Anne Arundel County Public Schools Transportation Services Review

March 10, 2020
Presentation Outline

• Review Team and Process
• AACPS Commendable Areas
• AACPS Challenge Areas
• Findings and Recommendations
• Estimated Costs and Savings
• Next Steps
Prismatic Team

- 2 former school district transportation directors
- 2 current school district transportation directors
- 6 consultants with detailed experience in a variety of school transportation routing software packages
- 1 current GIS Analyst and Supervisor of Routing in a similarly sized district
- 1 former Deputy Project Manager for the Maryland Transit Administration
- 1 licensed architect who is also a Professor Emeritus of Architecture
- 1 former commercial routing system Lead Algorithm Manager
- 1 CPA who is also a registered School Business Administrator
- 1 consultant with a doctorate in educational leadership who also has an MBA
Review Process

- Advance Visit
- Data Collection
- Surveys
- Onsite Work
- Draft Report
AACPS Commendable Areas

- Driver training
- Athletic trip process
- Co-curricular busing
- Walk zone policy
- Vehicle maintenance
- Contractor pay system
AACPS Challenge Areas

- Lack of procedures
- Legacy ways of work
- Lack of technology
- State environment
- School Start Times
Leadership Areas

School Start Times

1. School Start Times – Rec 27
2. Request changes in COMAR – Rec 1
3. Require min hourly wages in next bus contracts – Rec 15
4. Plan for new AACPS transportation facilities – Recs 20 & 21

State environment
Leadership Areas

School Start Times

1. School Start Times – Rec 27

“...the evidence strongly implicates earlier school start times...as a key modifiable contributor to insufficient sleep.”

-- American Academy of Pediatrics, 2014

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Runs</td>
<td>563</td>
<td>554</td>
<td>560</td>
</tr>
<tr>
<td># of Tiers</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Average # of Students per Bus</td>
<td>33</td>
<td>50</td>
<td>39</td>
</tr>
<tr>
<td>Total Morning Trip Mileage, miles</td>
<td>16.1k</td>
<td>10.4k</td>
<td>14.5k</td>
</tr>
</tbody>
</table>

Source: Prismatic, November 2019
Leadership Areas

School Start Times

Exhibit 3-57
Comparison of Trip Durations in Minutes

Current Trips

Proposed Trips

Source: Prismatic, November 2019
Leadership Areas

State environment

2. Request changes in COMAR – Rec 1

We don’t have hard data that school buses are the safest transportation.

Your transportation budget is 5.0% of the overall operating budget.

We recommend that you work with county government officials to request legislative changes in COMAR to allow the use of small passenger vans for student transport and to allow the use of on-demand hired private cars for student transport. Both are already being done in districts in other states.
Leadership Areas

3. Require min hourly wages in next bus contracts – Rec 15

2019-20 Minimum Rate of Pay Reported by Contractors

- Minimum: $15.02
- Average: $24.32
- Maximum: $33.59
Leadership Areas

4. Plan for new AACPS transportation facilities – Recs 20 & 21

State environment
Multi-Department Leadership Areas

1. Establish clear processes for field trip requests – Rec 19
2. Develop a strategic recruitment plan – Rec 5
3. Review & revise job descriptions – Rec 6
4. Enforce contract provisions – Rec 16
5. Develop quarterly and annual assessments of performance measures – Rec 8
6. Improve organizational structure – Rec 3
7. Offer contractors incentives – Rec 17
8. Digitize paper files – Rec 12
9. Amend purchasing cycle of next software upgrade – Rec 14
Multi-Department Leadership Areas

Lack of procedures

1. Establish clear processes for field trip requests – Rec 19
2. Develop a strategic recruitment plan – Rec 5
3. Review & revise job descriptions – Rec 6
4. Enforce contract provisions – Rec 16
Multi-Department Leadership Areas

Lack of procedures

4. Enforce contract provisions – Rec 16

**Buses arrive and depart on time each day.**

| School Admin | 3% | 33% | 3% | 43% | 17% |

**This year so far at your school, how often is at least one bus late in arriving in the morning?**

| School Admin | 34% | 31% | 3% | 30% | 1% |
Multi-Department Leadership Areas

Lack of procedures

4. Enforce contract provisions – Rec 16

**Last year, how often did bus combining/splitting happen?**

- School Admin:
  - Almost Never: 54%
  - Few Times a Month: 20%
  - Once a Week: 4%
  - Several Times a Week: 16%
  - Don’t Know: 5%

**Last year, how often did a bus make a double run?**

- School Admin:
  - Almost Never: 70%
  - Few Times a Month: 17%
  - Once a Week: 5%
  - Several Times a Week: 8%
Multi-Department Leadership Areas

5. Develop quarterly and annual assessments of performance measures – Rec 8

6. Improve organizational structure – Rec 3
5. Develop quarterly and annual assessments of performance measures – Rec 8

We Recommend These Metrics

<table>
<thead>
<tr>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per Mile Operated</td>
</tr>
<tr>
<td>Cost per Bus</td>
</tr>
<tr>
<td>On-Time Performance – Morning</td>
</tr>
<tr>
<td>On-Time Performance – Afternoon</td>
</tr>
<tr>
<td>Accidents – Miles Between Preventable Accidents</td>
</tr>
<tr>
<td>Daily Ride Time – General Education</td>
</tr>
<tr>
<td>Daily Ride Time – SWD Students</td>
</tr>
<tr>
<td>Service Complaints</td>
</tr>
</tbody>
</table>
6. Improve organizational structure – Rec 3

Add 3 positions to strengthen GIS/Routing/Technical staffing in the department
Multi-Department Leadership Areas

Lack of technology

7. Offer contractors incentives – Rec 17
8. Digitize paper files – Rec 12
9. Amend purchasing cycle of next software upgrade – Rec 14
Multi-Department Leadership Areas

Lack of technology

7. Offer contractors incentives – Rec 17
Multi-Department Leadership Areas

Lack of technology

8. Digitize paper files – Rec 12
9. Amend purchasing cycle of next software upgrade – Rec 14
**Transportation Department Areas**

1. Develop and implement a cross-training policy – Rec 2
2. Provide ASE training for all interested bus mechanics – Rec 4
3. Write salary placement rules – Rec 7
4. Develop a SOP manual – Rec 9
5. Identify, analyze, and redesign major transportation processes – Rec 10
6. Create automated workflow for TARs – Rec 13
7. Require weekly bus counts – Rec 18
8. Adopt online systems for communications – Rec 11
9. Improve routing methodology – 24
10. Establish a consistent route planning process – Rec 22 & 25
11. Develop written rules/guidelines for routing – Rec 23
12. Improve sped routing – Rec 26

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**Lack of procedures**

**Legacy ways of work**

**Lack of technology**
Transportation Department Areas

Lack of procedures

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Transportation Department Areas

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Last year, this process impacted 600 out of 1,308 homeless students.
Transportation Department Areas

7. Require weekly bus counts – Rec 18

![Bar chart showing Regular Education Morning Bus Drop-offs by Number of Students on the Bus]

The chart illustrates the distribution of morning bus drop-offs by the number of students on the bus, categorized by the number of students dropped at school. It indicates a peak in the number of buses used to transport students between 36 to 45, followed by a significant drop in the number of buses used for larger groups of students.
8. Adopt online systems for communications – Rec 11
9. Improve routing methodology – Rec 24
10. Establish a consistent route planning process – Rec 22 & 25
11. Develop written rules/guidelines for routing – Rec 23
12. Improve sped routing – Rec 26
Transportation Department Areas

Lack of technology

8. Adopt online systems for communications – Rec 11

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>SCHOOL</th>
<th>BUS</th>
<th>INFORMATION</th>
<th>UPDATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/14/19</td>
<td>6:35AM</td>
<td>Special needs</td>
<td>140</td>
<td>In spare bus #289</td>
<td></td>
</tr>
<tr>
<td>11/18/19</td>
<td>6:19AM</td>
<td>CHS, MES, SLES</td>
<td>121</td>
<td>In spare bus #269</td>
<td></td>
</tr>
<tr>
<td>11/20/19</td>
<td>6:15AM</td>
<td>CHS, CMS, MES, SLES</td>
<td>118</td>
<td>In spare bus #296</td>
<td></td>
</tr>
<tr>
<td>11/25/19</td>
<td>6:10AM</td>
<td>HHS, PPMS, PPES, HES</td>
<td>128</td>
<td>In spare bus #210</td>
<td></td>
</tr>
<tr>
<td>11/26/19</td>
<td>7:21AM</td>
<td>CMS</td>
<td>79</td>
<td>In spare bus 295 and running approx 25 min late to CMS.</td>
<td></td>
</tr>
<tr>
<td>11/26/19</td>
<td>1:47PM</td>
<td>HHS, PPES, BES</td>
<td>29</td>
<td>In spare bus 280 this PM.</td>
<td></td>
</tr>
</tbody>
</table>

THIS INFORMATION IS ONLY AVAILABLE FOR BUSES THAT ARE AT LEAST 10 MINUTES LATE OR FOR UNUSUAL SITUATIONS.
Transportation Department Areas

Lack of technology

8. Adopt online systems for communications – Rec 11
Transportation Department Areas

Lack of technology

Routing, routing, routing.

We need:
- centralized route planning within the department
- a schedule of route planning events
- routing guidelines regarding bus occupancy rates and length of ride time
- assignment of students to bus stops
- SPED routing in the system
Costs and Savings

Overall:
• 27 recommendations
• 7 recommendations with estimated fiscal impacts
  • 5 places to spend
  • 2 places to save
Next Steps

• Some already taken

• Recognize that change is hard

• Prioritize the recommendations

• Plan to be on the path for 2-3 years

• Recognize that the path has options
Questions?

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