Director, a secretary, and two Transportation Liaisons with one each dedicated to special and regular education transportation services for a total of four employees. The routes are planned by the contractor using an automated route planning system. Documented regulations establishes the responsibility of the contractor in the route planning process and also district staff to ensure that route and run planning is cost effective.

Regulatory, Policy, & Funding Framework

Eligibility for transportation is based on locally adopted policies consistent with state laws

- K-12 regular education students are transported providing they reside more than one radius miles from their assigned school; and
- All special needs students as determined by their IEP.

In addition to eligibility definitions, the district has developed a comprehensive array of regulations, procedures and manuals that helps to ensure that the stakeholders of the system understand their responsibilities.

State funding for transportation is on a reimbursed cost basis based on the following:

- Basic (regular education) and special student counts;
- Average distance to school; and
- The number of locations served.

Cost of Services

For FY 2012 approximately \$9,488,000 was budgeted for transportation services. This represents three percent of the total district expenditures of \$313,302,780. On a unit-cost basis, these expenditures break out as follows:

Annual cost per route bus	\$64,100
Annual cost per student	\$1,395

Appendix B – Comparison District Summaries

Danville and San Ramon

Operational Summary

Beginning in August of 2009, a fee-for-service transportation service was introduced to the Town of Danville and the City of San Ramon for regular education students attending selected schools in the San Ramon Valley Unified School District. Transportation is provided by Traffix, which is jointly operated by the Town of Danville, the City of San Ramon, Contra Costa County, and the San Ramon Valley Unified School District. The cost of service is partially funded by Contra Costa County Measure J. Measure J was approved by the voters in 2004 which levies a ½ cent sales tax within the county. The sole purpose of Measure J was to fund traffic congestion mitigation projects as a result of parents driving their students to and from school. Following the discontinuation of home to school transportation services by the San Ramon Valley Unified School District in 2007, seven schools were selected to receive service. The analysis of traffic volumes and intersection congestion found that providing services to these schools represented the best opportunity to reduce school related traffic in each of the communities.

Currently, services are provided to nine schools within the county. This includes 2 high, 2 middle, and 5 elementary schools. Approximately 1,250 students are transported daily on 18 route buses⁹. The daily operation is monitored by a contracted Program Manager who reports directly to the Board of Directors. The Board of Directors is comprised of members of each of the participating governmental entities and charged with the responsibility for setting policy. Service is provided by a single bus contractor. The contractor was chosen based on formal bid process that included cost, experience, and the type of equipment. The contractor is currently responsible for the development of the runs and routes under a review by the Program Manager.

Regulatory, Policy, & Funding Framework

Eligibility for transportation is limited to the schools currently identified as presenting the best opportunity for reducing traffic within the communities. A yearly pass (fee-for-service) is currently \$275 per student with a reduction to \$200 if parents register for service before the end of the school year.

Funding for the program is from a combination of the revenue generated by Measure J, the fee-for-service, and other funds. The expected year end FY 2012 revenue from Measure J¹⁰ is \$1,251,400 while the fee-for-service will generate approximately \$261,177. Funding from additional sources totals \$65,000 providing the initiative with a total available of approximately \$1,691,385. Approximately \$318,000 of the total available FY2012 is being added to a reserve account for the future expansion of service. Services are evaluated on an annual basis to determine the viability and benefit of adding additional schools.

⁹ Traffix website and interview with the Program Manager

¹⁰ Contra Costa Transportation Authority – Staff Report June 20, 2012

Appendix B – Comparison District Summaries

Cost of Services

Based on the total available for service (revenues minus the reserved amount) of \$1,373,370 the breakout of costs for service is as follows for FY2012:

Annual cost per route bus	\$76,300
Annual cost per student	\$1,098

Appendix B – Comparison District Summaries

State of Rhode Island

Operational Summary

The Statewide Student Transportation System (SSTS) provides out-of-district, statewide transportation across the state's 1,545 sq. miles. Service is provided to students attending special needs programs and students attending private, charter, career, and technical programs outside of their home districts. Approximately 900 special needs and 2,600 private and charter school students are transported daily on over 200 route buses. Service is provided to 133 schools across the state. This is considered the first phase¹¹ of a plan to create a single statewide system for the transportation of all students. The impetus for the creation of a statewide system included reducing the inherent inefficiencies of multiple districts transporting students within a limited geographical area and the reduction of costs.

The administration of the system is outsourced to single management company that is responsible for the logistical planning of services and for the monitoring of the services provided by a single bus contractor. Each of these contracts was awarded within the confines of a competitive bidding process. The administrative organization structure consists of a General Manager, an operations assistant for special needs, a router for private and charter schools, a customer service representative, and an accounting specialist. The use of technology includes automated routing software and access to the GPS systems that are installed on all of the contractor's buses. The monitoring of actual run paths available from the GPS system along with management practices of annual route audits and regular student and mileage counts helps to ensure that that system is operating as effectively and efficiently as possible.

Regulatory, Policy, & Funding Framework

Eligibility for transportation by SSTS is determined by state law¹² as follows

- Pre-kindergarten students are not eligible for transportation;
- Students must reside in one of the participating districts;
- Regular education students will only be transported within their designated region; and
- Regions do not apply to special education students.

As established by state law¹³, the cost for transportation services by the statewide system are based on a fee-for-service basis for each of the service purchasing districts. District that currently own their own buses and employ their own drivers have the option to be exempt from the purchase of services.

¹¹ Office of Statewide Efficiencies

¹² General Laws 16-21. 1-7 and 16-21. 1-8 of the General Laws in Chapter 16-21.12

¹³ General Laws 16-21. 1-7

Appendix B – Comparison District Summaries

Cost of Services

Total expenditures for special needs transportation services for the 2012 fiscal year were \$11,389,423. On a unit-cost basis, these expenditures break out as follows:

Annual cost per special needs route bus \$46,402

Cost per special needs student \$12,614

Appendix B – Comparison District Summaries

Howard County Public School System

Operational Summary

The Howard County Student Transportation Services Branch serves an area of approximately 250 sq. miles with a combination of dense urban/suburban areas and areas with rural attributes. Transportation is provided to almost 41,000 students on approximately 315 regular education and 121 special needs buses to the District's 74 schools and the non-public and parochial schools across the county. The Department is comprised of a Director, Payroll/Business Manager, six Area Managers, two driver trainers, a Router, and three administrative support and secretaries for a total of 14 employees.

Service delivery is 100 percent contracted to approximately 55 service providers. The Department is responsible for the oversight of all transportation related activities including route planning, the bidding of operator contracts, monitoring of contractor performance, and driver training. The route planning process benefits from the use of Transfinder routing software and the established procedures for the testing and validation of run paths and times. The policies and implementation procedures for the bidding and awarding of contracts (to service providers) are well defined and documented¹⁴. Key components of the bidding and award process includes the staggering of contract expiration dates, established criteria for the award of the contracts, and the ability to fairly distribute the routes to contractors based on geographical considerations. Also well-defined are the performance and compliance standards for service providers. To support and ensure driver compliance and student safety, the Department provides all pre and periodic training for all drivers providing service. Additionally, the Department oversees and monitors the State mandated bus inspection processes.

Regulatory, Policy, & Funding Framework

Transportation in the State of Maryland is governed by the MD Annotated Code (Education) and the Code of Maryland Regulations (COMAR) 13A.06.07. Transportation eligibility (determined by local adopted policies) is established as follows:

- Half-day Pre-Kindergarten morning, noontime and afternoon: 0.5 mile;
- Half-day Kindergarten, morning and afternoon: 1.0 mile;
- Half-day Kindergarten noontime: 0.5 mile;
- Full-day Kindergarten through Grade 8: 1.0 mile;
- Grades 9 through 12: 1.5 miles; and
- Special needs students as determined by their IEP.

Funding for student transportation is based on the amount of the previous year's grant with an adjustment that considers the change in the Baltimore area consumer price index for private transportation. Additional funding is allocated to off-set the cost of providing transportation for special

¹⁴ HCPSS Policy 5220 School Bus Contracts and School Bus Personnel

Appendix B – Comparison District Summaries

needs students. For the 2010/2011 school year, reported¹⁵ expenditures totaled \$32,992,983 with a State Aid off-set of \$14,681,349.

Cost of Services

Total budgeted expenses for the 2010/2011 school year were approximately \$33,000,000 or almost five percent of the District's \$675,347,650¹⁶ annual operating budget. The unit costs for these expenditures break out as follows:

Annual cost per route Bus	\$76,200
Annual cost per student	\$676

¹⁵ State of MD "Fact Book": MD Pupil Transportation: 2010-2011

¹⁶ HCPSS Fiscal 2011 Approved Budget

Appendix B – Comparison District Summaries

Chesterfield County Public Schools

Operational Summary

Transportation is provided to an area consisting of approximately 437 square miles in the eastern area of the Commonwealth of Virginia. The population of Howard County is approximately 316,250 (2010 Census) making it the fourth-largest municipality in Virginia. Student enrollment is almost 59,000 with approximately 40,000 regular education and 1,000 special needs students transported on over 500 daily route buses. Service is provided to the County's 62 educational facilities and unlike many states across the country, Virginia school districts are not required to transport private or parochial students.

Transportation services are self-operated for the delivery of services. All management, support staff, and drivers are employees of the system. The administrative organization structure consists of a Director, an Associate Director, an Assistant Director of Training and Safety, six Area Operations Assistant Directors, twelve Coordinators, six Office Managers, and an Administrative Assistant for a total administrative staff of 28 employees. The driver core includes over 525 drivers, substitute drivers, and driver/trainers. Somewhat surprising (given the number of students transported and the size of the area served), route planning relies on manual process without the benefit of automated routing software. This is due in part to predominance of neighborhood schools, static stop locations, and traditional feeder patterns to secondary schools. Fleet maintenance services are outsourced under a memorandum of understanding (MOU) with Chesterfield County. The MOU comprehensively defines the level of services that are to be provided and establishes the necessary legal framework for inter-governmental cooperation.

Regulatory, Policy, & Funding Framework

Virginia Administrative Code (8VAC20-70) defines the criteria under which transportation will be provided and sets the policy framework for districts in the development of local policies. The Chesterfield Board of Education¹⁷ has defined eligibility as follows:

- Elementary students (under age 10): over two miles in distance;
- Middle and high school students (over age 10): over two and one-half miles; and
- Special transportation will be provided to students with disabilities.

State funding for transportation is based on a formula that includes:

- Districts are grouped according to student density with reimbursement based on the weighted average cost per for both regular education and special needs students;
- Special arrangements (e.g., taxi or parent transport) are calculated based on one statewide prevailing rate per pupil; and
- Reimbursements for students using transit buses are based on the regular education prevailing rate multiplied by the number of students transported.

¹⁷ School Board Policies – 7160 Pupil Transportation

Appendix B – Comparison District Summaries

Cost of Services

For FY 2010¹⁸, \$27,859,000 was budgeted for transportation out of an operating budget of \$571,630,000. This represents five percent of the annual operating budget. On a unit-cost basis, these expenditures break out as follows:

Annual cost per route bus	\$56,066
Annual cost per student	\$679

¹⁸ FY 2012 Approved Financial Plan