SCHOOL DISTRICT OF JEFFERSON COUNTY PUBLIC SCHOOLS

AN ASSESSMENT OF THE TRANSPORTATION PROGRAM AND THE TRANSPORTATION ACTIVITIES OF AUGUST 9, 2023

PHASE 1 REPORT

JCPS

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Chapter 1
Introduction

In October 2024, Jefferson County Public Schools (JCPS) contracted with Prismatic Services to undertake an assessment of the transportation activities of August 9, 2023 (Phase 1) and the transportation program (Phase 2). The district termed the transportation activities of August 9, 2023 as "the Incident." As noted in the district's request for proposals (RFP), the goals of Phase 1 were to:

- *Perform a comprehensive analysis of the Incident*
- *Identify and assess the conditions that gave rise to the Incident. This may include, but not be limited to, an assessment of:*
  - *Project Management*
  - *System Implementation*
  - *Personnel Competency*
  - *Organizational and Community Communications*
- *Provide recommendations to address the conditions that gave rise to the Incident.*
- *Provide commentary regarding the potential for conditions that gave rise to the Incident and any related root cause analysis to impact other aspects of JCPS operations.*

This report is provided in fulfillment of Prismatic's contract for Phase 1. It is important to note that JCPS voluntarily undertook this work.

Project Approach

Prismatic proposed and followed a 5-task work plan to meet the district's requirements for Phase 1:

1. Initiate Project and Phase 1
2. Collect Incident background information

3. Conduct Phase 1 investigation
4. Draft Phase 1 report
5. Develop and present Phase 1 final report

Throughout Phase 1, Prismatic coordinated with the JCPS director of internal audit to discuss activities completed, review challenges or changes in project progress, review activities scheduled, and review upcoming project products and deadlines. Project activities occurred from October 2023 through January 2024. Data analysis and report writing occurred from October 2023 through February 2024.

Thoroughly identifying and analyzing the root causes of the Incident required reviewing district plans and actions going back several years (and in some cases, decades). Prismatic recognized that 3 separate initiatives were pursued and implemented on the first day of school in 2023-24:

- School Choice Initiative (SC) – the rollout of a new student assignment plan that gave families different school choices than they previously had
- School Start Time Initiative (SST) – termed "Start Smart" by JCPS, the development of new school start times in recognition of the latest sleep science but also in response to the district's bus driver shortage
- Routing Optimization Initiative (RO) – this included the use of new software tools to attempt to improve route efficiency so that fewer bus drivers would be needed

The 3 initiatives can be thought of as 3 strands of a braided rug. Each strand is essential for building the rows of the rug as they overlap and are entwined together. Some rug strands may be more prominent and stand out more than others. For JCPS, the SC and SST initiatives were the more visible changes to district leadership and the community at large. Implementation of them both though, relied upon the 3rd strand, the RO initiative, in order to reduce the number of required bus drivers and get students to school on time. Consideration and discussion of just 1 initiative without awareness of the impact of the other 2 initiatives would ignore critical connections between developments leading up to the Incident and what became perhaps a Gordian knot for JCPS. In chapters 2-4 of this report, Prismatic has endeavored to analyze the impact of each initiative individually upon the Incident but recognizes that the relationship between them is complex.

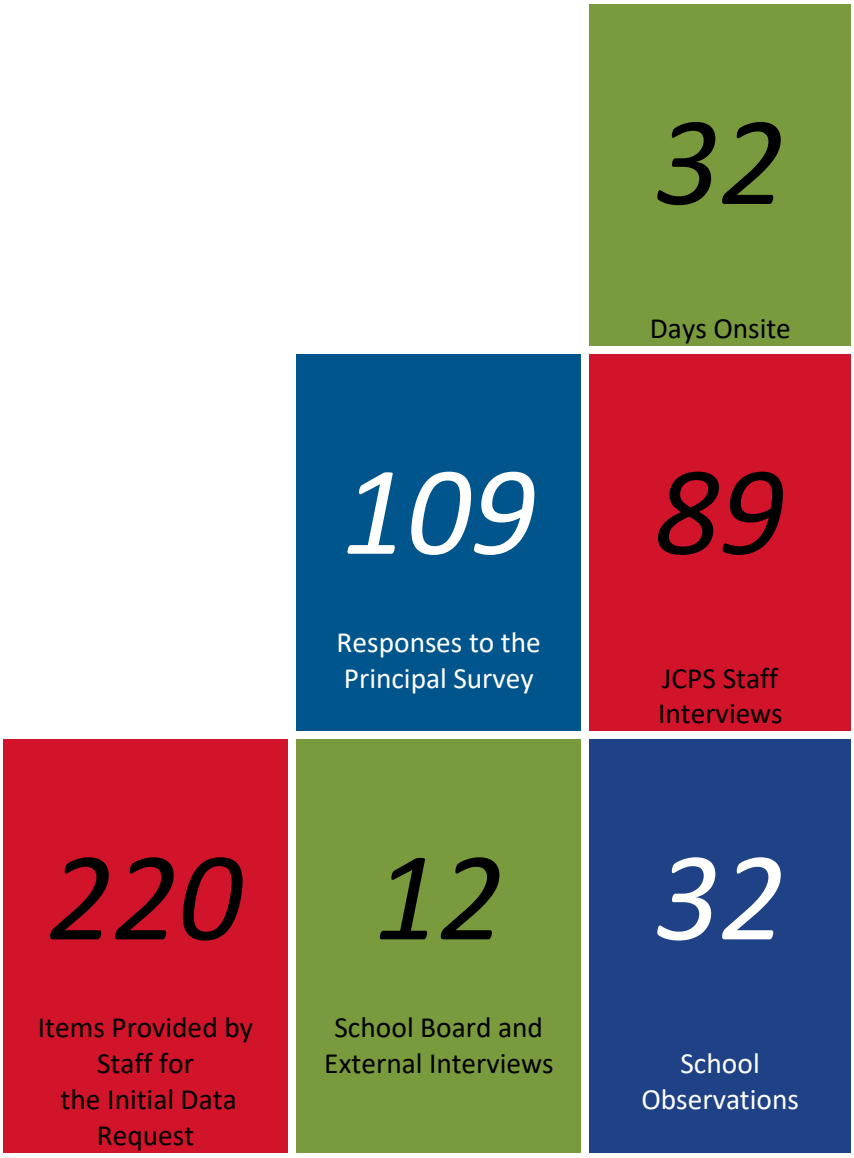
Timeline of Key Dates Leading Up to 2022-23 School Year

Date	JCPS Activity	Related to Which Initiative
2010-11	JCPS contracts with a vendor for a bell time study. The study recommends a move to a 3-tier bell schedule. No change made to the existing 2-tier schedule.	SST, RO
2015-16 through 2018-19	JCPS contracts with a vendor for bus routing software.	RO
2017	A Kentucky DOE Audit of JCPS is conducted. One of its recommendations: ♦ "analyze bus routes (including double runs) for the most efficient and effective solution to the transportation challenges."	RO
October 2017	Student Assignment Review Advisory Committee is formed.	SC
November 2019	JCPS contracts with a vendor for student assignment plan consulting.	SC
November 2020	A Kentucky DOE Audit of JCPS is released. Two of its recommendations: ♦ "develop a process that allows the transportation department to be included in discussions around school choice and student assignment." ♦ "develop a recruitment plan to ensure the district has enough bus drivers and monitors to support the school choice opportunities."	SC, RO
December 2020	School Board given presentation on the DOE Audit and the JCPS Corrective Action Plan. No details are provided related to the 2 preceding transportation recommendations.	SC, RO
April 2021	School Board given presentation on school start times changes as a method to improve student achievement.	SST
June 2021	JCPS contracts with a vendor for bell time and bus routing optimization consulting. Plan includes changing bell times for at least some JCPS schools for 2022-23 school year.	SST, RO
August 2021	School Board given presentation on the bus driver shortage, noting that the district has eliminated ~200 bus routes in the previous 6-7 years.	RO
February 2022	School Board given presentation bus driver shortage, bell times, and research on benefits of later school start times for older students.	SST, RO
March 2022	School Board given presentation on start times that includes 2 phases for new bell times and bus routing. Phase 1 includes moving a "small number of schools" to a 9:55 am start in August 2022.	SST, RO
April 2022	School Board given presentation on school choice proposal.	SC

Date	JCPS Activity	Related to Which Initiative
Spring 2022	District abandons idea of changing some school start times in August 2022, in favor of a more "comprehensive," full scale roll-out of all 3 initiatives in August 2023.	SC, SST, RO
June 2022	New School Choice plan approved.	SC

As part of this project phase, Prismatic:

- interviewed 6 school board members
- collected data from the district in response to an initial data request of 55 items, then additional data items as the study progressed
- completed 101 interviews, most with district staff (some staff were interviewed multiple times)
- visited 32 schools to observe morning bus drop-offs or afternoon bus pick-ups; these visits sometimes included short, informal interviews with principals/other staff
- administered a principal survey that received 109 responses
- spent a total of 32 days onsite across all Prismatic staff, conducting interviews, completing transportation observations, and reviewing data in technology systems
- developed draft and final reports



Project Limitations

All projects of this nature have time and resource constraints. Beyond those typical constraints, this project had these limitations:

- A portion of district interviewees expressed concerns regarding confidentiality. A few either explicitly or tacitly expressed concerns about retaliation if their interview responses were shared with district staff. A few were reluctant to share data items for the same reason. In Prismatic's experience, the number of interviewees expressing these types of concerns was higher than usual.

- Because prior events impacted what became known as the Incident, Prismatic asked some interviewees to recount district activities from years ago. Few district staff reported having kept written notes regarding meetings, events, or reasoning behind decisions made. This was true of recent and historical events, so interviewees sometimes had to rely solely upon memories. In some cases, district staff members could not recall specifics. In other cases, district staff could remember specifics, but did not have documentation to support them.

Report Organization

The remainder of this report is organized as follows:

- Chapter 2 - School Choice Initiative Findings
- Chapter 3 - School Start Time Initiative Findings
- Chapter 4 - Routing Optimization Initiative Findings
- Chapter 5 - Financial/Procurement Findings
- Chapter 6 - Multi-area Findings
- Chapter 7 - Conclusions
- Appendices

Chapter 2

School Choice Initiative

Background

Jefferson County Public Schools (JCPS) has a long history of offering students and parents school choice. Jefferson County Schools desegregated in 1965. In 1975, Jefferson County and Louisville City Schools merged. At that time, as mandated by the federal District Court, the Alphabet Plan emerged and assigned students to schools based on their address, grade, race, and the alphabet letter of the student's last name. At that time, all schools, except those with special purposes, desegregated using mandatory busing. Certain students from the east and south ends attended west end schools, and students from the west attended schools in the east and south.

In 1984, with input from the community and stakeholders, the Student Assignment Plan changed. School attendance zones were redrawn so that students could attend the same school zone throughout middle and high school. Mandatory busing ended for the east and south ends of the district but continued for the students living in the west end of the district. The modification created the first stage of the West Louisville satellite area.

The Kentucky Education Reform Act (KERA) of 1990 caused JCPS to make modifications to the Student Assignment Plan. In 1991, the Alphabet Student Assignment Plan ended, and Project Renaissance began. Project Renaissance removed automatic school changes in the elementary grades to provide stability for students. Through this plan, students applied for schools or programs of their choice and were assigned according to school capacity, racial guidelines, and admission criteria for some schools. In addition, the idea of elementary school clusters began. In 1995, the district conducted another review of their Student Assignment Plan. The district sought public input and solutions. The district then changed its guidelines again to require 15-50% of school enrollment to be Black students.

In 2000, Judge Heyburn dissolved the original desegregation decree and banned the use of racial quotas at Central High School, then ordered the district to develop new admission procedures for magnet schools before the 2002-03 school year. The plan focused on "managed choice" and allowed student school assignments based on elementary clusters, magnet schools using criteria, open enrollment at high schools, and via transfers.

After yet another court case in 2007, JCPS stopped making student assignments based solely on race. In 2008, JCPS created a new student assignment plan that divided the district into 2 geographic areas based on the minority population, average household income, and average education level of parents. Each school had to have between 15 and 50% of its population consisting of students from zones with minority populations that were higher than 48%. Elementary schools regrouped into regional clusters at that time. With each change in the Student Assignment Plan came a change in the guidelines. The district definition of minority changed for policy purposes from "Black students" to "all students who are non-white." **Exhibit 2-1** provides the minority population guidelines required.

Exhibit 2-1
Minority Guidelines for Schools

Level	1975	1984	1991	2001
Elementary	15% - 50%	23% - 43%	15% - 50%	15% - 50%
Middle	15% - 50%	22% - 42%	16% - 46%	15% - 50%
High	15% - 50%	18% - 38%	12% - 42%	15% - 50%

Source: *JCPS, 2023*

In 2009, the JCPS school board approved new MS and HS boundaries, but delayed implementation after reviewing a report on the new boundaries. The new boundaries utilized guidelines around student diversity as an attempt to provide a balance at each MS/HS.

The district contracted with an external consultant to study the Student Assignment Plan in 2011 to analyze the balance of diversity throughout the district, and transportation services available for each cluster. Findings included:

- elementary clusters were large
- there were long transportation times
- 40% of schools did not meet the diversity guidelines previously established

In 2012, after seeking community input and studying the consultant's recommendations, the school board made new changes:

- developed a new definition of diversity for schools which included three categories based on median household income, race/ethnicity, and the average education of adults in the household
- created new diversity guidelines based on weighted averages
- added English as Second Language (ESL) in each elementary school's diversity index
- adjusted student assignment processes for Kindergarten students
- adjusted diversity index calculations for middle and high schools to include by grade level within each middle and high school

By the 2011-12 school year, new MS boundaries began; by 2012-13, new HS boundaries began. Students impacted by boundary changes were "grandfathered in" and allowed to remain at their current school. The decision to grandfather certain students and reclassify schools mitigated the potential disruptions caused by boundary changes. Grandfathering allowed students to maintain their current educational environment.

Throughout the boundary change process, some schools reclassified as magnet schools, and opened to students throughout the district. Over time, JCPS recognized certain magnet schools were not true to the Magnet Schools of America standards and were not attracting students from across the district. To address these issues, JCPS took corrective measures, including changing a total of 17 schools back to traditional schools, closing schools, or reinventing them.

School boundaries went through multiple adjustments from 2012 to 2022 in response to changes in residing population, as well as a restructuring of schools and their purpose. The primary focus of these changes was to address the evolving needs of students. The fact that boundaries changed multiple times highlights the dynamic nature of educational planning. These adjustments likely responded to shifts in population distribution and changes in the educational landscape. Allowing students to remain at their originally assigned school during boundary changes became a customary practice in JCPS. This practice minimized disruptions for students and families, providing them with continuity in their educational experiences despite changes in the school or boundary structure. The practice of allowing students to remain at their originally assigned school until transitioning to the next level often left families with multiple choice options. This flexibility in school assignments empowered families to make decisions that best suited their preferences and circumstances.

Student Assignment Plan – 2023-24

The Student Assignment Review Advisory Committee (SARAC) originated in 2017 with the purpose of providing advice and input for the student assignment plan. According to the JCPS website, during monthly meetings, the committee was charged with a focus on "ensuring that the district plan is consistent with the vision, mission, and core values of the JCBE." SARAC had representation from the multiple groups and departments:

- Data Management
- Student Assignment (2)
- Demographics
- Diversity, Equity, and Poverty (3)
- Operations
- Academics
- Director of Strategy
- Elementary School Principals (3)
- Middle School Principal
- High School Principal
- Magnet School/Program Principal
- a Principal at Large
- JCTA representatives (2)
- Board Parent Rep from each of 7 Districts
- University of Louisville
- Greater Louisville Inc.
- Louisville Urban League

From 2017 through the beginning of 2022, JCPS collaborated with community agencies, parents, district personnel, and an external vendor (Cooperative Strategies, LLC) to develop new school choice options and boundaries for students, with an emphasis on families residing in the West Louisville area. According to JCPS staff interviewed and documentation, JCPS held community listening sessions to display options for school choice models and maps. The community had an opportunity to provide feedback and ask questions. One person interviewed stated there were questions early on about grandfathering and "knew it would be a burden for transportation because of old routes and adding in new routes. Everyone on the school side knew it would be a heavy lift for transportation."

As noted in the district's school choice recommendations presentation to the board in June of 2022, the *School Choice Guiding Principles* focused on equity with a target of ensuring access, ease of understanding, diversity, and choice for students. According to JCPS school choice promotional materials:

> The current Student Assignment plan has not undergone a

comprehensive review in almost 40 years. Historically, the plan has advantaged White affluent families with greater financial and social capital. JCPS is committed to co-creating a plan with our community that ensures that all students have equitable access to school choice options within JCPS.

With the passing of the School Choice System on June 1, 2022, the district developed a Choice Zone with defined boundaries which provided these options:

1. *The parent/guardian of an Elementary Choice Zone student will select the option for a school closer to home or for a school farther from home, and within the option selected, rank order schools using the Choice Zone application process.*

2. *The parent/guardian of a middle or high school Choice Zone student shall select the school closer to their home or the school farther from their home that serves their address. Once a selection is made for that year, a parent/guardian may utilize the student transfer process to select another school. At the end of the school year, the family may decide to either stay at the school they selected or attend another school using the Choice Zone Option application process.*

These changes went into effect at beginning of the 2023-24 school year:

- *Boundary Modifications*
  - *Choice Zone Option for Elementary, Middle, and High School Students Living in West Louisville*
  - *Priority Zone for Elementary Students*
  - *Suburban Elementary Clusters, Middle School Alignment, and High School Boundaries*
- *Choice Zone Support Plan*
- *Supports for Elementary, Middle, and High Schools Located in the Choice Zone as Part of a Comprehensive Approach to Support Excellent School Choices for All Families*
- *Magnet and Optional Schools/Programs*
- *Clear Purpose for Magnets*
- *JCPS Magnet Program Standards*
- *Continuous Improvement Processes*

- *Professional Development (PD) and Support*
  - *Magnet School Boundaries*
  - *Alignment of MST Seats*
  - *Centralized Lottery*
  - *Removing School-Initiated Exits*
  - *Diversity Targets and Goals*
  - *Revamping or Eliminating Non-magnetic Magnets*
  - *New and Revised Magnet Schools and Programs*
  - *New School Creation Process*
- *Open Enrollment Rolled Into Transfer Process*
- *Adjustment of Transfer Revocation Process for Equity and Ease of Understanding*
- *Lottery Admissions for Academies of Louisville (AOL) Programs*
- *Related Policies and Procedures*

When the school year began in August 2023, JCPS operated 161 sites as schools, magnet programs, and academies that served approximately 92,933 students in grades PreK through Early College. Prior to 2023-24, students received a choice in schools, but choices expanded in 2023-24. The greatest difference between the choice plan in 2022-23 and 2023-24 was the decision to provide students in the West Louisville areas a choice of attending a school closer to their residence. In previous years, the only option for certain students in this area was to attend a school considered "far-away" from their residence.

The new plan guaranteed a choice of a school closer to their home or a school farther from their home through an application process to elementary, middle, and high school students residing in the choice zone. JCPS added academic and non-academic support in schools within the Choice Zone. Students in the Choice Zone and outside of the zone could submit a transfer or magnet school application. If the requested school was already at capacity, the student requesting a transfer could join the waiting list. JCPS staff interviewed shared the following about the impact of the lack of transportation and school choices:

- *We want families to make informed decisions…if transportation isn't offered, it will impact decisions, and what capacity looks like at each school.*
- *We could not honor some of the placements because of the lack of transportation.*
- *We received an email today that there is no route for a student (in zone) and the stop can't be added.*
- *Parents are calling back to change school assignments because there is no transportation.*

Although staff reported that the majority of students' transfer requests from their choice school due to a lack of transportation were not captured, one set of data kept by a staff member captured 57 cases. In that listing, some were ultimately resolved through the provision of transportation, but some were resolved by changing to a school that was not the original choice, due to a lack of transportation.

As early as 2017, JCPS parents asked for siblings to be allowed to remain at the same school. The School Choice Proposal approved stated, "Every effort to accommodate parental preference will be made; however, the district cannot guarantee placement in any specific school, including the base (resides) school for the student's address."

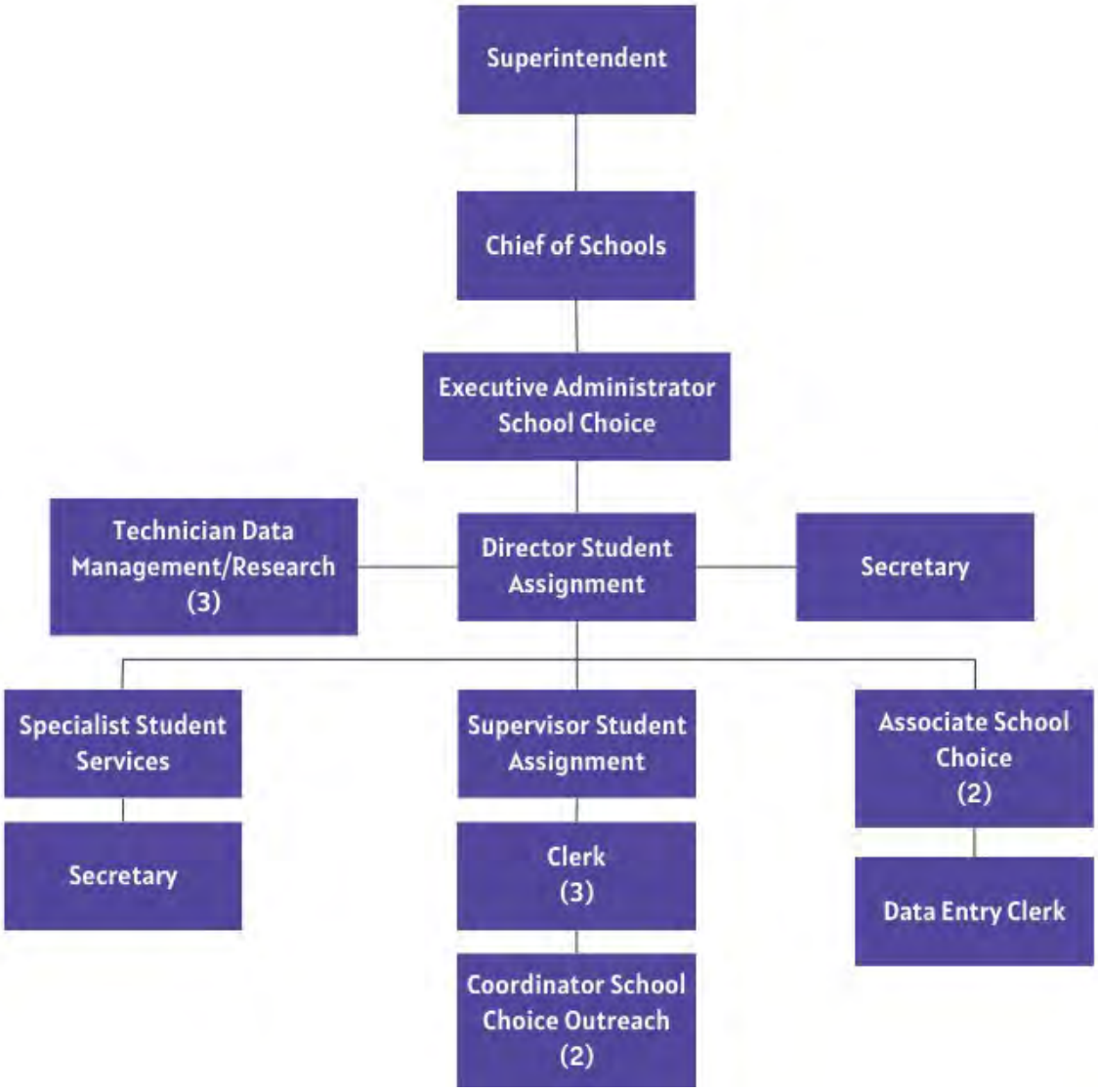
After a parent completed an elementary zone application, school assignments were made. According to the JCPS Frequently Asked Questions for Student Assignment, there were "3-8 schools that serve each address that make up the elementary zone." Families of elementary students could rank their school choice options according to their preference. The district intent was for families to receive their first or second choice of schools based on capacity, emphasizing the role of parental choice and the district's intent to accommodate preferences. The district also had to consider school building capacity in assigning students to their preferred schools which indicates a practical approach to ensure that school assignments align with the available resources and infrastructure. The capacity of transportation was not mentioned in the proposal and did not guide the Choice Zone plan.

School Choice Processes

The department charged with assessing and processing student applications was the Office of School Choice (OSC). Staffed with 17 personnel in 2023-24, OSC continued to use the same application process as in previous years. Student transfer applications were processed by the specialist for student services and a secretary. Magnet applications were processed by the 2 associates for school choice and a data entry clerk. The supervisor for student assignment and 3 clerks processed the

Elementary Assignment applications and added the processing of Choice Zone applications. The department added 2 coordinator of school choice outreach positions in 2022-23 to oversee and coordinate outreach efforts to ensure parents, students, staff, and community members were knowledgeable of the choice options available in 2023-24.

OSC Organization



The Choice Zone plan timeline for implementation intended to limit the number of changes made each year and minimize potential negative impacts. The new Choice Zone boundaries and options would occur in stages. Students who attended JCPS schools in 2022-23 were to attend the same school according to the 2022-23 boundaries until they reached 6th or 9th grades. Students new to the district, changing residences, or entering grades Kindergarten, 6th, or 9th followed the new Choice Zone

boundaries. **Exhibit 2-2** provides the approved Choice Zone Implementation timeline.

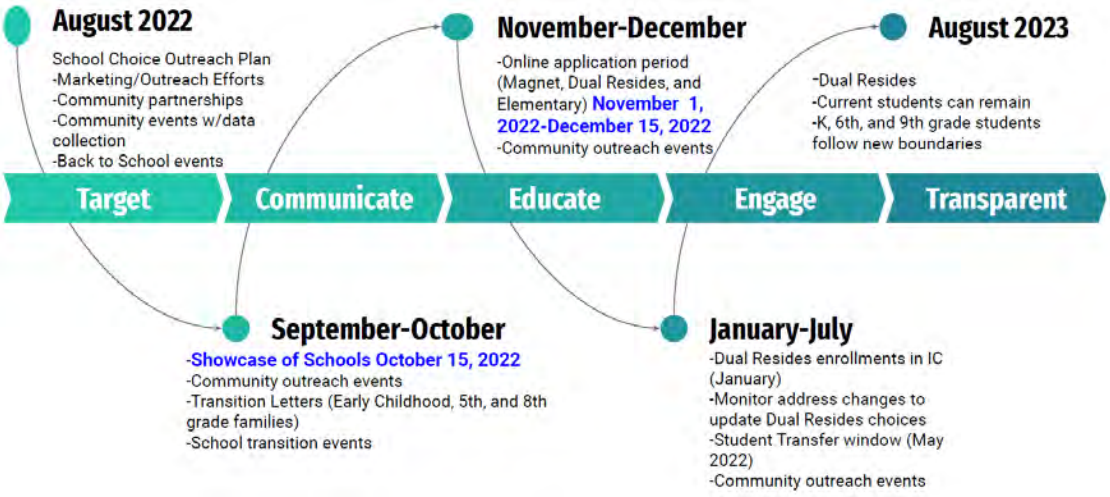
Exhibit 2-2
Choice Zone Implementation Timeline

School Year	Implementation Steps
2021-22	Passage of Proposals
2022-23	o Application Process for Choice Zone Included in Fall o Two new elementary buildings open in fall of 2022. o Eliminate school-initiated exits. o Implement Centralized Lottery. o Non-magnetic magnets are identified, and plans to revamp or remove are determined. o SchoolMint goes live in fall of 2022-23 (for application 2023-24). o Open Enrollment Rolled Into Transfers o Transfer revocation changes.
2023-24	o First Class of Choice Zone—Kindergarten, Sixth, and Ninth Graders o First Year of New Suburban Boundaries—Kindergarten, Sixth, and Ninth Graders o Western Middle and Shawnee Middle become full magnets. o Hawthorne Elementary becomes full magnet. o Consolidated Magnets—Foster and Coleridge-Taylor Elementaries become full magnets. o Removal of Non-magnetic Magnets o Western High transition begins.
2024-25	o K-1st; 6th-7th; 9th-10th Choice Zone Implementation. o K-1st; 6th-7th; 9th-10th Suburban Boundary Implementation.
2025-2028	Continue phase-in with full implementation 2028-29 school year.

Source: *JCPS, 2023*

JCPS developed a thorough School Choice Outreach Plan. Communication methods utilized included the JCPS website, social media, and automated calls to reach out to parents and the community. OSC personnel attended school and community events, called parents, and hosted a Showcase of Schools. JCPS provided paper and online Choice Guides, and videos which described each school. In interviews, most district staff and principals listed the communication and outreach efforts of the OSC as a strength of the Choice Zone implementation. An overview of the school choice outreach is shown in **Exhibit 2-3**.

Exhibit 2-3
School Choice Outreach



Source: *JCPS, 2023*

Timeline of Key Events for SCI

Date	Event
2017	Student Assignment Review Advisory Committee (SARAC) formed
April 2019	JCPS Office of School Choice (OSC) presents an update regarding the work of the SARAC
November 2019	Superintendent brings a recommendation to approve a consulting firm to work on the dual resides proposal, outlined goals and probable options that would be brought to the school board that spring. Contract with vendor (Cooperative Strategies) approved.
December 2019	Potential recommendations are shared with community.
January 2020	OSC presents option of dual resides and magnets.
April 2020	OSC presents MS/HS dual-resides options and implications of options.
May 2020	In school board meeting, a board member questions the implications school choice would have on transportation. Concerns are expressed about ensuring ample family feedback on student assignment plan.
June 2020	Superintendent provides update on current student assignment plan for West Louisville and the proposed dual-resides option.
November 2020	JCPS school board holds a virtual public forum to gather community feedback on student assignment plan. Recommendations presented: Dual Resides option and Magnet/Optional Choices.
November 2020	Kentucky DOE Audit recommends transportation be included in discussions and planning for school choice options.
December 2020	The superintendent presents the latest version of the school choice plan.
July 2021	New contract with the same vendor is approved to conduct boundary audit.

Date	Event
March 2022	Public Forum Breakout Sessions are held. Superintendent provides a brief overview of the school choice recommendations, outlines the upcoming timeline for a school choice recommendation, and highlights the various channels available to provide feedback.
April 2022	The superintendent presents options for the proposed student assignment plan: dual resides and feeder patterns, and the choice zone support plan.
May 2022	The superintendent, JCPS leadership team, and University of Louisville professor present update on the school choice proposal. This is the 3rd of 3 reports on the school choice recommendation. The presentation covers feedback received, changes implemented based on feedback, and the reduction of 90 feeder patterns down to 23.
June 2022	New school choice plan is approved.
June 2022	Adoption of Board Policies 09.11 - School Choice System and 08.134 - Magnet Education (Second Reading).
August 2022	The superintendent and JCPS staff present an update on the SCI, noting they meet on a weekly basis to discuss implementation for 23-24. The timeline and upcoming board decisions are shared.
September 2022	Showcase of Schools is held for parents and community.
September 2022	Annual subscription is renewed for the online technology platform that supports school choice in the registration and application process.
October 2022	Board conducts a community forum on the district's student assignment plan and facilities.
November 2022	Application Outreach Event; Radio Ads, Text/Email blasts to JCPS families
November 2022	Recommendation made to remove non-magnetic magnets to provide “more precise educational options.”
November-December 2022	Outreach efforts continue: Flyers distributed to community centers, churches; Social media posts; Email to partners; Insider outreach to families.
November-December 2022	School Choice/Magnet application window opens
December 2022	School Choice Plan undergoes Racial Equity Analysis Protocols (REAPs)
February 2023	In a board meeting, the chief of schools states that "routes will increase due to SCI.”
March 2023	Elementary Zone Applications are processed, assignments sent to schools, letters mailed to parents.
March-May 2023	Transfer application window is open
July 2023	Recommendations for approval of organization charts and job descriptions for SCO. Revisions of Board Policies are presented–2023 Annual KSBA Board Policy
August 2023	First day of classes for new school choice zones for Grades, K, 6 and 9.

Findings

FINDING 2-1 – School Choice Model

The JCPS school board and superintendent adopted a school choice model for students and families. The adoption of a school choice model underscores a commitment to ensuring equitable access to quality education for all students. The model seeks to break down barriers and provide students, regardless of their background or location, with equal opportunities to access educational resources and programs. The decision to adopt a school choice model indicates a deliberate choice by the JCPS school board and superintendent to provide families and students with the flexibility to choose educational options that best suit their needs and preferences. The commitment to a school choice model reflects an overarching goal of improving educational opportunities. By offering a range of choices, the district aims to cater to the diverse learning styles, interests, and needs of students, thereby enhancing the overall educational experience. By acknowledging the importance of choice in education, the district recognizes the potential positive effects on student engagement, motivation, and academic success.

The superintendent's efforts to create change and build strategic initiatives to increase opportunities for students in West Louisville were received by the school board with trust and support. Students and families in parts of Jefferson County already had the option of choosing a "close-to-home" school. According to reports made to the school board in April 2020, 94% of students of color had to leave their community for school, compared to just 6% of white students. The superintendent's focus on strategic initiatives, particularly those addressing disparities in school options, underscores a commitment to equity in education.

JCPS staff interviewed about the school choice initiative (SCI) stated the following:

- The addition of choice zones for students residing in West Louisville addressed the "lack of equity."
- "As an educator, this was really about an equity decision. In my roles, I saw the burden on students of color was huge and something had to be done. It was long overdue."
- Students "can now be a part of the school that is part of their community."

Overall, the introduction of choice zones in West Louisville was seen as a positive step in providing students with the opportunity to attend schools that are geographically closer to their communities. This addresses concerns about historical disparities in educational access and seeks to

ensure that all students, regardless of their location, have equitable choices in education.

The alignment of schools to follow feeder patterns from elementary to middle to high school occurred with the new plan. This approach offers not only educational options but also seeks to create a more cohesive and interconnected educational system. Feeder patterns enable students to progress through their K-12 education with continuity, building lasting relationships with peers and educators.

The emphasis on feeder patterns suggests a strategic approach to fostering a cohesive and interconnected educational system. This approach is designed to facilitate smoother transitions for students as they move from one educational level to the next, promoting a sense of continuity and community throughout their K-12 academic journey.

COMMENDATION

The JCPS school board and superintendent are commended for working to improve educational opportunities for all students.

FINDING 2-2 – School Choice Transportation Impacts

The planning leading up to the passage of the SCI did not adequately consider the impact on transportation. The approved School Choice plan did not adequately consider the impacts on transportation, particularly the grandfathering component. Including members of the transportation department in in-depth discussions about operating multiple boundaries would have provided insight early into the impact the dual boundary system would have on transportation.

The KDE Management Audit dated November 20, 2020, recommended that JCPS "develop a process that allows the transportation department to be included in discussions around school choice and student assignment" and "develop a recruitment plan to ensure the district has enough bus drivers and monitors to support the school choice opportunities." Although practices were in place to gather feedback on school choice zones from stakeholders, parents, district departments, and the school board, it does not appear that the transportation department was directly involved in the establishment of Choice Zone boundaries nor were they consulted regularly during the multi-year choice planning process about what might be the impact on their operations.

Staff shared in interviews that the Office of Student Assignment personnel had been involved in meetings where there were transportation department representatives; however, meetings did not solely focus on transportation and did not discuss in detail the implications Choice Zones and dual boundaries would have on

transportation. When asked what could have been different with the SCI to ensure success with transportation, one interviewee shared, "Maybe more communication, consistent meetings with transportation. Make sure everyone understood the plan. Our district has a bad habit of working in silos."

Several JCPS staff were leaders in the school choice planning and the school start time/routing optimization planning, included the retired chief of staff who returned to lead the start time initiative and the GIS executive director. In interviews, they noted that it was known that the school choice options and the associated grandfathering would require more drivers. They provided one estimate that the SCI, without the other initiatives, would have led to a need for an additional 100 routes. However, they also noted that "no constraints" were placed upon those leading the SCI to consider whether the plans adopted could be implemented by the transportation department.

Presentations to the JCPS school board on SCI generally did not include quantification of the transportation costs (or savings) that might be associated with SCI options. In the May 4, 2020, board meeting, one board member asked the superintendent about the need for transportation funding in relation to SCI. The superintendent responded that the transportation impact would depend on the "percentage of students in satellite areas wishing to remain at a local school" then mentioned that a 3rd bell time would "save significant funding." No details were provided at that time. Subsequent board meetings and presentations to the board did not return to the issue of transportation needs to meet SCI options. None of the written board questions to JCPS staff during the development of the SCI included questions about how transportation would be impacted and whether the transportation department could accommodate the SCI plans under consideration or the final adopted plan.

The SCI passed on June 1, 2022 did a number of things. The new plan aligned feeder patterns from elementary through high school, which provided additional stability for students. In the fall of 2023, the new plan impacted students new to JCPS, Kindergarten, 6th, and 9th grade students. In the fall of 2024, the plan would expand to include students new to JCPS, Kindergarten, 1st, 6th, 7th, 9th, and 10th grades. The plan included additional grade levels to be added in subsequent years until the entire district adhered to the new choice plan in 2028-29.

The phased-in approach allowed students to remain at their current school until they transitioned to middle or high school. This continuity for students, particularly during critical transitions to middle or high school, was a strength of the new plan. This approach aimed to minimize disruption to students' educational experiences. Staff members

expressed the belief that the plan might not have received community approval without the phased-in approach.

The phased-in approach was purposefully designed to allow for a smoother transition and provided time for students, parents, and the community to adjust to the changes, and to reduce the number of school transitions for students. However, operating on dual boundaries ("grandfathering") likely created a greater burden on transportation. As with the planning leading up to SCI passage, the impact of grandfathering on transportation was inadequately assessed. There were no school board presentations that outlined the potential transportation impacts due to grandfathering.

JCPS staff interviewed and surveyed explained some of the impacts of allowing students to adhere to old boundaries until transition years (also known as "grandfathering"). Staff comments included:

- "Grandfathering created a different burden, but we couldn't switch schools for all students."
- "JCPS has been very accommodating as a service to the community. We were already asking for a big lift with changes for those in transition years. It was a big shift for the community. To also change existing student schools would have been hard for the community to understand."
- "If we eliminated grandfathering, it may not have passed."
- "I truly believe we have not even reached the pinnacle of this disaster. Year 2 and 3 will be even worse because you are transporting fewer and fewer kids in the old plan while still implementing the new plan for more kids."
- "Grandfathering was a big concern that was shared because you are still trying to satisfy "two assignment plans" with a reduction in service (bus drivers)."
- "We also expressed concerns that "grandfathering" students could create problems with class size and transportation."
- "Commend for trying to keep students where they were, but…huge strain on transportation."

During the fall of 2023, some students requiring transportation were forced to choose a different school if they needed to access transportation. Bus routes, drivers, and stops were maxed out to the point additional routes could no longer be added. The lack of transportation eliminated choice options granted by the 2023-24 JCPS student assignment policy for some students living in the Choice Zone.

Several parents changed their original "far-away" school request to a "close-to-home" option because of the lack of transportation. Many parents were unable to provide transportation for their children and had to select schools with existing routes for their residential area.

Early involvement and improved communication would afford the transportation department more time to plan and prepare for the challenges posed by the dual boundary system. Adequate time for planning is essential for developing strategies, distributing resources, and addressing any potential issues related to transportation logistics. Including transportation department members in discussions and fostering improved communication between departments are essential components of effective organizational management. These practices can lead to better-informed decision-making, increased efficiency, and a more coordinated approach to implementing changes within the educational system.

RECOMMENDATION 2-2

Develop systematic procedures for communication and collaboration between departments related to school choice and schedule on-going reviews of school choice zones and boundaries with the district transportation department to ensure students receive transportation services to their choice schools as appropriate.

A proactive approach allows for a comprehensive understanding of the logistical challenges and requirements related to transporting students within multiple boundaries. Improved communication between departments would have also provided transportation with a better understanding of transportation needs and more time to plan accordingly. Enhanced communication channels can facilitate the sharing of information, concerns, and expertise between different departments, ensuring that all relevant stakeholders are well-informed about the implications of decisions.

Leaders of the transportation, school choice, operations, and communications departments should meet on a regular basis to discuss transportation and facility capacity, trends in student applications, messaging to parents and the community, and related concerns as they arise. Joint collaboration, problem-solving, and planning with departments impacted by school choice decisions will improve services for students while minimizing negative impact.

An urgent first topic for this leadership group should be assessing the potential impact of grandfathering on transportation needs in upcoming school years. Based on the 2023-24 data, a slight majority of students are choosing their closer school under SCI. This could indicate an easing of the burden prior to 2023-24 to bus a large number of students to non-neighborhood schools. The leadership group could use SCI data the

district likely already has on hand for 2024-25 to gauge the impact of grandfathering and to make plans to address transportation needs.

Fiscal Impact

This recommendation can be implemented with existing resources.

FINDING 2-3 – School Choice Timeline

For the 2023-24 school year, school choice application windows and approval processes did not change from previous years. The adherence to a timeline that worked in the past proved problematic.

Since there was a potential of a profound impact on students and schools with the new SCI plan, JCPS decided that the new choice zone boundaries would initially only impact students entering grades Kindergarten, 6, and 9, students changing residence, and students new to the district. **Exhibit 2-4** demonstrates the steps involved in the student assignment process.

Exhibit 2-4
Student Assignment Process

Steps	Timeline for Steps
Outreach	September – December, 2022
Showcase of Schools	October, 2022
School Choice Zone and Magnet Application Window	November 1 – December 16, 2022
Elementary Cluster Assignments Processed	March 6-10, 2023
Elementary Zone Assignments Sent to Schools	March 17, 2023
Elementary Zone letters mailed	March 20, 2023
All Elementary Students Assigned to Classrooms	March 30, 2023
2nd Batch Zone Assignments Processed	April 10, 2023
Student Transfer Application Window Opens for 2023-24	May 1, 2023
Daily Zone Assignment	May 8 - August 8, 2023

Source: *JCPS, 2023*

Since there would be no "default" school for students, it was important for students impacted by the choice zone plan to complete an application. The OSC launched an outreach plan to ensure that families were well-informed about the options available to their children. Prior to the student application window, the outreach plan utilized various communication channels and strategies, including postcards, information/question and answer sessions, outreach events, signage, newcomer events, informational sessions and materials for staff, and a Showcase of Schools event. The purpose of the diverse methods was to reach a broad audience and cater to different preferences for receiving information. These efforts empowered families with the information they needed to actively participate in selecting the educational options

that best suited their preferences and needs. **Exhibit 2-5** displays the types of choices provided to students and the application window for each. The addition of Choice Zone applications was the only addition for 2023-24.

Exhibit 2-5
School Choice Application Windows, 2022-24

Type	Application Window	
	2022-23	2023-24
Choice Zone	NA	November 1 – December 16, 2022
Magnet	November 1 – December 15, 2021	November 1 – December 16, 2022
Transfer	May 1, 2022 – March, 2023	May 1, 2023 – March 6, 2024

Source: *JCPS, 2023*

After the fall application window closed, the coordinators of school outreach collaborated closely with schools to contact students living in the Choice Zone who had not applied. Overall, this proactive outreach strategy reflects a commitment to inclusivity and a dedication to maximizing the number of students who participate in the application process and receive a choice of schools.

Exhibit 2-6 displays the number of applications submitted during and after the designated application windows. The number of JCPS applications for school choice options increased from 2022-23 to 2023-24 (November – August) by 15% (3,974 applications). The number of personnel available to process school choice applications did not increase, even with an increased number of applications submitted.

According to JCPS, all students applying for magnet, choice zone, or elementary zone schools were eligible for transportation. Students applying to transfer schools were only eligible for transportation if an existing route would accommodate the transportation need and there were available seats on the assigned bus. It is not known whether the lack of guaranteed transportation impacted the number of transfer applications submitted.

Exhibit 2-6
Submitted School Choice Applications

	Nov. 1 – Dec 31		Jan. 1 – July		Aug		Total	
Choice Type	**22-23**	**23-24**	**22-23**	**23-24**	**22-23**	**23-24**	**22-23**	**23-24**
Magnet & Choice Zone	9,545	10,834	9,451	10,590	2,285	2,420	21,281	23,844
Transfer	0	0	4519	5,839	1,411	1,502	5,930	7,341
Total	**9,545**	**10,834**	**13,970**	**16,429**	**3,696**	**3,922**	**27,211**	**31,185**

Source: *JCPS, 2024*

The number of applications approved November-August increased by 17% (**Exhibit 2-7**).

Exhibit 2-7
Approved School Choice Applications

	Nov. 1 – Dec 31		Jan. 1 – July		Aug.		Total	
Choice Type	**22-23**	**23-24**	**22-23**	**23-24**	**22-23**	**23-24**	**22-23**	**23-24**
Magnet & Choice Zone	144	139	12,360	14,367	2,119	2,448	14,623	16,954
Transfer	0	0	2,561	3,251	775	764	3,336	4,015
Total	**144**	**139**	**14,921**	**17,618**	**2,894**	**3,212**	**17,959**	**20,969**

Source: *JCPS, 2024*

Exhibit 2-8 displays the number of applications submitted and approved by month. It is important to note that submitted applications were not necessarily processed in the same month they were submitted. The data also do not indicate when approved applications were entered into Infinite Campus. A majority (50%) of the approved applications were received May-August 2023. This concentrated period of application submissions may have presented challenges in terms of workload distribution and timely processing.

Magnet school applications are processed prior to choice applications. Most magnet schools process their own applications. If a student is not accepted into a magnet school, they can then apply to a choice school. This keeps the JCPS system from assigning a student to 2 different schools, but it means that the choice process is completed later than the magnet process. The district followed the same process for 2023-24 that it had for previous years.

Exhibit 2-8
Student Choice Applications by Month, 2023-24

	Received			Approved		
Type	Magnet, Choice Zone	Transfer	Total by Month	Magnet, Choice Zone	Transfer	Total by Month
November 2022	6,566	-	6,566	0	-	0
December 2022	4,268	-	4,268	139	-	139
January 2023	152	-	152	1,507	-	1,507
February 2023	140	-	140	2,490	-	2,490
March 2023	4,172	-	4,172	5,107	-	5,107
April 2023	142	-	142	228	-	228
May 2023	2,489	3,160	5,649	2,105	1,842	3,947
June 2023	592	854	1,446	434	436	870
July 2023	2,903	1,825	4,728	2,496	973	3,469
August 2023	2,420	1,502	3,922	2,448	764	3,212
Total	**23,844**	**7,341**	**31,185**	**16,954**	**4,015**	**20,969**

Source: *JCPS, 2024*

Exhibit 2-9 provides an analysis of the choices parents made for schooling for 2023-24. Although some JCPS communications to the board indicated that as much as 72% of families opted for the close-to-home school option, the final data set indicate a more even split. A majority of families, 55%, did opt for the close-to-home option. This indicates a preference to attend a school that is geographically closer to their residence. This is often influenced by factors such as convenience, transportation considerations, and a desire for a school within the local community. Meanwhile, 45% of families opted for the far-away choice. The varying preferences for close-to-home and far-away school options highlight the diverse needs and preferences within the Choice Zone. Recognizing this diversity is crucial for providing a range of educational options that align with the varied preferences of students and families. This diversity also has a large impact on the transportation system.

Exhibit 2-9
Choice Zone Applications Approved by Location through August 2023 for 2023-24 School Year

Type	Close-to-Home	Far-Away	Total
Elementary	2,172	369	2,541
Middle	3,978	1,915	5,893
High	3,378	5,525	8,903
Total	**9,528**	**7,809**	**17,337**
	55%	45%	

Source: JCPS, 2023

Although the application windows and approval processes did not change, there were notable changes or exceptions for students in Choice Zones moving into the district or entering specific grades (Kindergarten, 6th, or 9th). Students in Choice Zones moving into the district or those in the specific entering grades did not become automatically assigned to a default school if they did not apply.

District staff and schools contacted students without applications individually. Eligible students who did not submit an application by the deadline were allowed to still complete an application at any point after the application window closed. This flexibility acknowledges that circumstances arise and was an attempt to be responsive to parent needs. However, late applications resulted in late school assignments. The transportation department had minimal time to edit and reconfigure bus routes and stops to ensure all eligible students received transportation. Per Kentucky Legislature (KRS 158.072), a student is eligible for transportation under the following circumstances:

> "Eligible student" is defined as a student enrolled in kindergarten or grade one (1), two (2), or three (3) who qualifies for free or reduced-price school meals or attends a school that participates in the community eligibility provision of the National School Lunch Program.
>
> If an eligible student changes residence during the school year and the change in residence results in the student being assigned to a different school within the District, the parent/guardian shall have the option to request the student, and any of the student's siblings enrolled in the same school in any grade, remain enrolled in the original school regardless of the transportation decision made by the Superintendent/designee.
>
> The District shall provide transportation to the original school from the eligible student's new residence unless the Superintendent/designee denies the transportation request because he/she/they determine the distance and travel time that the student would spend in transport is impracticable. The District shall report the transportation denial and supporting rationale to the Kentucky Department of Education.

Due to transportation constraints, some students who needed transportation were denied this service. This denial could be a substantial barrier for those students, particularly if parents were unable to provide alternative transportation arrangements. Faced with transportation limitations, the district made the decision to direct some students to other schools where transportation options were available. JCPS staff acknowledged that this was an issue in the lead-up to August 9th and the

start of the 2023-24 school year but they did not keep track of how many students were directed to select a different school.

To assess public JCPS statements about the perceived complexity of its transportation system, Prismatic contacted a number of peer districts as part of this project and asked about their experiences with offering students the option of attending a school outside of their zoned school including school choice, magnet, open school transfer, and other unspecified programs. When reporting districts began new student assignment plans, all offered grandfathering and transportation during the transition period. In 5 out of 7 peer districts, not all students were eligible for transportation, based on the school selected and their home address. Some peer districts reported operating on application deadlines to provide transportation ample time for routing. Out of 7 peer districts, 6 reported completing routing no later than July of each year.

As stated in Education Next:

> Transportation must be affordable and safe so that all students, regardless of their location or resources, can attend their school of choice. And on the municipality's end, the cost of providing transportation must be sustainable. All these factors play into the discussion on the benefits of choice.[1]

RECOMMENDATION 2-3

Assign default schools to students who do not complete a school choice application by the established deadline.

The district should adopt a default school assignment process for students who do not complete an application. The district should also adopt an appeals process that would allow a student to request a change; this process should have a deadline in June of the preceding year for the upcoming school year. This would aid principals and the transportation department in school year planning.

Fiscal Impact:

This recommendation can be implemented with existing resources.

[1] https://www.educationnext.org/going-extra-mile-school-choice-how-five-cities-tackle-challenges-student-transportation/

Chapter 3
School Start Time Initiative

Background

With the advent of widespread school transportation services, adjusting school start times became a way to leverage a relatively smaller investment in yellow school buses to serve a larger student population. School districts that could support multiple school start times could also use their buses multiple times each morning and afternoon. In recent decades, staggered school start times has run headlong into growing sleep research. Contemporary research, consistent with dozens of older studies, consistently shows that U.S. adolescents not only are deprived of the sleep they need but also are in need of more sleep than their younger and older counterparts. Schools and school districts have spent recent years struggling with balancing the sleep health of their students with their myriad other responsibilities to stakeholders.

Of the 3 major initiatives that JCPS implemented on August 9, 2023, the school start time (SST) initiative was the least independent and influential. The 2 major drivers for the 2023-24 changes were the new school choice school assignment program, and the new bus routing scheme that was motivated by and designed to address a deepening shortage of bus drivers. The new bell times schedule might therefore be thought of as the offspring of the re-routing work which was motivated not just by a driver shortage but by an increased demand for bus routes and drivers resulting from the new school choice program.

The current 2023-24 bell schedule is largely a 3-tier system, with most schools starting at either 7:40, 8:40 or 9:40 am. Most JCPS programs that receive busing (127 out of 150, or 85%) start at 1 of these times. The remaining programs start at 1 of 6 times ranging from 8:00 to 10:40 am. The additional runs required to serve schools not on the 3 major start times are sometimes referred to as a "double tripping" or even "triple tripping." They typically require that a bus drop off early at a school, then go pick up additional students that live nearby but could not be put on the first run due to seat capacity constraints. Double tripping works best

in urban neighborhoods, like some parts of Louisville, where a bus can pick up 20-40 students just a few blocks and a few minutes away from their school. Double tripping works less well in a rural environment where there might be miles between individual student's addresses. JCPS has a mixture of urban and rural, high student density and low student density neighborhoods. Most of JCPS's territory can be characterized as either suburban, exurban, or rural.

In conducting this study, Prismatic found that JCPS has considered SST changes as far back as 2011. No specific department has had responsibility for leading consideration of SST changes; however, some staff members who led the most recent change also participated in prior assessments.

Timeline of Key Events for the School Start Time Initiative

Date	Event
April 2011	JCPS completes a bell time study with assistance of consulting firm Transportation Advisory Services (TAS). There were concerns as to whether the district can continue to meet all transportation needs with the existing 2-tier structure and about a shortage of bus drivers. The study recommends a switch to 3 tiers; however, JCPS chooses to keep its existing 2-tier schedule (HS/MS and ES). In 2023, some JCPS staff indicated to Prismatic that the change was not made in 2011-12 because of concerns about athletics.
2017	A JCPS staff group re-considers a pilot program to try a 3-tier bus schedule and later start times for some schools, but the idea meets resistance and is rejected. The staff group includes the GIS specialist who is now the JCPS GIS executive director. In 2023, some JCPS staff indicated to Prismatic that the change was not made due to "politics."
2019	The demographic analyst who is now the JCPS GIS executive director first meets the consulting firm Dynamic Ideas/AlphaRoute (AR).
May 2021	JCPS provides a "sole source" justification for contracting with AR for bell time optimization and routing service to resolve the bus driver shortage. AR pledges they "will optimize for the chosen objectives and adhere to the constraints and policies as well" of JCPS.
June 2021	The JCPS/AR contract is finalized. Option A for 2 bell time optimization plans is agreed to. "Frameworks" for setting JCPS's desired bus routing parameters are completed with AR.
February 1, 2022	JCPS leadership and the chief operations officer (COO) presents "Bell Times and Our Transportation System" to the school board. The COO emphasizes that in 2021-22 JCPS transports 70% of its students versus a national average of 50%, uses 770 routes, and relies heavily on many routes completing double runs,

A double run is when a bus goes back out to service another group of students on same bell schedule. In the mornings, a double run would result in either the first group of students being delivered extra early to the school, or the second group of students being delivered later than desired or even after the start of school. In the afternoons, a double run leaves the second group of students at school while they wait for their bus to take home the first group of students.

Date	Event
	indicating there are 191 HS/MS and 117 ES double runs at the time. AR is identified as a partner in the work of addressing transportation challenges.
February 15, 2022	JCPS reports to the school board on bell times and research about adolescent sleep needs, providing 185 pages of research on the benefits of later school start times for adolescents. At the time, JCPS MS and HS start at 7:40 am.
February 2022	JCPS and AR revise their contract for 2 additional bell time optimization scenarios, Option B. After reviewing the initial 2 bell time scenarios, the school board requests 2 additional, optimal bell time scenarios.
March 8, 2022	JCPS reports to the school board on SST with plans for 2 phases of implementation of new bell times and bus routing. Phase 1 for a "small number of schools" is planned to start in August 2022. These plans are later canceled in favor of a more "comprehensive," full scale roll-out of all 3 initiatives (SC, SST, and RO, in August 2023).
January 2023	The JCPS transportation department is not included in the planning of bell time changes and routing for 2023-24. AR is noted in a board meeting as the firm conducting the planning for bell time changes and re-routing.
February 28, 2023	JCPS and AR present "Start Smart Start Time Proposal" to the school board. The need to address the bus driver shortage and a desire to provide later school start times for MS/HS students are cited as the reasons for the bell times changes. AR states that the optimal bell time scenarios are the product of their algorithms and mathematical modeling, using routing parameters set previously with JCPS in the "frameworks."
March 28, 2023	The school board approves the "Start Smart Start Time Proposal."
March-May 2023	Start Smart bell time proposal is presented to groups of JCPS stakeholders, including central office administrators, school principals, transportation leaders, and bus drivers.
May 8, 2023	The GIS executive director emails JCPS transportation leaders to notify them that AR has completed the "first round of routing." This comes 3 months after the "Start Smart" bell times proposal was presented to school board, which was dependent on routing plans being far beyond "the first round" of development at the time the proposal was presented.
July 10, 2023	AR delivers initial bus routes to JCPS.
~July 17, 2023	AR delivers final bus routes to JCPS. Transportation department staff and school principals realize that the routes are in poor condition – some students have been left out, many buses are scheduled to arrive late to many schools, some buses lack afternoon schedules, some runs are too long, some drivers are being sent to unfamiliar areas, etc.
August 9, 2023	Start of school, date of the Incident.
August 11-18, 2023	In the days after the Incident, AR sends some of its staff to JCPS. No changes made to school bell schedules.

Findings

FINDING 3-1 – AlphaRoute SST/RO Solution

The SST/RO solution provided by AR to JCPS suffered from myriad design flaws.

The 2 strands of SST and RO are heavily entwined. If the bus routes do not deliver students to school on time, the bell schedule does not reflect what is actually happening. Bell times without buses on time do not work. Actual start and end times of the school day, including a reasonable and common 10-15 minutes "window" for early drop off and late pick up need to align with publicized start and end times. When buses are 30-60 minutes late or early in the morning and comparably late in the afternoon, due to unrealistic, unworkable bus routes, the school day becomes quite different for students, parents, school staff, and bus drivers than they might expect based on the official bell times. JCPS staff indicated an understanding of the entwined nature of SST and RO. The district's COO noted as much in a February 2022 school board presentation when he noted that "bell time changes and transportation are interrelated." It was apparent from board presentations and JCPS documents that the district expected the work of AR would result in a new bell schedule that met the district's objectives for fewer bus drivers and on-time delivery of students to school.

As part of its SST/RO work with JCPS, AR requested that the district provide "objectives, constraints and policies JCPS wished to follow when changing school bell times" and to provide them via a spreadsheet form (**Exhibit 3-1**). Once AR received the completed spreadsheet, AR stated it would "optimize for the chosen objectives within each framework and will adhere to the constraints and policies as well." Initially, AR was to provide just 2 new SST options. This plan was known as Plan A in the contract between JCPS and AR. Later, the district requested 2 additional optimization plans, Plan B, for an added cost of $65,000. As part of developing the new SSTs, AR advised JCPS that each bell time analysis, based upon JCPS's frameworks, "will require substantial sophistication and iteration" in other words, frequent, back and forth exchanges of questions and answers between the district and AR.

Exhibit 3-1
Initial SST/RO Frameworks as Defined by JCPS

	JCPS Responses by Framework			
AR Questions	**1**	**2**	**3**	**4**
Primary Objective	*Increase overall efficiency in order to improve student experience (i.e. middle/high kids later times to improve student engagement, less crowded buses, shorter bus rides)*			
What is the maximum % of schools that can change bell times?	*100% to start*			
What is the maximum extent of change for any individual school?	*Ideally 1 hour, but can possibly start analysis with no constraints*			
What is the earliest possible start-time?	*7:30 am*			
What is the latest possible start-time?	*9:40 am*	*9:40 am for gen. ed. (10:15 am for ECH)*	*Open Ended*	
What is the earliest possible dismissal time?	*2:05 pm*		*2:10 pm*	
What is the latest possible dismissal time?	*4:25 pm*		*Open Ended*	
How many tiers should be used?	*At least 3*		*At least 3 (5 for elementary cluster schools if possible)*	
What specific tiers should be used?	*See excel sheet Brent sent for a guideline*			
Should the tiers be fixed at specific times or allow for flexibility (e.g., if 8am is one of the tiers then should all schools at that tier start exactly at 8am or can they start +/- 10 minutes from 8am)?	*Allow for flexibility where possible*			
Should schools of certain types be grouped at the same tier?	*See excel sheet- we did this initially, but if some types are on different times that may be ok (i.e. elementary cluster schools have some on early time and some on late time to give parents choice); magnet student can be on least desirable times since this is by choice*		*Open Ended*	
What is the earliest allowable bus stop time in the AM?	*5:45 am*		*5:30 am*	
What is the latest allowable bus stop time in the PM?	*5:35 pm*		*Open Ended*	

AR Questions	JCPS Responses by Framework			
	1	2	3	4
How early before the opening bell can buses arrive (early dropoff)?	*Currently 55 minutes, but if we can shorten would be better for students and staff*	*40 minutes*	*1 hour*	
How late after the dismissal bell can buses arrive (late pickup)?	*Currently 55 minutes, but if we can shorten would be better for students and staff*	*40 minutes*	*1 hour*	
Which schools cannot have their times changed at all?	*None at this time*			
Which pairs or groups of schools need to be at the same tier or on different tiers?	*Schools involved in depots probably need to be on same tier, and some tiers can be all direct if those schools aren't involved in depots*			
What is the maximum ride-time for students?	*60 minutes used to be target, but this was extended due to shortage*		*Open Ended*	
What is the maximum walk-to-stop distance?	*Legally 0.5 miles for elem and 1.0 mile for mid/high, but we use 0.25 for elem and 0.5 for mid/high--we are willing to expand the walk distance…*			
How many elementary students can be assigned to a regular bus?	*66*			
How many MS students?	*66 but ideally would not have 3 to a seat if possible*	*Up to 66 but let's use 60 for this scenario*	*66*	
How many HS students?	*66 but ideally would not have 3 to a seat if possible*	*Up to 66 but let's use 60 for this scenario*	*66*	
How many seconds should be allocated per stop, regardless of the number of students at the stop?	*60?*			
How many seconds should be allocated per student loading/unloading at a stop?	*10?*			

AR Questions	JCPS Responses by Framework			
	1	2	3	4
How long do buses need to stay at hubs/schools before leaving for next run?	*Schools probably 5-10 minutes, depots when all of the buses arrive*			
How many minutes before the opening bell do buses need to arrive?	*15-20?*			
Do buses need to arrive *before* the dismissal bell or at the bell time?	*15-20 before is ideal---but it is ok if some come a little later--we can load the first set and then load the next set*			
Which students need to be assigned to the same **stops** in the AM and PM? Do we need to ensure that 100% of this group of students has the same stops? If not, what level below 100% would be acceptable?	*This would make tagging system easier for elementary students if they have same AM and PM bus. Would like to see the savings with un-mirrored solution and compare*		*Un-mirror as needed to reduce bus count*	
Which students need to be assigned to the same **buses** in the AM and PM? Do we need to ensure that 100% of this group of students has the same buses? If not, what level below 100% would be acceptable?	*Same as above*		*Same as above*	
Which students need to retain current JCPS stop assignments? Which ones can be changed?	*We can change stop assignments except for the zip codes that I gave you already*			

Source: JCPS, 2023

At some point after JCPS provided these constraints and policies to AR, AR included feedback within the same spreadsheet. In all 3 areas -- the questions asked by AR, the responses provided by JCPS, and the AR responses -- there are problems. Problems in regard to the questions asked by AR include:

- AR did not ask about state requirements for the length of school days. At each grade level in JCPS the school day is 6 hours and 40 minutes. The Kentucky Department of Education (KDE) requires that the school instructional day be a minimum of 6 hours. Lunch is counted as non-instructional time. KDE permits a maximum of 7 hours of instructional time; lunch is extra. In some districts the length of the school day varies by level (elementary, middle, high). In some districts, the high school day is longer to afford time for a mid-morning nutrition break, or to build time into the regular day for clubs to meet. With the KDE range of available instructional times in mind, more variations of possible school bell times, especially those at the high school level, might have been considered.

- AR did not ask about the district's capacity to meet some students' needs with smaller-than-a-bus vehicles. This may have been communicated elsewhere by JCPS to AR, but not including it in the "master" list of questions appears to indicate that any kind of transportation service other than yellow bus was not part of AR's considerations. This is problematic if a few students live in a far-flung area of a district or there are special geographic challenges in a part of a district. Forcing students in those situations into a solution that only considers yellow bus capacity could result in a long bus run that then prevents that bus from serving students in another tier.

- AR did not ask whether groups of students from different schools/levels could be transported together, and, if so, under what circumstances. This may have been communicated elsewhere by JCPS to AR, but not including it in the "master" list of questions appears to indicate that this kind of potentially useful flexibility was not part of AR's considerations. For example, if there is an especially rural area in a district, the best solution might be to allow MS and HS students to be transported together from that area. In another example, JCPS has a number of co-located or closely located schools. It might be most efficient to transport students for those schools together. Other district documents indicate that AR was told that ES students could not ride with MS/HS students, but that MS and HS students could ride together.

- AR did not ask questions regarding acceptable distances between bus stops. In the JCPS *Transportation Procedures and Training Manua*l (2015 edition) "three blocks" is listed as the desired interval between bus stops. The length of 3 blocks may be hard to standardize and difficult to apply in high density, urban areas. School bus routing and safety guidance recommends a distance of several hundred yards between bus stops so that the driver can safely merge back into traffic and re-activate his/her amber, overhead warning lights before reaching the next stop. ("Safe Routes, Safe Stops," Pupil Transportation Safety Institute, 1992). Based on interviews with JCPS staff, the subject of bus stops may have been covered in other conversations with AR, but it seems odd this was not part of the official documentation for the frameworks.

- AR did not ask questions regarding special needs transportation. For example, the framework spreadsheet does not ask if there are differences in load times between regular education and special education students, despite general industry acknowledgement that loading of students in wheelchairs

requires substantially more time than loading an ambulatory student.

- The question of "late pickup" is unusual and, in the experience of the consulting team, outside the norm for school transportation operations. Intentionally scheduling a bus to arrive at a school after afternoon dismissal places burdens on the school-based staff to provide supervision.

  In a survey of peers undertaken for this project, 7 districts provided input on the subject of afternoon allowances:

  - 86% maintain a goal to have all buses lined up and ready to receive students at the dismissal bell
  - 14% indicated a goal to have all buses lined up and ready to receive students no later than 15 minutes after the dismissal bell
  - 14% of peer respondents allow buses to arrive at school as much as 15 minutes after school ends
  - 86% do not have an afternoon pick-up allowance
  - 57% indicated that their afternoon pick-up allowance is currently used only in limited, rare circumstances
  - 43% indicated that the afternoon pick-up allowance is currently used with more than 25% of their bus runs (which in no case exceeds 15 minutes)

- There are no questions regarding "overbooking" on buses. In a high-performing school routing department, historical load factors are considered when determining how much (or whether) a bus can be overbooked. For example, in 1 district, a bus run serving HS students may be assigned up to 150 students, because historical data show that only a fraction of the assigned students ever ride the bus.

Problems in regard to the responses provided by JCPS include:

- Some of the JCPS responses indicate a lack of knowledge as to what would be acceptable operationally. In 3 instances, the JCPS response is followed by a question mark, likely indicating that the district representative did not know what figures JCPS was then using for those parameters. Other district responses include "ideal" and "probably," which could have been misinterpreted by AR.

Regarding the 2 AR questions as to whether to allow un-mirroring, the district representative gave permission for this to be allowable in the SST/RO solution. Un-mirroring more than a few routes would have represented a huge change in the existing JCPS transportation operations and likely should have been recognized as such. When queried by Prismatic why this was even considered at the initial stages of building a solution, AR representatives responded without providing evidence that mirroring "adds 10% to the bus count" and that "most of Canada" does not require mirroring. In analyzing the subsequent solution JCPS put into operation on August 9th, an estimated 80%+ of the bus routes were un-mirrored.

- When asked, "Which pairs or groups of schools need to be at the same tier or on different tiers?" the district representative responded with, "Schools involved in depots probably need to be on same tier." This response appears to ignore specific geographic circumstances for various JCPS schools, particularly what would likely be best for pairs of adjacent schools. Later, after seeing the final AR routes, the question of which schools should be on the same or different tiers would be raised by compound coordinators who saw that some routing efficiency was lost by not putting adjacent schools in the same tier, or in other instances, that timing efficiency was lost by putting neighboring schools in the same tier, resulting in traffic delays. This was an instance where more familiarity with the workings of JCPS busing operations and geography was lacking in the SST/RO development process.

- Framework 2 was the same as Framework 1 except in 5 areas. Those areas were: a small difference in the latest possible SST, the possible number of ES tiers, the maximum amount of time before/after school allowed, and the maximum number of MS/HS students to be assigned.

- Framework 4 framework (labelled "New Framework 2" in some internal documents) is the same as Framework 3. It appears that JCPS provided only 3 different frameworks, despite explicitly contracting for 4 plans.

Problems in regard to the responses from AR to JCPS include:

- For all 4 frameworks, JCPS identified the same "primary objective" - "increase overall efficiency in order to improve student experience (i.e., middle/high school kids later times to improve student engagement, less crowded buses, shorter bus rides.)" In response, AR noted "reduce bus count, shift M/H non-magnet schools after 8 am, shift M/H & ES magnet schools to

earliest or latest tier solution as starting point." This response ignores JCPS concerns about crowded buses and long bus rides. This response also ignores research and best practices of later SSTs for secondary students.

- AR made a note that instead of 5:35 pm as the latest allowable bus stop time in the afternoon, magnet school students can be dropped later. AR made similar changes to the parameters in several other areas:

AR Questions	JCPS Framework 1 Response	Subsequent AR Notation
How many MS students can be assigned to a regular bus?	*66 but ideally would not have 3 to a seat if possible*	*60*
How many HS students?	*66 but ideally would not have 3 to a seat if possible*	*55*
What is the maximum ride time for students?	*60 minutes used to be target, but this was extended due to shortage*	*70 mins for non-magnet; 90 for magnet*
How many seconds should be allocated per stop, regardless of the number of students at the stop?	*60?*	*30*
How many seconds should be allocated per student loading/unloading at a stop?	*10?*	*5*
How long do buses need to stay at hubs/schools before leaving for next run?	*Schools probably 5-10 minutes, depots when all of the buses arrive*	*5*
How many minutes before the opening bell do buses need to arrive?	*15-20?*	*5*
Do buses need to arrive *before* the dismissal bell or at the bell time?	*15-20 before is ideal---but it is ok if some come a little later--we can load the first set and then load the next set*	*0*

The reduction in the maximum loads for secondary buses likely made minimizing the number of buses needed more difficult; without consideration of overbooking possibilities, it also made it likelier that buses would not operate at capacity. All of the other AR changes made minimizing the number of buses needed in a solution easier, but likely also made actually completing the routes as planned more difficult.

Particularly troubling in these changes is the change from planning to have buses arrive 15-20 minutes before the opening bell down to 5 minutes. For students who depend upon school meals, arriving 5 minutes before the bell makes it impossible to

In practice, bus "capacity" is not typically considered to be the manufacturer's rated capacity. A "78-passenger" bus may indeed be able to hold 78 elementary students, but it is unlikely to be able to hold the same number of middle/high students. Prismatic typically recommends that a district adopt "effective capacity" guidelines, such as "2 to a seat" for middle/high students. However, Prismatic then typically recommends that a district endeavor to overbook its buses to result in them actually operating at their effective capacity.

select and consume school breakfast in the cafeteria. Absent adjustments by a district's food service department in how breakfast is offered and adjustments in school procedures to allow students to eat breakfast in class, those students will miss out on breakfast.

- When asked "Which pairs or groups of schools need to be at the same tier or on different tiers?" JCPS responded, 'Schools involved in depots probably need to be on same tier, and some tiers can be all direct if those schools aren't involved in depots." This response indicates that JCPS anticipated the continued use of depots. For depot systems to work and as JCPS had previously done, the buses involved enter the depot area within a short time window (10-15 minutes), allow students to switch buses, then depart promptly. For this to be efficient and not result in an overly long ride time (or overly early drop time at a school), buses using a depot at the same time should all be at the same SST. The AR response as recorded on the frameworks document was, "Can't put all depot schools at the same tier…Can we have a split system with 2 tiers of depot schools, and 3 tiers of direct schools? Try to keep schools that share buses on same tier." This response seems to indicate that AR understood the need to keep buses sharing a depot interaction on the same SST, but it is not completely clear.

Of all the SST parameters that JCPS provided to AR in the frameworks, the 1 that was likely the most problematic was the allowance of substantial time for early drop offs before the first bell in the morning and equally substantial time for picking up students from school after the dismissal bell. In interviews, some JCPS staff indicated that they believed it was communicated to AR that 40 minutes prior/after was only to be used on an exception basis. However, reporting to JCPS as AR went through its optimization iterations does show that AR included the 40 minutes prior/after as generally acceptable (**Exhibit 3-2**).

Exhibit 3-2
SST Draft Provided by AR to JCPS in January 2023

D	E	F	G	H	I	J	K	L	M	N	O
schoolId	anchorTim	anchorTim	startTime	endTime	dwellTimeAM	dwellTimePM	allowanceAM	allowancePM	maxRoute	maxRoute	mirroring
4	7:55:00	14:45:00	8:00:00	14:40:00	5	5	40	40	75	75	0
5	7:35:00	14:25:00	7:40:00	14:20:00	5	5	40	40	75	75	0
7	8:35:00	15:25:00	8:40:00	15:20:00	5	5	40	40	75	75	0
10	9:35:00	16:25:00	9:40:00	16:20:00	5	5	40	40	75	75	0
11	9:35:00	16:25:00	9:40:00	16:20:00	5	5	40	40	75	75	0
12	8:35:00	15:25:00	8:40:00	15:20:00	5	5	40	40	75	75	0

Source: AlphaRoute, 2023

As an exception, 40 minutes would have been an improvement over the 55 minutes allowed in the 2022-23 routing plan. It became problematic when it was widely applied in the final SST schedule.

Between 2021-2023, the JCPS school board received a series of presentations regarding changes to busing and bell times. These proposals aimed to enhance student achievement and outcomes while also addressing the pressing need for multiple start times to reduce bus routes and accommodate the shortage of bus drivers. Although the overarching goal of improving student success and addressing transportation challenges was evident, there was a notable absence of detailed explanations regarding the specific trade-offs required to implement the proposed initiative. Instead, the presentations primarily focused on outlining broader objectives, and concerns raised to the school board mostly centered on the potential impact on the schedules of families, staff, and extracurricular activities. Even as the school board approved the final SST proposal, discussions remained centered on objectives, logistics, and feedback, with limited exploration of the nuanced trade-offs required to achieve the adopted bell time schedule. This lack of comprehensive discussion may have left the school board without a complete understanding of the full implications of the new schedule, potentially resulting in missed opportunities to address the described flaws effectively.

RECOMMENDATION 3-1:

Review options for adjusting SSTs for 2024-25.

At the time this report was written, JCPS lacked routing expertise within its transportation department and lacked 3rd-party routing software. In its experience, Prismatic has found it to require at least 1 full year of implementation before a school district can reasonably expect to effectively use routing software at a high level. Therefore, it would be ill-advised for JCPS to attempt another wholesale adjustment of SSTs for 2024-25. Nevertheless, there are likely some precision adjustments that can improve the current situation. These could be accomplished by the existing transportation department staff with their existing tools.

Implementation Steps:

The JCPS transportation director should convene weekly meetings with subordinate staff to explore options for adjusting selected school start times using these questions:

- Are there pairs of schools where adjusting the SST of 1 or both would likely lead to better operational performance?
- Are there schools where, given current operational capacity, it is likely that the school could be better served at either the adjacent earlier SST or the adjacent later SST?

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 3-2: Multi-tiered School Start Times

Although JCPS has 3 main start times in the new bell schedule, it also has 6 mini-tiers around those main ones. This has created unacceptably long workdays for a number of bus drivers, as well as high potential for regular daily delays for schools with later SSTs. To make this multi-tier schedule fit the district's desire to minimize the number of drivers required, a large portion of the daily routes were un-mirrored. This added substantial complexity.

School bell schedules are built upon a desired first school start time and then on the basis of available buses and drivers. If a district has enough buses and drivers to pick up all students at 1 time and deliver them to school, then the district can use 1 bell schedule. If the number of bus riders must be divided in half to fit on available buses, then a 2-tier system is needed. If it is an urban district and buses can be filled to capacity in just 15-25 minutes, then schools can start just 30 or so minutes apart, for example, 8:00 and 8:30 am. If the district is rural and it takes over an hour to fill a bus to even half capacity, the school starting bells may have to be an hour or more apart. JCPS has a mix of urban, rural, suburban, and exurban neighborhoods, which complicates tiering options.

Prior to 2023-24, JCPS bus drivers were accustomed to 2 runs each morning and afternoon, 3 if they also served an early childhood school. The new SSTs not only shifted to 3 main bells, but also included 6 mini-tiers that each serve a small number of schools (**Exhibit 3-3**).

Exhibit 3-3
Number of Schools Scheduled Off the 3 Main SSTs

Mini-Tier Start Time	# of Schools on the Mini-Tier
8:00 am	8 (only 4 receive transportation)
8:10 am	8
9:00 am	4
9:10 am	4
9:30 am	7
10:40 am	2
Total	33

Source: JCPS, January 2024

The implementation of such a schedule meant that a majority of bus drivers would have to complete 3 runs each morning/afternoon to meet the needs of the main SSTs and a substantial number would be needed to complete 4+ runs each morning/afternoon to also meet the needs of the mini-tiers.

Exhibit 3-4
Number of Runs JCPS Buses Need to Complete Daily

# of Runs	# of Buses, Morning	# of Buses, Afternoon
1	22	3
2	150	13
3	358	224
4	23	306
5	1	18
Total	554	564

Source: JCPS, January 2024

This kind of complexity increases the chances that a driver who encounters a run delay will be late for a subsequent run. If a driver only does 2 runs, the chances of delays compounding themselves, resulting in a more serious delay at the next school, are less. A 3-tier program effectively increases the chances of compounded delays by 50% over a 2-tier busing system. A 4- or 5-tier program increases the chances of delays proportionately. The effects of this kind of complexity can be seen in the increasing morning and afternoon lateness, as reported by principals in an anonymous survey conducted for this project between December 8, 2023 and January 3, 2024. When asked how late their last bus arrives to campus in the mornings and how late the last bus reaches campus in the afternoons, principals on later SSTs report substantially greater lateness.

Exhibit 3-5
Principal Survey Responses Regarding Bus Arrivals to Campus

Currently, the last bus in the morning arrives:	School Start Time		
	7:40-8:10 am	8:40-9:30 am	9:40-10:40 am
at or before the 1st bell	56%	3%	0%
~10-20 minutes after school start	19%	32%	21%
~21-30 minutes after school start	19%	30%	29%
>30 minutes after school start	6%	35%	39%

Currently, the last bus in the afternoon arrives on campus:	School End Time		
	2:20-2:50 pm	3:20-4:10 pm	4:20-5:20 pm
<15 minutes after dismissal	34%	3%	0%
16-30 minutes after dismissal	19%	0%	6%
31-45 minutes after dismissal	13%	5%	12%
46-60 minutes after dismissal	3%	35%	30%
>60 minutes after dismissal	31%	57%	52%

Source: Prismatic survey, December 2023

During January 10-12, 2024 school observations, Prismatic also found that the district was having difficulties meeting its planned SSTs. However, the problem appeared to be consistent across the 3 main start times (**Exhibit 3-6**).

Exhibit 3-6
Prismatic January 2024 School Observations

	School Start Time		
	7:40 am	8:40 am	9:40 am
Number of schools observed in the morning	4	4	4
Number of schools where at least 1 bus arrived after the start of school	3	3	4
Number of schools observed in the afternoon	5	5	4
Number of schools where at least 1 bus arrived 15-30 minutes after dismissal	5	5	4
Number of schools where at least 1 bus arrived >30 minutes after dismissal	5	5	3

Source: Prismatic, 2024

The district seems to have gained little from the complexity the mini-tiers introduced. Overall, they seem to have resulted in making the routing plan more, not less, difficult to meet in a timely fashion. Back-of-the-envelope calculations show that to bus ~65,000 students, or 5,000 per grade (65,000/13 grades, K-12), results in 30,000 K-5 ES students, 15,000 6-8 MS students, and 20,000 HS students. A fleet of 500 buses could transport 30,000 ES students by assigning just 60 students per bus. The

same 500 buses could transport 20,000 HS students by assigning just 40 students, less than 2 students per seat. The 15,000 MS students could also be handled by 500 buses, assigning just 30 students per bus. A 3-tier program built around common start times for each school level, for example, 7:40 for ES, 8:40 for HS, and 9:40 for MS appears initially possible. Of course, an initially simple plan could become difficult to implement if some bus runs must exceed the time allowed; because of that, in some cases not every bus can be expected to only do 3 runs in the morning and 3 runs in the afternoon. That would appear to have been the rationale for the mini-tiers. However, an examination of the runs assigned to each bus undermines the assumption that rationale was in play in the development of the final JCPS SSTs.

This can be seen in the analysis of buses assigned to serve schools on a mini-tier that also serve the previous or next major tier. For example, it would be a good use of a bus if it could drop students at a school on the 7:40 tier, then the 8:00 mini-tier, then the 8:40 tier, then the 9:40 tier. The creation of the 8:00 mini-tier allows that bus to be used 4 times in the morning, instead of just 3. However, if the same bus is only assigned to the 8:00, 8:40, and 9:40 tiers, the district has gained nothing and, having shortened the amount of time available to serve the 8:40 tier, it would have been better off assigning the bus to serve only the 3 major tiers.

Exhibit 3-7 provides the number of buses assigned to serve the schools in each mini-tier, then the number of those that also serve the previous or next major tier. The final column shows the number of buses that serve the mini-tier and both the previous and next major tier. As shown, at the individual bus level, the net gain in the morning from the mini-tiers is just 26 buses that could potentially serve 4 tiers in the morning because they serve 2 of the major tiers and 1 mini-tier. Of those 26, only 17 buses actually serve 4 or 5 SSTs in the morning.

Exhibit 3-7
Number of Mini-Tier Buses (MTB) that Also Serve the Previous or Next Major Tier

Mini-Tier Start Time	# of Schools on the Mini-Tier	# of Buses Assigned to Serve the Mini-Tier	Previous Major Tier	# of MTBs That Also Serve the Previous Major Tier	Next Major Tier	# of MTBs That Also Serve the Next Major Tier	# of MTBs That Also Serve Previous and Next Major Tier
8:00 am	4	30	7:40 am	8	8:40 am	16	2
8:10 am	8	52	7:40 am	20	8:40 am	17	5
9:00 am	4	40	8:40 am	17	9:40 am	19	8
9:10 am	4	39	8:40 am	26	9:40 am	16	9
9:30 am	7	56	8:40 am	53	9:40 am	2	2
Total							26

Source: JCPS, January 2024

On-time busing relies on accurate scheduling. There are variables that the transportation router cannot control – accidents, detours, road construction, a parent who insists on talking to the bus driver now, an upset student who will not board the bus promptly, etc. But a 3-tier system with school start and end times 1 hour apart must have its buses complete all of their work in about 3 hours each morning and afternoon, whether the bus is doing 2, 3, 4, or 5 runs each session. If the combined time lengths of the JCPS bus runs exceed 3 hours, then the buses will be late.

In their review of AR bus runs, delivered in late July 2023, JCPS principals quickly noted that bus runs were too long and that some were scheduled to arrive late even by the 40 minutes parameter built into the framework. On the principal survey completed for this project, 77% of principals noted that they had "many concerns" when they first saw the 2023-24 bus routes for their schools. Of the 101 principals who indicated they notified someone when they realized they had concerns about the bus routes, 56% stated they notified an assistant superintendent/immediate supervisor. JCPS leaders had a "blue and white report" that listed more than 70 schools where it was anticipated that buses would be 20-30 minutes late. This report was available several days before August 9th. Although difficult to tease apart the various factors that contributed to this problem, the use of mini-tiers that provided limited obvious benefits but which complicated transportation operations appears to have been a problematic factor. A number of options to crunch the SST table down to just 3 tiers do not seem to have been explored, the most important of which was historical bus ridership data.

Early in the SST/RO process, AR indicated that it could analyze "millions" of variables as it worked to create an optimal bell and bus schedule. Some

of the key variables were listed by JCPS and AR in the frameworks documents that led to the SST/RO proposals. The frameworks document did not include a request for bus ridership data. AR did request bus ridership data from JCPS in June 2023, after the SSTs had been determined. It appears that JCPS provided to AR a database of all students eligible for transportation and did not include estimates of likely actual ridership rates based on historical data.

Bus ridership data was requested from the district but not provided to Prismatic. JCPS provided a spreadsheet labelled "historical bus ridership," but it contained only data about the number of students eligible for transportation, not the number of students who have historically ridden on JCPS buses. In interviews, JCPS leaders reported that actual counts of the number of students riding buses were not collected on a regular, districtwide basis, with some staff indicating they thought the data would be of little value. Instead, 1 JCPS leader noted that the district relied on "gut feeling" regarding ridership. As required by KDE, ridership counts are taken once a year; the transportation director noted those data were provided to the GIS executive director who was either the primary or secondary contact person with AR during the SST/RO optimization process.

It does not appear that the admittedly limited ridership data collected for the KDE was used in the AR process. It also does not appear that either AR or JCPS attempted to collect updated ridership data during the SST/RO process. At the bus compound level, transportation coordinators were likely to have counts on the number of students riding their buses, or could get them by asking drivers. Ridership levels typically vary from age group to age group and from neighborhood to neighborhood. Knowing local ridership patterns can be a key to efficiently utilizing available buses. If a district does not know ridership patterns, a school that previously had 10 buses assigned to it will end up with 10 buses assigned in the new routing solution.

Although not completely comparable, a key aspect of the work that undergirded the SST change in Anne Arundel County Public Schools (AACPS, MD) was an assessment of actual bus ridership and the use of overbooking to help fill each bus in use. AACPS has some transportation challenges similar to those of JCPS, including a large number of students eligible for transportation, large geography, and a mix of urban and rural areas (**Exhibit 3-8**).

Exhibit 3-8
Comparison of JCPS and AACPS Transportation Challenges

	JCPS	AAPCS
Geographic Size	395 square miles	588 square miles
# of Students Eligible for Transportation	62,702	64,085
# of Bell Times, 2023-24	3 main 6 mini-tier	3 ES at 8:00 am HS at 8:30 am MS at 9:15 am
# of Buses Required	554 am 564 pm	519

Source: Prismatic, February 2024

RECOMMENDATION 3-2:

Review options for moving schools on mini-tier start times to a major tier start time.

At the time this report was written, JCPS lacked routing expertise within its transportation department and lacked 3rd-party routing software. In its experience, Prismatic has found it to require at least 1 full year of implementation before a school district can reasonably expect to effectively use routing software at a high level. Therefore, it would be ill-advised for JCPS to attempt another wholesale adjustment of SSTs for 2024-25. Nevertheless, there are likely some precision adjustments that can improve the current situation. These could be accomplished by the existing transportation department staff with their existing tools.

Implementation Steps:

The JCPS transportation director should convene weekly meetings with subordinate staff to explore options for adjusting the SSTs of schools currently on mini-tiers using this question:

- Can consolidation of existing mini-tier bus runs make it possible to fit a school into the earlier or later major tier time?
- What was gained operationally by placing each school on a mini-tier start time? If nothing was gained, then it should be moved to an adjacent major tier time. If there was an operational gain, can the same gain be accomplished elsewhere and the school moved to a major tier start time?

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 3-3 – School Start Times for Secondary Students

Although JCPS leaders were aware of the scientific basis supporting later school start times for secondary students, it allowed the development of SST options to ignore that research base. The district ultimately adopted an SST schedule that was unequitable across JCPS middle and high schools.

Currently, middle and high schools are scattered through the final SST table. Approximately half of the secondary schools start prior to 8:30 am, which is typically used as the line between a start time that is too early and an acceptable start time for adolescents (**Exhibit 3-9**).

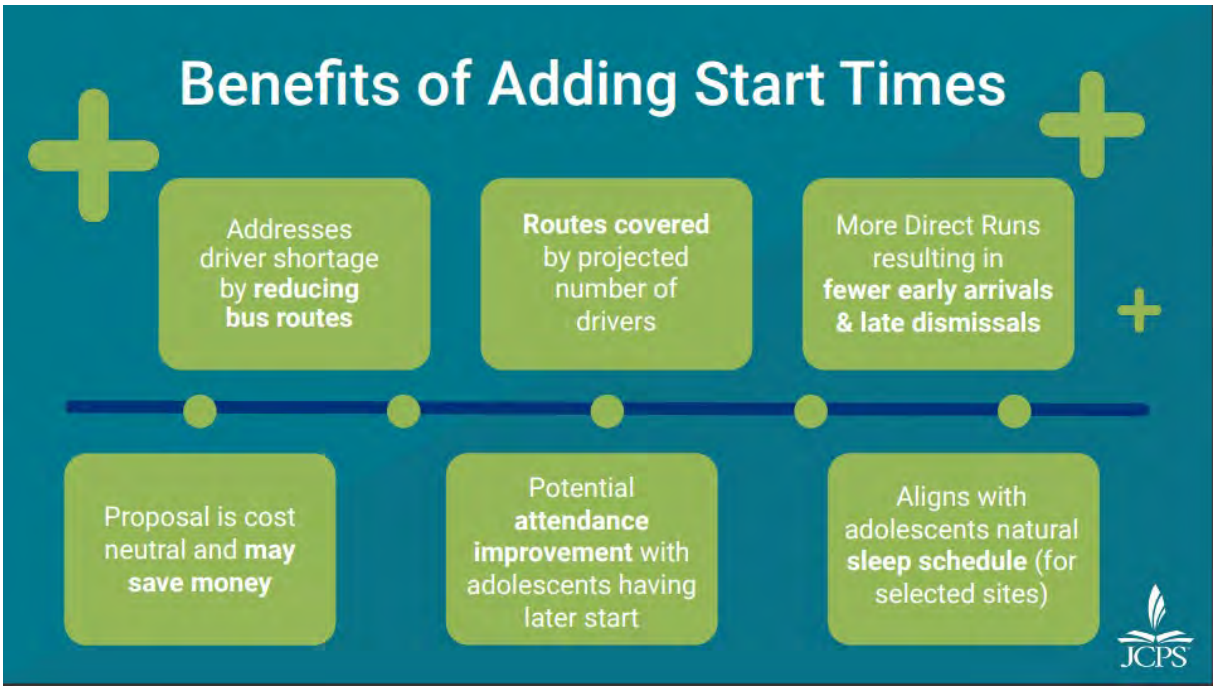
Exhibit 3-9
Breakdown of Start Times for JCPS Secondary Schools

	Prior to 8:30 am	After 8:30 am
Middle Schools	15	17
High Schools	13	17

Source: JCPS, January 2024

JCPS leadership briefed the school board as SST options were being considered. In the February 7, 2023 introduction of the SST initiative to the school board, later start times for adolescents was emphasized, receiving 2 full slides out of 8 in the presentation. A 3rd slide in the presentation provided 6 anticipated benefits of changing SSTs; 2 focused on benefits for adolescents (**Exhibit 3-10**).

Exhibit 3-10
Presentation to JCPS School Board
February 7, 2023



Source: JCPS Website, January 2024

It was also included as an objective in the frameworks communication from JCPS to AR. As SST plans became more concrete, JCPS administrators acknowledged that they and AR were not able to provide as many adolescent students a later start as they had hoped. In the February 28, 2023 presentation to the school board, the goal of later start times for adolescents was now listed as a benefit - "potential attendance improvement with adolescents having later start." JCPS leadership pledged to seek a revised, future busing schedule that would give more middle and high school students more sleep in the morning.

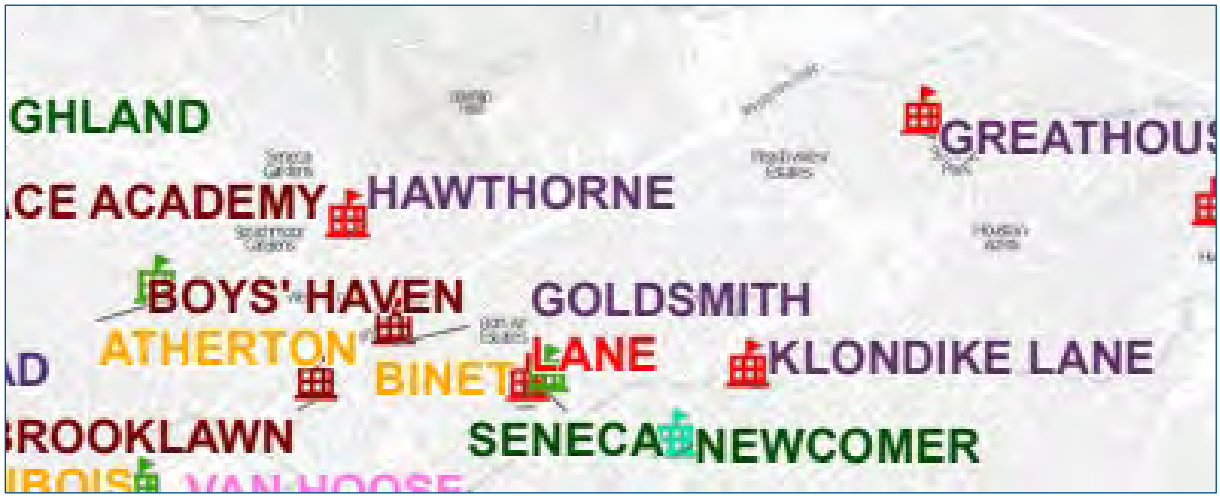
For a bell times initiative that was intended to provide adolescent middle and high school students more time to sleep in the mornings, the new schedule did not change life much for many of the older students. Under the new bell schedule, 10 high schools and 12 middle schools maintained their 7:40 am start time from previous years. Sixteen high schools and middle schools were shifted to an 8:40 start. One high school and 1 middle school were put on the 9:40 major tier, making this group of adolescent students with 2 extra hours of sleep an elite group.

Based on the available data regarding how AR selected which schools to include in which SST tiers, it is unclear whether AR followed an order of operations that attempted to put all secondary schools on the 8:40 and 9:40 am tiers but then selectively moved some to the earlier 7:40 am tier as it worked through routing options or whether the stated JCPS objective

of moving secondary students to a later SST was not in the top level in the order of operations while optimizing. The AR notes on the JCPS-provided frameworks seem to indicate that at least secondary magnet schools were slated for either the 7:40 or 9:40 am tier from the beginning of the optimization work.

Regardless, once the initial SST/RO solution was developed, it does not appear that either AR or JCPS reviewed the results to see whether it had maximized the number of secondary schools at later SSTs. A visual analysis of the district's school maps yields a number of likely candidates for moving a secondary school to a later SST and moving elementary schools to the earlier SST. For example, Atherton HS (in orange in **Exhibit 3-11**) was placed on the 7:40 am start. Three relatively close elementary schools, Goldsmith, Hawthorne, and Klondike Lane (shown in dark purple) were placed on the 9:40 am start.

Exhibit 3-11
Proximity of Atherton HS to Later-Starting ES



Source: Prismatic, January 2024

The morning and afternoon buses required for each of the schools indicates that some combination of 2 of the candidate elementary schools could have been swapped earlier so that Atherton HS could start later (**Exhibit 3-12**).

Exhibit 3-12
Number of Atherton HS and Nearby ES Buses

School	Morning Buses Allocated	Afternoon Buses Allocated
Atherton HS	23	26
Goldsmith ES	13	13
Hawthorne ES	14	10
Klondike Lane ES	10	11

Source: JCPS Transportation Department, January 2024

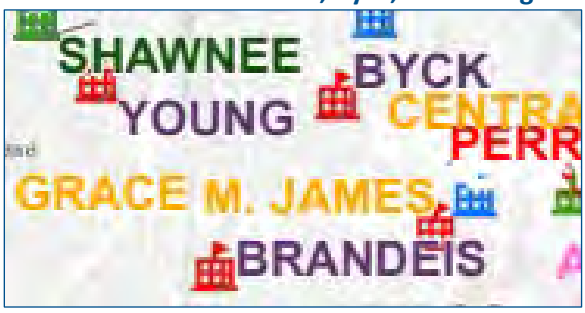
The consulting team found multiple other potential swaps. Several samples are shown in **Exhibit 3-13**.

Exhibit 3-13
Potential Swaps of Later HS for Earlier ES

Possible Swap of Binet for Some Combination of Hawthorne, Goldsmith, and Klondike Lane ES

Possible Swap of Central HS for Some Combination of Atkinson, Byck, King, & Young ES

Possible Swap of Grace James HS for Some Combination of Brandeis, Byck, and Young ES



Possible Swap of W.E.B. DuBois HS for Some Combination of Indian Trail, Price, Slaughter ES

Source: Prismatic, January 2024

On the principal survey conducted for this project, a few secondary principals noted the later SSTs as a benefit. They noted that many of their students are able to sleep longer and it does seem to be helping with student attendance. They also noted HS students are more aware and ready to engage in learning at the opening bell.

In what should likely be considered the final word on the subject of SSTs for secondary students, the American Academy of Pediatrics has recommended that middle and high schools not start before 8:30 am. The Academy made this recommendation in 2014. As noted in their policy statement, "the evidence strongly implicates earlier school start times…as a key modifiable contributor to insufficient sleep."[1]

RECOMMENDATION 3-3:

Review options for adjusting all secondary schools to the 8:40 am or later SST for 2024-25.

At the time this report was written, JCPS lacked routing expertise within its transportation department and lacked 3rd-party routing software. In its experience, Prismatic has found it to require at least 1 full year of implementation before a school district can reasonably expect to effectively use routing software at a high level. Therefore, it would be ill-advised for JCPS to attempt another wholesale adjustment of SSTs for 2024-25. Nevertheless, there are likely some precision adjustments that can improve the current situation. These improvements could be accomplished by the existing transportation department staff with their existing tools.

The JCPS transportation director should convene weekly meetings with subordinate staff to explore options for adjusting selected school start times using this question: Within the existing SST table, where can a secondary school on the 7:40 – 8:10 am starts be swapped for 1+ elementary schools on the 9:40 start?

Fiscal Impact:

This recommendation can be implemented with existing resources.

[1]https://pediatrics.aappublications.org/content/pediatrics/early/2014/08/19/peds.2014-1697.full.pdf

Chapter 4
Routing Optimization Initiative

Background

Bus route optimization (RO) can take a number of forms in a school district. In some districts, it is a continual process of seeking to adjust routes to "do more with less" – to fill buses more completely while seeking to reduce routes times and deadhead mileage. In other districts, much of the RO work happens in response to new circumstances – an apartment building opens with students who need transport, the attendance boundary of a school is changed, or the needs of a special education student require a new schedule of transport. As a best practice, routing work follows an annual schedule that ties together the work of a number of departments outside transportation. This typically includes:

- the technology department, which is responsible for rolling over the student database from the current to the next school year
- the special education department, which makes the bulk of its student placement decisions the spring before the next school year
- the department(s) responsible for managing new student enrollment and enrollment projections so that transportation can be apprised of potentially new routing needs.

JCPS undertook its recent RO initiative motivated primarily by the ongoing driver shortage and the increased demand for bus routes and drivers resulting from the new school choice program. Although not directly involved in most of the planning around the RO initiative for 2023-24, the transportation department includes routing as a responsibility of each of the 9 compound coordinators.

JCPS Internal School Transportation Routing Positions

The recent RO initiative was the result of a collaboration between a vendor (AlphaRoute) and a JCPS leadership team comprised of the GIS executive director, the chief operations officer (COO), and the retired chief of staff who was brought back in a consultant capacity.

Timeline of Key Events for Routing Optimization Initiative

Date	Event
1990s	JCPS obtains 3rd party routing software and tests it in 2-3 bus compounds. The test is not successful; the district never fully implements the software.
2012-13	JCPS adjusts all elementary attendance boundaries and has to adjust bus routes as a result. JCPS staff indicated to Prismatic that some grandfathering of students was allowed during this process.
2015	JCPS obtains new 3rd party routing software. It is used for some special education routing.
2019	The demographic analyst who is now the JCPS GIS executive director first interacts with the consulting firm Dynamic Ideas/AlphaRoute (AR).
September 2019	JCPS cancels its contract with a 2nd provider of routing software. The district had maintained a contract with that vendor since 2015, but never fully implemented the software.
May 2021	JCPS provides a "sole source" justification for contracting with AR for bell time optimization and routing service to resolve the bus driver shortage. AR pledges they "will optimize for the chosen objectives and adhere to the constraints and policies as well" of JCPS.
June 2021	The JCPS/AR contract is finalized for bell times optimization and re-routing with intent of reducing the number of required bus drivers.

Date	Event
February 1, 2022	JCPS leadership and COO present "Bell Times and Our Transportation System" to the school board. The COO emphasizes that in 2021-22 JCPS transports 70% of its students versus a national average of 50%, uses 770 routes, and relies heavily on many routes completing double runs, indicating there are 191 HS/MS and 117 ES double runs at the time. AR is identified as a partner in the work of addressing transportation challenges.
March 8, 2022	JCPS reports to the school board with plans for 2 phases of implementation of new bell times and bus routing. Phase 1 for a "small number of schools" is planned to start in August 2022. These plans are later canceled in favor of a more "comprehensive," full scale roll-out of all 3 initiatives (SC, SST, and RO, in August 2023).
January 2023	AR is identified as conducting the planning for SST and RO initiatives.
February 28, 2023	JCPS and AR present "Start Smart Start Time Proposal" to the school board. The need to address the bus driver shortage and a desire to provide later school start times for MS/HS students are cited as the reasons for the bell times changes. AR states that the optimal bell time scenarios are the product of their algorithms and mathematical modeling, using routing parameters set previously with JCPS in the "frameworks."
March 28, 2023	The school board approves the "Start Smart Start Time Proposal." One impact of this is the need to complete substantial bus re-routing and RO.
May 8, 2023	AR provides JCPS with its "initial solution."
July 10, 2023	AR delivers initial bus routes to JCPS.
~July 17, 2023	AR delivers final bus routes to JCPS. The transportation department and school principals find a number of problems with the routes, including: some students left out of plans, buses routed to arrive late at schools, missing afternoon bus schedules, runs too long, drivers sent into unfamiliar areas, etc.
July 24, 2023	Bus stop and route information goes live in the district.
August 9, 2023	Start of school, date of the Incident.
August 11-18, 2023	In the days after the Incident, AR sends some of its staff to JCPS to assist.

Findings

FINDING 4-1 – Routing Timeline

The routing timeline that JCPS has generally used in years prior was not adhered to by AlphaRoute. Assuming that major changes in routing could be handled in the same amount of time allocated for a normal process led to delays in rollout.

The traditional timeline followed by JCPS bus compound coordinators, transportation managers, and the GIS department in preparing for the upcoming school year was:

- April: Student projections for MS/HS students initiated by the GIS department, reviewed by transportation staff
- Mid-April: Compound Coordinators start creating MS/HS routes
- Mid-May: GIS department creates ES student projections
- Early June: Routing for ES students begins
- July 1st: Completion and review of all routes

The detailed traditional schedule is shown in **Exhibit 4-1**.

Exhibit 4-1
Traditional JCPS Transportation Routing Schedule

Date	Event	Responsibility
December	Check Luggage Tag Counts	Operation Manager
January	Order Luggage Tags	Operation Manager
March 25	Pre Edit	Bus Compounds
March 25	Delete GF Stops, Update Master List, L&Rs, Routing System	GIS Exec Director, Managers, Coords, Assts
April 1	Pull MS/HS Student Projections and Qualify Students	GIS Exec Director
April 4-6	Coords Review MS/HS Projections	GIS Exec Director, Managers, Coords, Assts
April 15	MS/HS Routing Begins	Coords/Assts
May 11	Bus Finder - Off to Public	GIS Exec Director
May 4	Begin Entering MS/HS Bus Stops in Routing System	Compound Staff
May 18	Pull Elementary Projections and Qualify Students	GIS Exec Director
June 1	Deadline For MS/HS Routing (Start L&R's, does not include pairing)	Coords, Assts
June 2	Review MS/HS with Compounds	Managers, Coords, Assts
June 3	Start ES Routing (Including L&R's)	Coords, Assts
June 30	Deadline For ES Routing (does not include pairing)	Coords, Assts
July 6	1st edit	Operation Manager
July 9, 14, 20	Edit	Clerical, Compounds
July 16	Deadline For Routing ES	Coords, Managers
July 19-23	Edit	Operation Manager
Week of July 19	Early Childhood (ECH) Distribution	Operation Manager

Date	Event	Responsibility
July 21	Pairing Complete	Coords, Managers
July 23	Bus Finder Live	GIS Exec Director
July 19-23	Principal Meetings with Coords Visit Schools	Bus Drivers
July 27	Route Preview	Coords
July 31 & August 2	Route Selection	Coords
August 3	Orientation & Mandated Training	All Transportation Staff
August 4 - 6	A.M. & P.M. Bid Simulation (Including ECH)	Drivers, Monitors
August 6	MS/HS Principal Meetings 11:00 – 11:30 am ES Principal Meetings 12:30 – 1:00 pm	Drivers, Monitors
August 4-6	Coords and/or Asst Coords Present at All Depots	Coords and Asst
August 9	TAPP Training	Training
August 9-10	Extra Simulation, if needed	Drivers, SNTAs, Monitors
August 9-10	Waller Training: Drivers, SNTAs, Ords	Drivers, SNTAs, Ords
August 11	**First Day of School**	All Transportation Staff
August 25	**ECH Transportation Starts**	All Transportation Staff

Source: JPCS Transportation Department, provided by the COO, 2023.

Critical points of failure in the 2023-24 RO timeline were:

- JCPS initially anticipated AR route information for review in March (for regular education routes) and May (for special education routes). Instead, AR did not provide route information until July 10, 2023. Those routes were incomplete and necessitated returning to Alpha Route for finalization. The district received finalized routes from AR on July 17, 2023. In a subsequent interaction with Prismatic, an AR representative indicated that the routes delivered on July 17th were only intended to be "about 80% complete." However, given the substantial changes presented in the AR routes, there was little time available for JCPS staff to make adjustments.

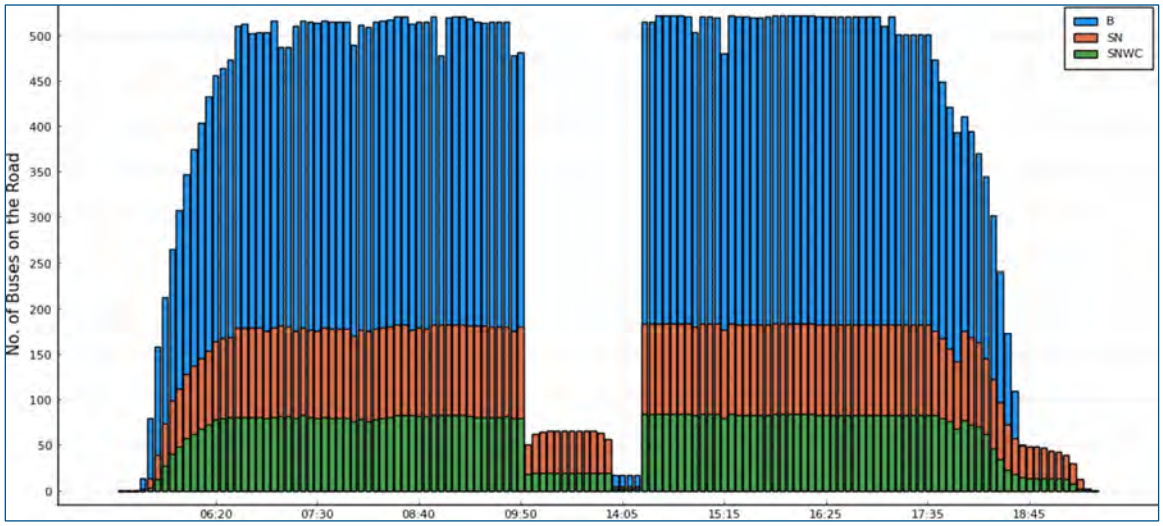
- July is typically the time when the district adds stops, makes last-minute changes, and incorporates new additions into already finalized routes. The delivery of AR routes on July 17th eliminated half the days typically used for this kind of work.

These failure points were compounded by 2 other decisions made earlier in the RO process: accepting incomplete data from AR as their RO work progressed and excluding the transportation department from most of the RO planning process.

The GIS executive director and COO received updates from AR as their SST/RO work progressed. However, those updates did not include details that provided assurances that the RO efforts were leading to truly workable routes. In January-February 2023 (termed Phase 2 in some JCPS documents), AR provided JCPS with updates that included a list of proposed SSTs and histograms showing the number of buses on the road during the day. For example, an update on January 20, 2023 noted that AR had developed a solution that used ~570 buses with "longer walking distances" and "longer time on bus for students." The accompanying spreadsheet and histograms provide a limited overview (**Exhibit 4-2**).

Exhibit 4-2
Proposed SSTs and Bus Needs Under a January 2023 Scenario

id	name	schoolId	startTime	endTime	type
4	CAMP TAYLOR ELEMENTARY	4	8:00 AM	2:40 PM	ELEM CLUSTER
5	CANE RUN ELEMENTARY	5	7:40 AM	2:20 PM	ELEM MAG PROG
7	EASTERN HIGH	7	8:40 AM	3:20 PM	M/H MAG PROG
10	FAIRDALE ELEMENTARY	10	9:40 AM	4:20 PM	ELEM MAG PROG
11	FERN CREEK ELEMENTARY	11	9:40 AM	4:20 PM	ELEM CLUSTER
12	FERN CREEK TRADITIONAL HIGH	12	8:40 AM	3:20 PM	M/H MAG PROG
13	GREATHOUSE/SHRYOCK TRADITIONAL ELEMENTARY	13	9:40 AM	4:20 PM	ELEM MAG SCH
14	GREENWOOD ELEMENTARY	14	9:30 AM	4:10 PM	ELEM CLUSTER
16	TULLY ELEMENTARY	16	9:30 AM	2:20 PM	ELEM CLUSTER
18	ATHERTON HIGH	18	7:40 AM	2:20 PM	M/H MAG SCH
19	THE BROOK/DUPONT	19	9:40 AM	4:20 PM	SPED
20	THE BROOK/KMI	20	9:30 AM	4:10 PM	SPED
22	MEDORA ELEMENTARY	22	9:40 AM	4:20 PM	ELEM CLUSTER
24	MIDDLETOWN ELEMENTARY	24	9:30 AM	4:10 PM	ELEM CLUSTER
27	OKOLONA ELEMENTARY	27	9:40 AM	4:20 PM	ELEM CLUSTER
28	BOYS AND GIRLS' HAVEN	28	8:40 AM	3:20 PM	SPED
29	ST JOSEPH CHILDREN'S HOME	29	9:40 AM	4:20 PM	SPED



Source: AR email to JCPS, January 20, 2023.

District staff confirmed that additional details on this potential solution were not provided. Together, the email, spreadsheet, and histograms provide only an incomplete picture. They do not provide sufficient detail for JCPS to assess the quality of the proposed solution. JCPS did not receive:

- a listing of how many buses would be required by each school
- quantification of how many students would be walking longer and whether those distances were acceptable
- quantification of how many students would have longer bus rides and whether those lengths were acceptable
- verification that other routing parameters were followed – for example, how much time was allowed for buses to load at elementary schools in the afternoons?
- a listing of what the route times would be for each bus, once the school-level runs were stitched together, so that the district could gauge the impact on bus driver hours

In June-July 2023 (termed Phase 6 in some JCPS documents), the district provided AR with a file of stop changes for ~17k students. District staff noted that it expected AR to make those changes before providing the routing solution in July and believed it was discussed. However, it does not appear that the district received written verification that those changes were incorporated into the routing solution, nor did the district make a comprehensive assessment to verify they were made. In early July, AR told the district they had a routing solution that used 567 buses. AR provided the raw data files that JCPS then imported into their system. AR also provided the solution in their software and made it available to JCPS. AR did not provide summary data that enabled district leaders to assess the quality of the solution. District staff noted that the timeline did not give them enough time to quality check every run/route.

During the SST/RO collaboration with AR, the key points of contact with the vendor were the GIS executive director and the retired chief of staff; the transportation department was generally excluded. Instead, the GIS executive director, who had a long history working in the district and who had worked in the transportation department previously, was viewed as the representative for concerns, questions, or needs of the transportation department. He worked in concert with the retired chief of staff, who also had a long history in managing start-of-school planning. When asked why members of the transportation department were not materially included in the RO planning process, JCPS staff members indicated that the transportation director was relatively new and viewed

as having other transportation areas in need of attention. Some staff indicated that JCPS transportation specialists lacked depth in experience, lacked leadership experience, or would not be objective in RO planning.

Initially granted access to the AR software in the spring of 2023, transportation coordinators were informed that the routes were still a work in progress and were advised to await their completion. Following this, a training session on how to navigate stops and utilize the software took place in the week after July 4th. Once transportation coordinators were able to view the AR routes in mid-July, they identified a number of problems. Had they been part of the RO planning process earlier, it is possible problematic routing issues could have either been identified earlier, leaving time to address them, or avoided altogether. Instead, because of the RO initiative timeline, transportation coordinators worked for 35 days straight, including weekends, after receiving the AR routes, in an attempt to address problems.

The delay in receiving the final AR information disrupted the established timeline. The shortened window between receiving incomplete routes and the school start date on August 9th restricted the district's ability to thoroughly review, adjust, or optimize routes for maximum efficiency and student safety. This compressed timeline and delayed receipt of finalized routes contributed to service disruptions at the beginning of the school year and led to confusion, delays, and inconvenience for students, parents, and schools relying on the transportation system.

RECOMMENDATION 4-1:

Re-establish and adhere to an annual routing timeline.

Attempting to fit a normally lengthy process into a shortened time span while also making substantial changes in the routes was a critical point of failure that impacted events on August 9th. To help ensure it does not happen again, the district should implement a clear drop-dead enrollment date and routing deadlines to ensure that transportation planning aligns with finalized student enrollments. The district should reintroduce the original JCPS routing timeline, coupled with the utilization of advanced computerized routing systems. This will optimize the transportation planning process, enabling the district to efficiently allocate resources and plan routes well in advance of the academic year.

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 4-2 – AR Bus Routes

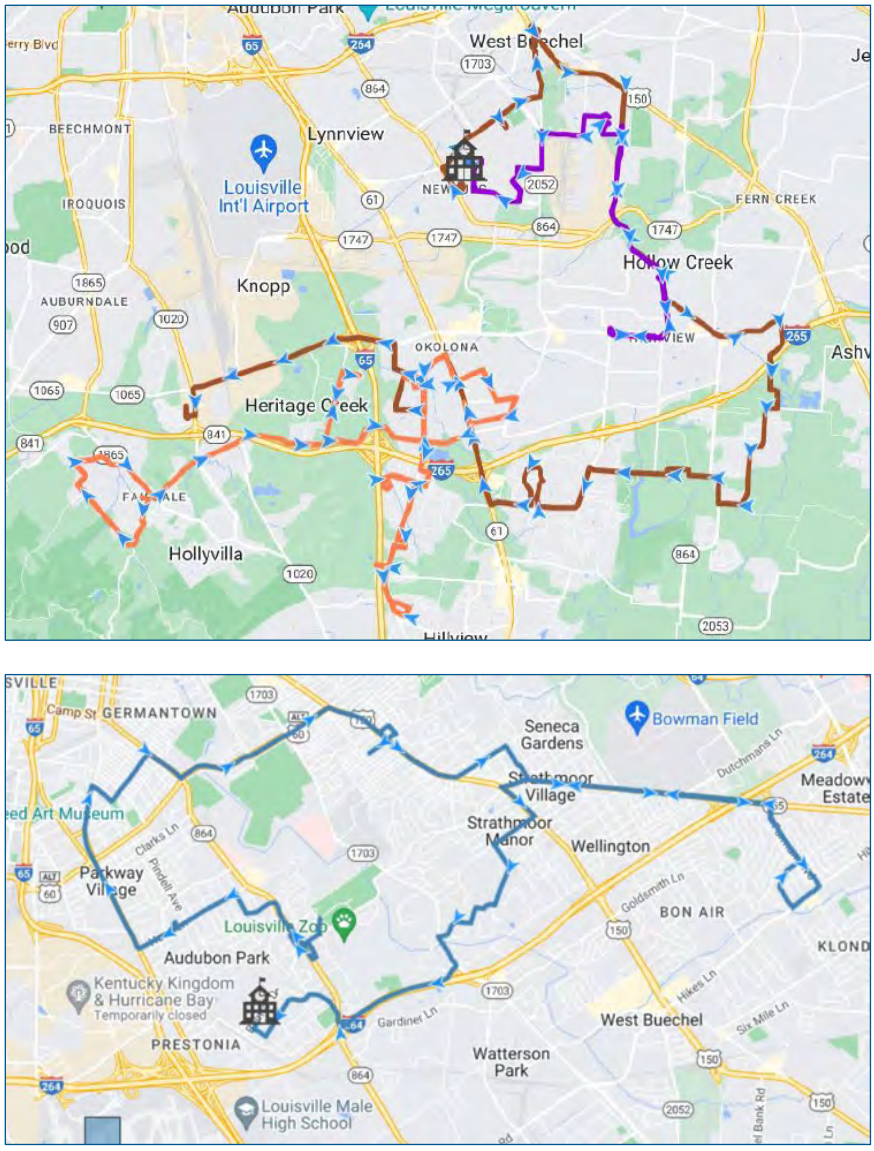
The district received inadequate bus routes from AR for the 2023-24 school year. The routing solution provided attempted to incorporate a

number of improvements and innovations, but the end results were suboptimal. The AR routing solution included lengthy routes, scheduling buses to serve multiple schools within the same start tier, missing schools, and even poor routing.

Lengthy Bus Routes

AR's restructuring of school bus routes involved substantial geographic displacement, with some locations more than 10 miles apart. **Exhibit 4-3** provides some examples of lengthy linear runs. Additional examples are provided in Appendix C. As designed, a number of these routes result in long ride times for students for whom a more direct path would be preferable and shorter.

Exhibit 4-3
Examples of Lengthy Runs



Source: JCPS, from AR software, 2024

Buses Serving Multiple Schools Within a Tier

The routing solution included an unusual feature: In a number of cases a bus was assigned to serve more than 1 school within the same SST. For example, in the morning, the plan expects Bus 1332 to deliver students to 3 schools that all have the same 7:40 am start time (Crums Lane ES, Schaffner Traditional ES, and Conway MS). On the day Prismatic observed the morning arrivals at Crums Lane ES, bus 1332 was departing that school at 6:50 am, which is outside the 40-minute allowance, but perhaps necessary if the bus is to also deliver students before the start of school

to the 2 other schools. **Exhibit 4-4** provides the number of buses expected to serve students of 1 or more schools within a SST tier each morning and afternoon. As shown, a substantial number of buses are routed to serve 2+ schools with the same start time each morning. The buses that are similarly scheduled to serve 2+ schools in the afternoon are more troubling, because it is not possible for them to be at the 2nd or later schools in a tier at dismissal, meaning that, by design, school staff must provide afterschool supervision.

Exhibit 4-4
Number of Buses Scheduled to Serve 1+ Schools in the Same Morning SST Tier

	7:40 am	8:00 am	8:10 am	8:40 am	9:00 am	9:10 am	9:30 am	9:40 am	Total
# Buses Serving 1 School in the Tier	317	30	27	318	40	39	48	298	1,117
# Buses Serving 2 Schools in the Tier	86	0	25	148	0	0	8	78	345
# Buses Serving 3 Schools in the Tier	5	0	0	9	0	0	0	13	27
# Buses Serving 4 Schools in the Tier	0	0	0	1	0	0	0	1	2
Total	408	30	52	476	40	39	56	390	1,491

Number of Buses Scheduled to Serve 1+ Schools in the Same Afternoon Dismissal Tier

	2:20 pm	2:40 pm	2:50 pm	3:20 pm	3:40 pm	3:50 pm	4:10 pm	4:20 pm	Total
# Buses Serving 1 School in the Tier	419	36	28	323	27	32	33	197	1,095
# Buses Serving 2 Schools in the Tier	62	0	28	128	0	0	7	67	292
# Buses Serving 3 Schools in the Tier	2	0	0	15	0	0	1	17	35
# Buses Serving 4 Schools in the Tier	0	0	0	3	0	0	0	4	7
# Buses Serving 5 Schools in the Tier	0	0	0	1	0	0	0	0	1
Total	**483**	**36**	**56**	**470**	**27**	**32**	**41**	**284**	**1,429**

Source: Compiled by Prismatic from AR software, 2024.

One negative impact of this routing solution is that drivers may find themselves managing an excessive workload. Some interviewees noted that drivers are routinely working as much as 12 hour days this school year.

Un-Mirroring of Bus Runs

AR included the un-mirroring of bus runs in its solution in an effort to make greater use of each bus. Un-mirroring means that a particular bus run in the morning may be completely different in the afternoon. Not only may the runs be driven by different bus drivers, stops that are served during the morning schedule may be divided across 2 or 3 separate runs in the afternoon, creating inconsistency and inconvenience for students and parents.

It does not appear that AR provided data in July 2023 to JPCS regarding how many runs were un-mirrored. Based on the available data, Prismatic estimated that as many as 90% of the AR runs were un-mirrored. For a district that historically had not used un-mirrored runs, this was a major change.

AR included un-mirroring and thereby reassigning routes beyond their original geographic boundaries with the intent that it would lead to a reduction in the annual mileage traveled. AR staff indicated that they believed un-mirroring would reduce bus count requirements by 10%.

However, JCPS bus mileage has increased with the implementation of the AR routing solution. Comparing December 2022 to December 2023, across 9 bus compounds, JCPS experienced a 45% increase in mileage (both Decembers had 16 school days, **Exhibit 4-5**). While some of this increase could be due to factors such as the inclusion of additional grandfathered students, the reduced reliance on depots and un-mirroring of runs are likely bigger factors.

Exhibit 4-5
Comparison on Bus Mileage by Compound

Bus Compound	Mileage Dec '22	Mileage Dec '23	Difference	% Change
Blankenbaker	79,284	105,240	25,956	33%
Blue Lick	55,677	99,882	44,205	79%
Burks	71,593	113,671	42,078	59%
Detrick	79,052	81,802	2,750	3%
Hoke	55,258	98,101	42,843	78%
Jacob	80,561	107,205	26,644	33%
Jeffersontown	-	-		
Lees Lane	-	-		
Moore	-	-		
Nichols	-	-		
Sped East	104,889	160,380	55,492	53%
Sped West	88,803	138,951	50,147	56%
Wilhoit	72,294	93,979	21,685	30%
Total Miles	**687,411**	**999,211**	311,800	45%

Source: JCPS, from Zonar software, 2024

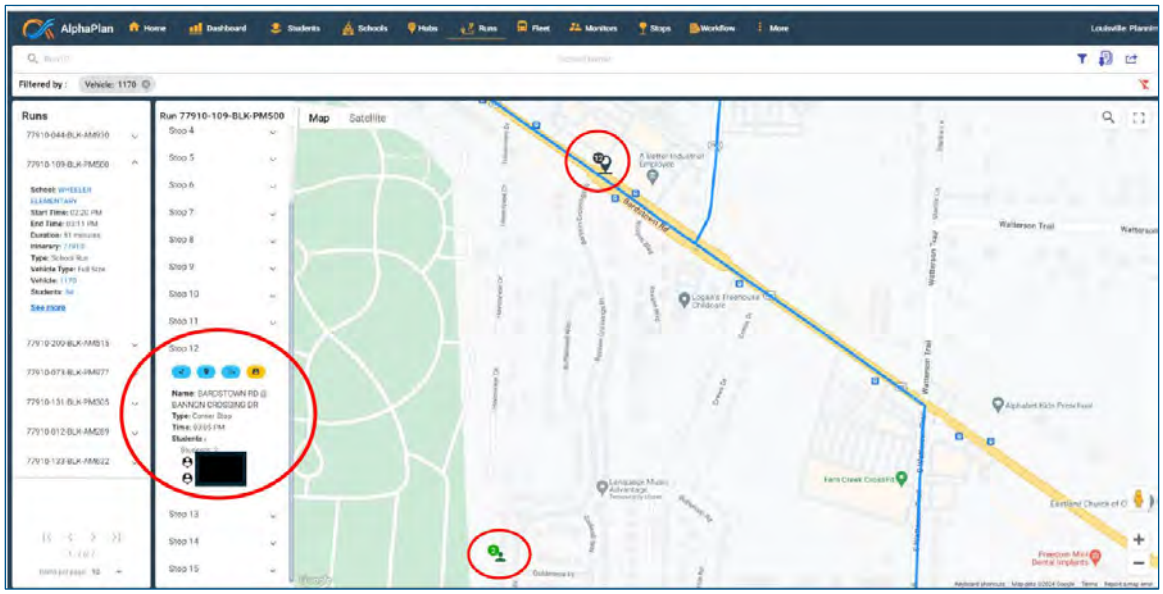
Routing Errors

As received, the AR routing solution contained several errors:

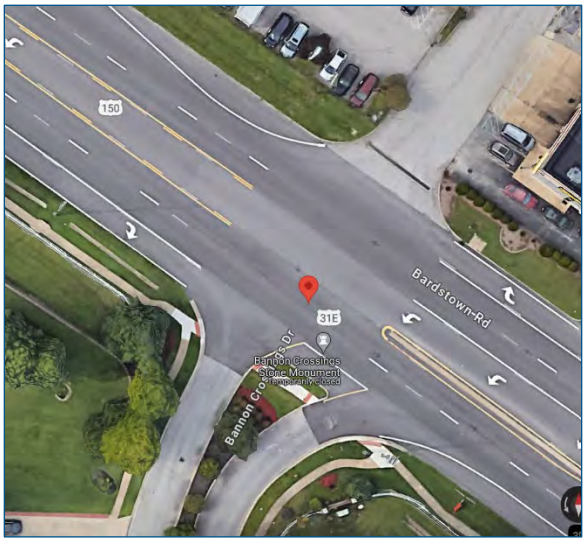
- It overlooked 2 schools, Byck Elementary and W.B Dubois.
- Approximately 1,500 grandfathered students were not allocated stops.
- Essential stops, such as daycare locations and before/after school YMCA stops, were absent. It appears that at least some daycare locations were treated as students' residence addresses, with the result that students were expected to walk some distance from a bus stop to the daycare. One JCPS principal reported that on August 9th 40 students were dropped at a stop 0.5 miles from the assigned daycare.
- Special education students from 5 schools were missing stops.
- Equipment requirements outlined in the Individualized Education Programs (IEPs) of special education students were disregarded in a number of cases, even though students are required by law to be provided the equipment noted in the IEP.
- In a number of cases, AR runs included unsafe stops for students. This included route plans that required students to navigate across multilane roads that lack a crosswalk or to traverse commercial areas with multiple business driveways and incomplete side walking (**Exhibit 4-6**). This also included bus stops located at traffic lights and stops not made on the right side when they could be avoided – neither of these is considered a routing best practice. Additional examples are provided in Appendix D.

Exhibit 4-6
Example Unsafe AR Bus Stops

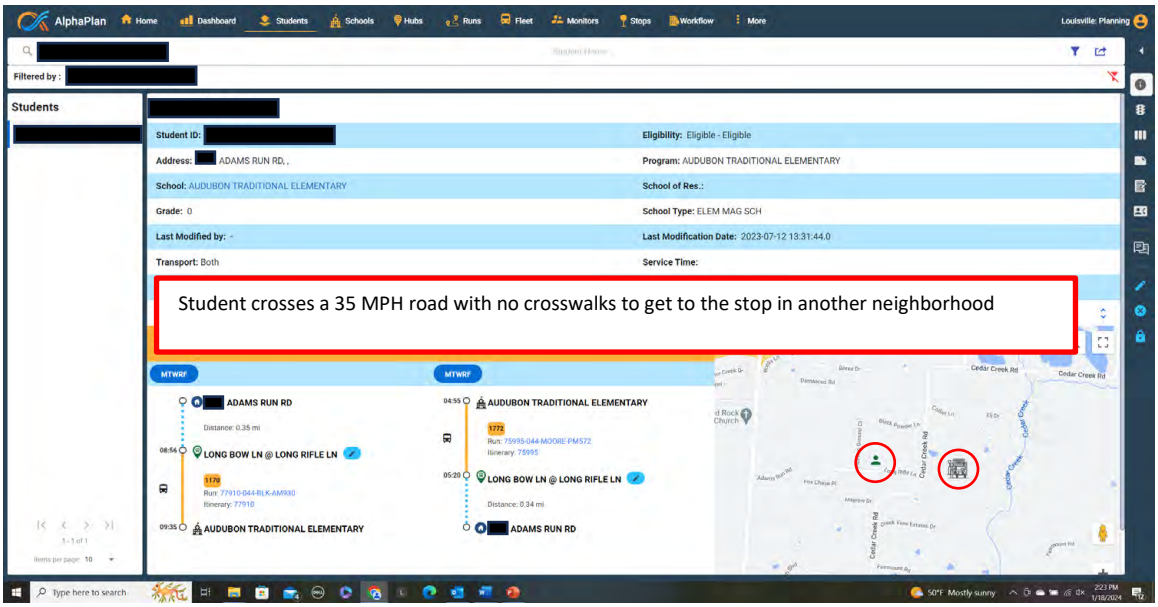
Example A – Student Expected to Cross a Large Road Without a Crosswalk to Reach Bus Stop



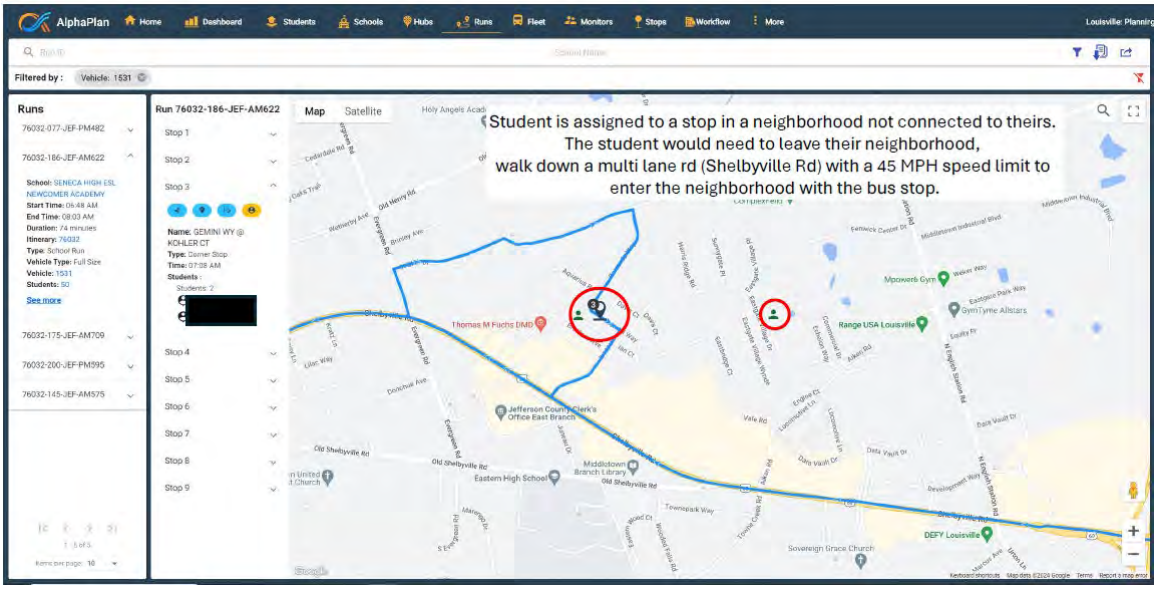
In this example, the 2 students are expected to walk through their neighborhood and cross Bardstown Rd to catch the bus near the entrance of the parking lot across the street. A top-down view of the intersection of Bannon Crossings Dr and Bardstown Rd, where the students would need to cross, is shown to the right.



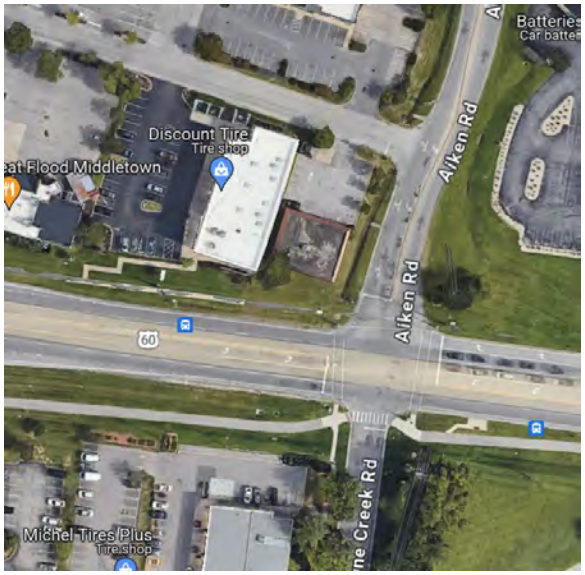
Example B – Student Expected to Cross Without a Crosswalk to Reach Bus Stop



Example C – Student Expected to Leave Neighborhood and Traverse Commercial Area



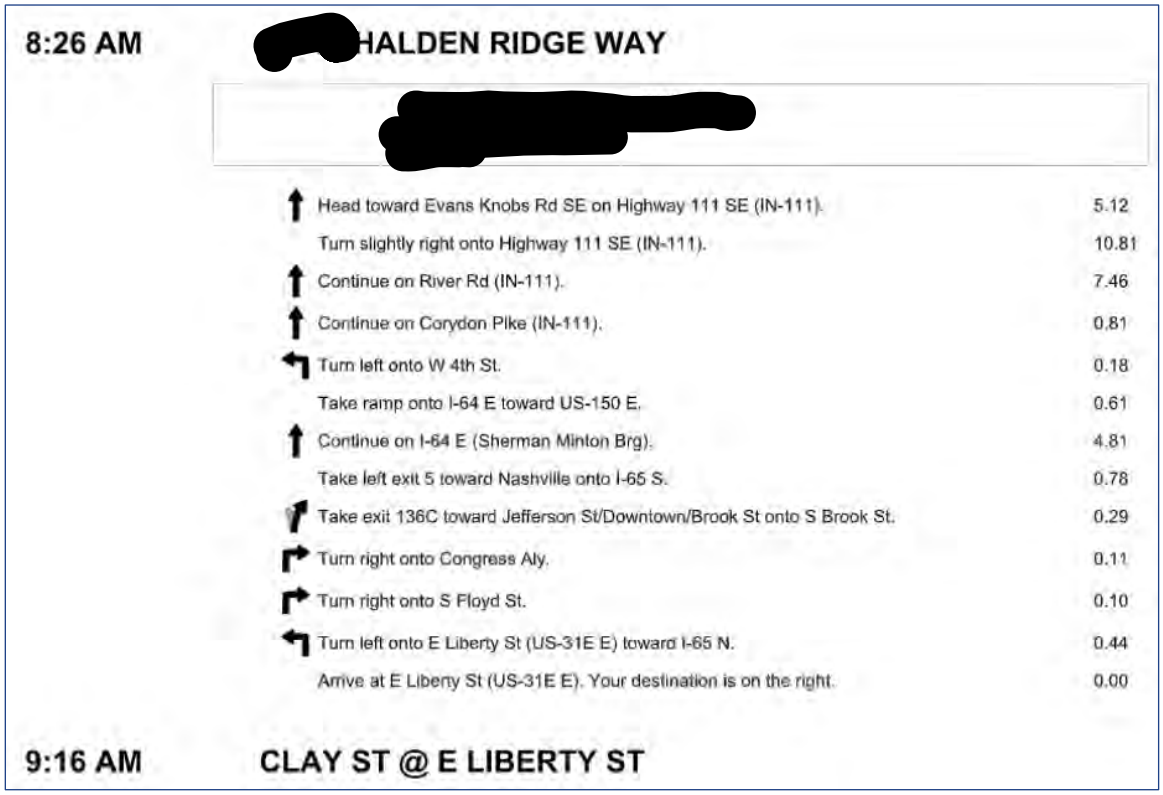
Not all portions of the expected path have sidewalks.



Source: JCPS, from AR software and googlemaps, 2024

Revised directions provided by AR required some buses to cross into Indiana only to backtrack or to cross into Indiana in an inefficient path (**Exhibit 4-6**).

Exhibit 4-6
Example Inefficient AR Bus Directions



Source: JCPS, from AR software, 2024

The cumulative impact of the problems with the AR routing solution can be seen in the results of August 9th (**Exhibit 4-7**). Based on the available GPS data for JCPS buses, a substantial number of buses within each start time tier were late in arriving the morning of August 9th, with "late" defined as arriving to the school after the starting bell. Likewise, a substantial number of buses were also late the afternoon of August 9th. Although the AR routing plan included allowing buses to arrive at schools as much as 40 minutes after dismissal, a substantial number arrived later than that.

The GPS data shown do not match the number of physical JCPS buses because some buses are assigned to serve multiple schools within the same arrival tier. It should also be noted that these data could include some number of false positives, because JCPS did not set up geofences appropriately within the GPS software and because some of the depots

are located close to some schools. However, it is unlikely that all the buses noted as arriving late in the GPS system are false positives.

Exhibit 4-7
GPS Data for August 9th

Morning	7:40 Tier	8:00 Tier	8:10 Tier	8:40 Tier	9:00 Tier	9:10 Tier	9:30 Tier	9:40 Tier	Total
No Arrival Data Recorded	30	2	6	55	6	9	10	107	**225**
On-Time Arrival (at/before bell)	302	19	21	166	7	4	3	73	**595**
Late Arrival	243	12	53	477	31	32	44	367	**1,259**
Total	**575**	**33**	**80**	**698**	**44**	**45**	**57**	**547**	**2079**

Afternoon	2:20 Tier	2:40 Tier	2:50 Tier	3:20 Tier	3:40 Tier	3:50 Tier	4:10 Tier	4:20 Tier	Total
No Arrival Data Recorded	29	3	11	160	9	8	14	100	**337**
On-Time Arrival (by dismissal)	389	17	13	62	3	4	3	43	**534**
Late Arrival (<15 minutes)	118	3	12	35	2	2	4	14	**190**
Late Arrival (>15 & <45 minutes)	89	5	35	112	7	3	9	65	**333**
Late Arrival (> 45 minutes)	10	2	15	115	2	3	5	45	**201**
Total	**635**	**30**	**86**	**484**	**23**	**20**	**35**	**267**	**1,595**

Source: JCPS, from GPS software, 2024

Considering only the buses for which GPS recorded data on August 9th, 68% of the buses arrived to school after the starting bell (**Exhibit 4-8**). The problem was most acute for the schools with starting times at 8:40 am through 9:40 am. In the afternoon, 57% of the buses arrived to collect students after the dismissal bell. Of all buses for which GPS data was recorded, 16% arrived more than 45 minutes after the dismissal bell.

Exhibit 4-8
GPS Data for August 9th

Morning	7:40 Tier	8:00 Tier	8:10 Tier	8:40 Tier	9:00 Tier	9:10 Tier	9:30 Tier	9:40 Tier	Total
On-Time Arrival (at/before bell)	55%	60%	28%	26%	18%	11%	6%	18%	**32%**
Late Arrival	45%	40%	72%	74%	82%	89%	94%	82%	**68%**

Afternoon	2:20 Tier	2:40 Tier	2:50 Tier	3:20 Tier	3:40 Tier	3:50 Tier	4:10 Tier	4:20 Tier	Total
On-Time Arrival (by dismissal)	64%	49%	17%	19%	21%	33%	14%	25%	**42%**
Late Arrival (<15 minutes)	19%	9%	16%	11%	14%	17%	19%	8%	**15%**
Late Arrival (>15 & <45 minutes)	15%	34%	47%	35%	50%	25%	43%	39%	**26%**
Late Arrival (> 45 minutes)	2%	9%	20%	35%	14%	25%	24%	28%	**16%**

Source: JCPS, from GPS software, 2024

On the survey of principals conducted for this study, 77% noted that in 2022-23 it was typical to have some buses not lined up at school at dismissal time. However, as of December 2023, 95% of principals noted that not all their buses are lined up at dismissal time. A majority of principals also indicated that the transportation situation in 2023-24 is worse than it was in 2022-23 – 10% categorized it as "somewhat worse" and 66% categorized it as "much worse."

In the days after August 9th, AR pointed to the addition of 5,000 bus stops into their original routing solution as a likely cause for the problems seen on the day of the Incident. In a press release, AR noted:

> *On August 12, AlphaRoute sent a team to be on-site to support JCPS. AlphaRoute quickly identified that there were 5,000 more stops (2,500 morning stops and 2,500 afternoon stops) added to the system from when the final solution was delivered in early July. The additional stops created disruptions as a result of:*
> - *Travel times not being updated to reflect new stops on some routes.*
> - *Subsequent trips for that same bus were not adjusted.*
> - *In some cases, a small number of stops were split up into several new stops.*

The addition of 5,000 stops would represent a 13% increase in the number of stops systemwide (from 33,363 to 38,389). AR provided to the district an example of added stops in a slideshow (**Exhibit 4-9**) but did not provide to JCPS details regarding how many of the added stops were added for what reasons. Despite multiple inquiries, neither AR nor JCPS staff could explicitly quantify why stops were added.

Exhibit 4-9
AR Slide Explaining Added Stops

Source: AR, 2023

AR's failure to provide a clear explanation of where and why JCPS added stops has led to uncertainty regarding the reasons behind the route discrepancies. They attributed observed route inefficiencies and lack of on-time performance to the added stops. However, at least some of the stops added to the AR routing solution were necessary to mitigate flaws in the original routing plan. This included:

- Some students who received only a morning or an afternoon stop required the addition of a stop for their missing piece. Prismatic estimated this need to account for approximately 1,250 additional stops (600 morning and 650 afternoon).

- Byck Elementary and W.E.B. Dubois were mostly excluded from the original AR routing salutation. Correcting this error required the addition of 200 stops (100 morning and 100 afternoon).

- Approximately 1,500 grandfathered students lacked allocated stops in the original AR solution. Prismatic estimated this need to account for approximately 3,000 additional stops (1,500 morning and 1,500 afternoon).

- The AR omission of essential stops, such as daycare locations and before/after school YMCA stops, had to be corrected through additional stops. Prismatic estimated this need to account for

approximately 298 additional stops (149 morning and 149 afternoon).

- In a number of cases, the AR routing solution failed to utilize right-side only stops where necessary. Correcting this required the addition of stops. Prismatic estimated this need to account for approximately 200 additional stops (100 morning and 100 afternoon).

- AR's use of bus manufacturer load counts to fill buses on some runs led to some buses being overloaded (and exceeded the district's routing parameters). To address this, in some cases JCPS staff had to add new stops. Prismatic estimated this need to account for approximately 70 additional stops (35 morning and 35 afternoon).

The cumulative impact of the routing solution AR provided included disruptions, inefficiencies, and inconsistencies within the transportation system. Many stakeholders, including students, parents, school staff, and bus drivers, were negatively affected.

RECOMMENDATION 4-1:

Rework AR routes.

Addressing the issues stemming from the AR routes will require a comprehensive review and realignment of routes and schedules to ensure a more efficient, reliable, and student-centric transportation framework. Key tasks include:

- Allocate runs more logically to avoid excessive overlapping of school pickups/drop-offs within the same tier and adjust bell times accordingly.

- Review and adjust driver schedules to ensure they have manageable workloads, reducing the number of runs per day and keeping working hours within reasonable limits.

- Rework route designs to minimize travel distances and streamline bus routes, taking into account geographical areas, school locations, and traffic conditions.

- Re-evaluate the decision to un-mirror routes and consider reinstating mirrored routes if it leads to more efficient and timely service.

- Ensure consistency in bus stop locations between morning and afternoon runs to provide familiarity for students and school staff

and added security for parents in knowing where their students will be.

- Review IEPs and accommodate the specific equipment needs of special education students when planning and assigning bus routes. Ensure buses serving these students are equipped accordingly.

- Adjust bus schedules to align with school bell times more accurately, ensuring buses arrive neither too early nor too late to minimize disruptions for students, parents, and school staff. Pair schools together that the compound coordinators already know will work and not cause overly difficult traffic delays.

- Involve stakeholders (transportation managers, coordinators, and drivers) in the route review process to gather feedback on the effectiveness of the revised routes and to identify any ongoing issues that need addressing.

- Implement a system for ongoing monitoring and evaluation of bus routes' effectiveness, taking feedback from drivers, schools, and families into consideration. Adjust routes as needed based on real-time data and feedback. A student count should be maintained daily by drivers and handed in monthly for better informed decisions on bus loads when routes are being created yearly.

Addressing these recommendations will require collaboration among transportation authorities, school administrations, drivers, parents, and students to ensure that the transportation system meets the needs of all stakeholders while prioritizing safety, efficiency, and reliability.

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 4-3 – Routing Communications Challenges

The JCPS transportation department was not provided with essential information regarding the AR routing solution as it was being implemented. Then, they lacked tools and training to work quickly to address identified problems. This added to the disruptions and poor service quality on August 9th.

Beyond the problem of the transportation department being largely uninvolved in the development of the AR routing solution, transportation staff also did not receive critical information once the solution was adopted mid-July 2023. For example, the bus compounds were not

provided with spreadsheets detailing which other compounds shared the other half of their bus runs. The necessary addition of new stops to accommodate students missed in the initial AR solution was greatly hindered because of the lack of this information – a compound coordinator could add the student's missing stop onto the run they oversaw but had no easy way to determine which other bus compound to contact to alert them of the need to add a stop on the run they oversaw. Bus compounds do not appear to have been explicitly alerted to features of the routing solutions, such as the potential a bus was not scheduled to arrive at a school until more than 40 minutes past the dismissal bell, contributing to confusion.

Bus coordinators were limited by the tools they had available. They completed associated routing tasks largely by hand. They had limited skills in the use of the AR software due to a lack of training. Initially granted access to AR software in Spring 2023, coordinators were informed that the routes were still a work in progress and were advised to await their completion before reviewing them. Following this, a training session on how to navigate stops and utilize the software took place in the week after July 4th. This was an insufficient amount of training for JCPS staff to then make changes competently in the AR software. Moreover, JCPS staff indicated that the original plan was to have transportation staff begin using the AR software in Fall 2023, as there was "not time" to do a full implementation and training in Summer 2023. Likewise, JCPS implemented a set of googlesheets to attempt to track missing stops in the runup to August 9th, but bus coordinators had not previously used googlesheets to a great extent, if at all. No training on googlesheets was provided at the time. If a bus coordinator added a stop in the July-August time period, they might use google maps or Waze to estimate the amount of additional time to add to the run. While a reasonable approach for fine tuning a small number of runs, this is a cumbersome process at scale.

Bus drivers were also impacted by the failure to share essential information in a format they could readily use. JCPS drivers traditionally received around ~12 pages in a route sheet. In those ~12 pages would be all the runs that comprised the route. The AR route directions were instead 30+ pages. Part of the reason for the increased length was the inclusion of student information in the route sheets, rather than providing drivers with route sheets that only showed directions and stops (typically, student-specific information is provided separately, in a bus roster). An example AR route sheet comprised of 44 pages is provided in Appendix E. This increased volume of information and unfamiliar format made the AR route sheets more cumbersome to follow and required extra time for familiarization. The AR route sheets also had problems beyond page length. Problems included:

- Directions from the compounds to the first stops as well as from the school to the first stop of the next run were missing. This was a problem for drivers newly assigned to drive unfamiliar areas.
- In some cases, the directions instructed drivers to turn around in the middle of a street or to go down roads that buses would need to back out of due to limited turning space.
- Because of the tight timeline, drivers were not given more than the usual amount of time to practice with the new format route sheets.

RECOMMENDATION 4-3:

Create more effective communications processes around routing.

Ideally, the JCPS transportation department will continue to work to improve routes and the routing process. To do so successfully, it will need to improve communications processes. Key guidelines for routing, such as where stops can be located and whether it is acceptable for many buses to arrive after school dismissal, should be documented and understood by transportation staff. Likewise, places where exceptions are made should also be documented, along with the reason for the exception. The department should maintain thorough documentation of the revised routes, schedules, and any changes made throughout the implementation process. When major routing changes occur, they should be clearly communicated to drivers and time set aside for drivers to review those changes and, if needed, practice them.

Fiscal Impact:

This recommendation can be implemented with existing resources.

Finding 4-4 – Integrated Routing, GPS, and Camera System

Although it has explored routing software from vendors as far back as the 1990s, JCPS has thus far failed to implement a vendor solution, citing unique transportation circumstances. A contributing factor to the problems experienced on August 9th was the lack of modern routing tools to analyze the AR routing solution and to quickly make needed adjustments.

Former district staff noted that JCPS attempted to implement routing software from Edulog in the 1990s, but the attempt failed. Staff stated that the district spent ~$1.5M working with Edulog, but abandoned the project because it did not want to spend additional funds.

In 2015, JCPS purchased new routing software, this time from Compass. The district used it for a few years to route special education students.

The district also did a pilot with the Compass software and RFID with tablets. The district ended its contract with Compass in 2019. Some staff indicated the cancellation was due to a lack of funding; others indicated it was because they were unable to get the software to meet all of their needs. At the same time, the district had developed some "home-grown" applications to support the transportation department's routing needs.

In 2017, a KDE audit of JCPS included as one of its recommendations, "analyze bus routes (including double runs) for the most efficient and effective solution to the transportation challenges."

In the run-up to August 9th, JCPS had worked with AR since 2019. Staff noted that JCPS spent a year and a half to two years "onboarding AR to the nuances" of how JCPS operated. Other staff noted that prior to the RO initiative AR developed "model scenarios coming out of COVID" and therefore had developed a knowledge base around JCPS transportation operations. However, JCPS had not implemented the AR routing software by August 9th and was still relying upon its home-grown applications, supplemented by googlemaps and Waze.

While it can be difficult for a district to implement new software, in JCPS this appears to have been compounded by the local perception that JCPS transportation is particularly complicated in comparison to peers. In a February 1, 2022 presentation to the school board, JCPS staff asserted "We provide more transportation to more school options than almost any district." This perception was reinforced by AR staff. In interviews with Prismatic, AR staff noted that the JCPS transportation was complex. In an update to the school board on December 14, 2021, JCPS staff stated, "Our consultants say that we have the most complicated transportation route in America." Staff reiterated this in the February 21, 2022 board update, stating, "The groups that we are working with say that we have the most complex transportation system and provide more transportation to every student for choice than any other district that they have seen." At the February 28, 2023 board meeting, an AR representative stated, "scale and complexity of JCPS' transportation system is unlike anything ever seen."

However, Prismatic did not find the JCPS transportation system, as it existed prior to August 9th, to have been more complicated than many other school districts:

- Planned ridership is not that high. In February 2023 documents provided to the school board at its February 28, 2023 meeting, district staff noted that JCPS transports about 70% of its students and that this is "very high" compared to peer school districts, who are noted as only transporting 50% of their students. However, JCPS does not routinely track student ridership. On any given day, the district does not know which eligible students ride the bus and which do not. JCPS only collects ridership data once a year,

as required by KDE. While it may be true that JCPS plans to transport about 70% of its enrollment, the data to support that assertion are weak. Moreover, there is limited data to suggest that many peers only plan to transport half of their enrollment. The Council of the Great City Schools, of which JCPS is a member, does not report on this statistic in its annual report, *Managing for Results*. JCPS staff noted that they routinely communicate with a subgroup of 10 CGCS members, but internal documents showing comparisons to that group that were provided to Prismatic do not include any transportation benchmarks.

- Geography is not overly difficult. JCPS serves an area of 395 square miles. While the largest in Kentucky, there are 4 districts of larger geographic size in Ohio and another 4 that are nearly the same size. Likewise, there are 8 larger or similarly sized districts in Indiana and 59 in Tennessee. The JCPS geography includes a mix of urban and rural areas. JCPS lacks the extreme altitude changes of districts that cover the Rocky Mountains. It also lacks water barriers such as the ocean or a high number of peninsulas into bodies of water.

- Transportation eligibility is not overly permissive. District staff noted that they believe JCPS offers transportation to too many students. In interviews in November 2023, some staff felt that the only way forward was to begin denying service to some students. In the September 26, 2023 board meeting, JCPS staff outlined transportation options that included denying service to magnet students. However, doing so would be inequitable. Moreover, any number of districts routinely provide transportation to magnet students. The Anne Arundel (MD) school district provides transportation for its magnet students through a combination of placement on regular buses and some vehicles operating from hub stops. As part of this project, Prismatic surveyed a number of peer districts. Of those, 2 indicated that they provide transportation for all the choice options their districts offer - Forsyth County Schools (NC, 52k students) offers transportation to school choice and magnet students; Saint Louis Public Schools (MO, 18K students) offers transportation to school choice, magnet, and open school transfer students.

Finally, in the course of interviews, data collection, and operational observations, Prismatic did not find that the JCPS transportation system prior to August 9th was unusual or overly complex.

Of course, these factors may seem daunting in the absence of a well-implemented routing software solution. The current reliance on separate WebApps, which are home-grown applications, while individually

effective, gives rise to operational challenges. Transportation staff has to toggle between these applications, introducing inefficiencies and hindering a streamlined workflow. These applications are routinely supplemented within the transportation department by googlemaps and Waze, which also slows work processes. The absence of an all-inclusive routing program means that staff must engage in a fragmented process to perform essential tasks, such as monitoring student locations, creating bus stops, and updating routes. The lack of seamless communication between the routing software and the district's student information system further exacerbates the situation, preventing the automation of daily reports and real-time updates on changes or new student additions. The negative impacts extend to the provision of services for special needs students, as the absence of integration between the routing software and Individualized Education Program (IEP) information may compromise the adherence to IEP specifications, particularly in ensuring equipment compliance.

RECOMMENDATION 4-4:

Adopt an integrated routing, GPS, and camera system.

In optimizing school bus routing operations, the ideal solution for JCPS lies in adopting an all-inclusive routing, GPS, and camera system. Presently, the district relies on WebApps provided by the GIS department, which, while effective, necessitate transportation staff to toggle between multiple applications. Transitioning to a unified routing program would streamline the process, enabling staff to access a single platform for various tasks. This includes monitoring student locations, creating bus stops, incorporating stops into routes, and modifying routes in real-time, with updates immediately visible to the entire Transportation staff.

Moreover, the routing software should establish seamless communication with Infinite Campus, the district's student information system, facilitating the automation of daily reports. These reports, reflecting changes or new student additions, would enhance information accessibility and timely decision-making. Integration of Individualized Education Program (IEP) details for special needs students into the routing software ensures compliance with equipment specifications outlined in the IEP.

To successfully implement this recommendation, JCPS will need to:

- Conduct a thorough needs assessment to identify the specific features required in an all-inclusive routing, GPS, and camera system. Consider input from transportation staff, administrators, and other stakeholders.

- Research and select, via an RFP process, suitable all-inclusive routing software that meets identified needs. The selected software should allow for seamless integration of various features in 1 platform.

- Develop a training program for transportation staff to familiarize them with the new routing software. Training should cover all aspects, including locating students, creating bus stops, updating routes, and using integrated features.

- Implement the selected routing software across the district. Transportation department staff will need to work closely with the software provider to ensure a smooth integration process and resolve any issues that may arise during implementation.

- Collaborate with the Infinite Campus team to establish bidirectional communication between the routing software and Infinite Campus. District IT staff should ensure that daily reports are automated and seamlessly transferred between the systems.

- Work with special education department to integrate IEP information into the routing software. This should include ensuring that the software can directly read and implement the specifications outlined in a student's IEP for equipment compliance.

- Implement a system for ongoing monitoring and evaluation of the new routing system. JCPS should gather feedback from transportation staff, drivers, and other stakeholders to identify areas for improvement and make necessary adjustments.

Successfully implementing routing software and then using it to develop and optimize school bus routes will likely require a minimum of 1 year.

Fiscal Impact:

This recommendation will have a substantial fiscal impact.

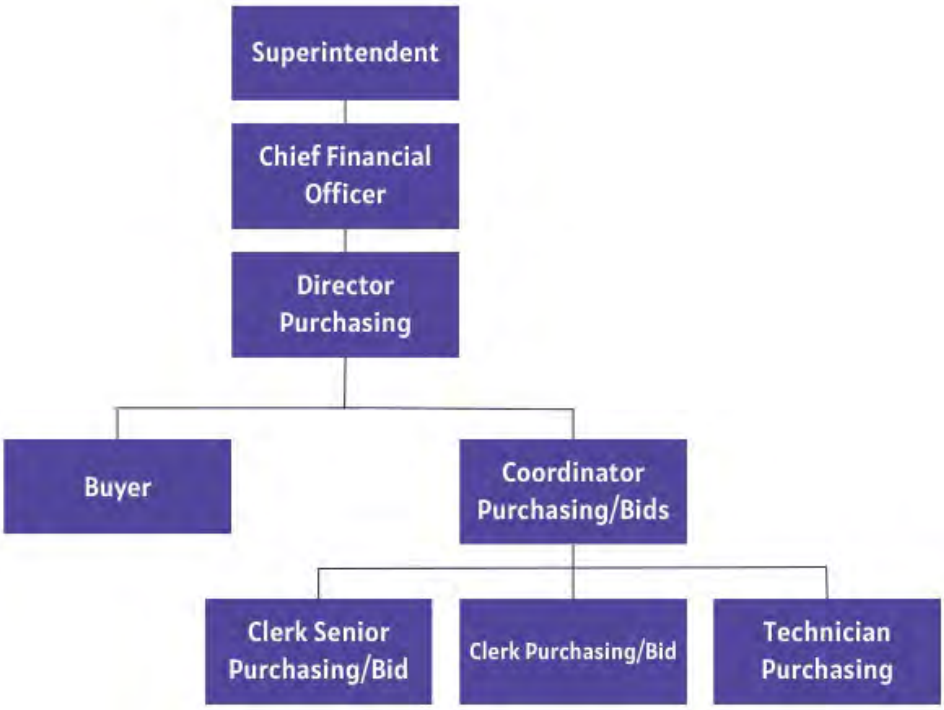
Chapter 5
Purchasing and Contracting

Background

Purchasing and contracting are essential to the operations of all district schools and departments. Obtaining professional services is often required to assist the district with critical processes when the district lacks the skills or knowledge to complete specialized or complicated projects. The JCPS transportation department encountered the need for expertise with the district's initiatives related to school choice, school bell times, and bus routing.

Obtaining professional services utilizing the most effective purchasing process and documenting the services needed in a formal Professional Services Contract can have a direct impact on the success of any initiative. Purchasing and contracting within JCPS is the responsibility of the director of purchasing. The director reports to the district's chief financial officer (CFO) and is assisted by his staff in conducting the district's purchasing activities.

JCPS Purchasing Organization



The district has adopted the local public agency provisions of the Kentucky Model Procurement Code, KRS 45A.345 to 45A.460, which contains the state law that governs all purchasing done by the district. The local public agency provisions of the Kentucky Model Procurement code have been in effect in JCPS since 1980. The JCPS school board first adopted its procurement regulations in September 1980; it adopted revised procurement regulations in August 2023.

The regulations are known and cited as the Board Procurement Regulations. Certain provisions of the regulations state:

- *These regulations and Board policy shall apply to every expenditure of public funds and other procurement transactions (e.g., School Activity Fund disbursements) by the Board under any contract or like business agreement.*

- *Competitive sealed bidding, which may include a reverse auction, is the preferred method for the procurement of supplies, services or construction by the Board. All Board contracts shall be awarded by competitive sealed bidding which may include the use of a reverse auction, unless authorized by law or except as provided in the following subparts of these regulations for Competitive Negotiation, Negotiations after Competitive Sealed Bidding when all bids exceed available funds, Noncompetitive Negotiation, Small Purchases, or Emergency.*

- *Small purchase procedures may be used for the award of any contract or purchase for which a determination is made that the aggregate amount of the contract or purchase does not exceed $40,000.*

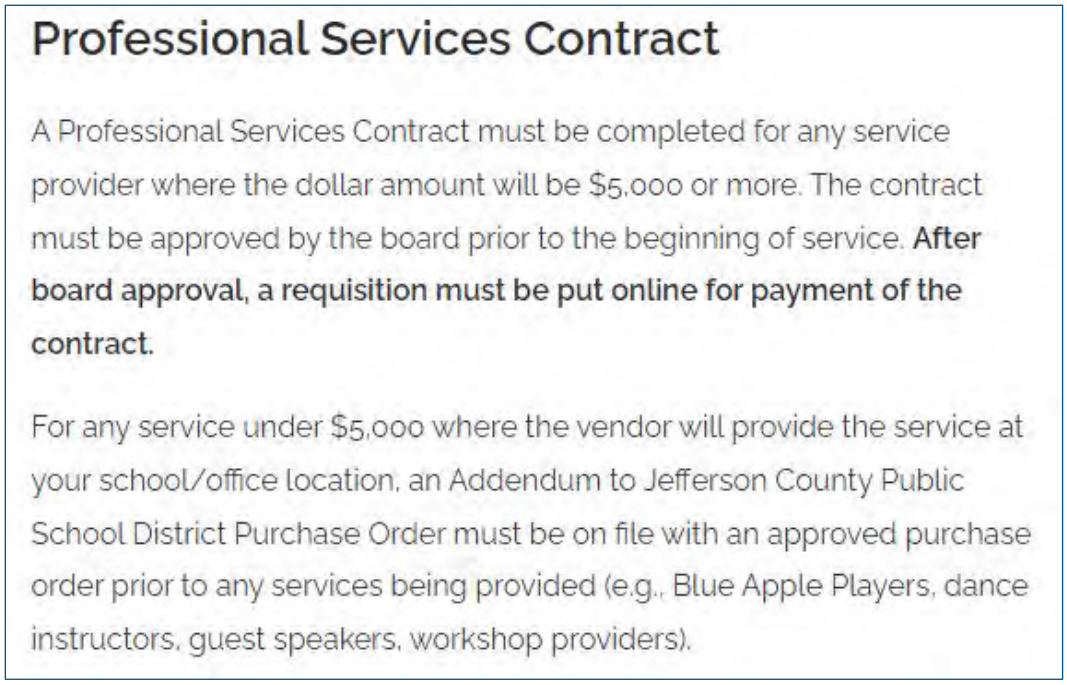
- *For all purchases which exceed $10,000 in value but which do not exceed $40,000 in value, the following procedure shall be followed by the authorized contracting officer; The contracting officer shall solicit a minimum of three potential bidders or suppliers and request written quotations for the supplies, services or construction which are to be procured.*

- *For all purchases which exceed $5,000 in value but which do not exceed $10,000 in value, the contracting office shall use its best efforts to obtain the lowest price from a responsible and responsive bidder for the supplies, services or construction to be procured. A minimum of three price quotations shall be obtained by telephone, Internet or catalog.*

- *For all purchases which do not exceed $5,000 in value, the contracting officer shall use its best efforts to obtain the lowest price from a responsible and responsive bidder, for the supplies, services or construction to be procured.*

The JCPS purchasing department's website provides information on professional services contracting in the "Miscellaneous Purchasing Information" section (**Exhibit 5-1**).

Exhibit 5-1
Professional Services Contract information on JCPS Website



Professional Services Contract

A Professional Services Contract must be completed for any service provider where the dollar amount will be $5,000 or more. The contract must be approved by the board prior to the beginning of service. **After board approval, a requisition must be put online for payment of the contract.**

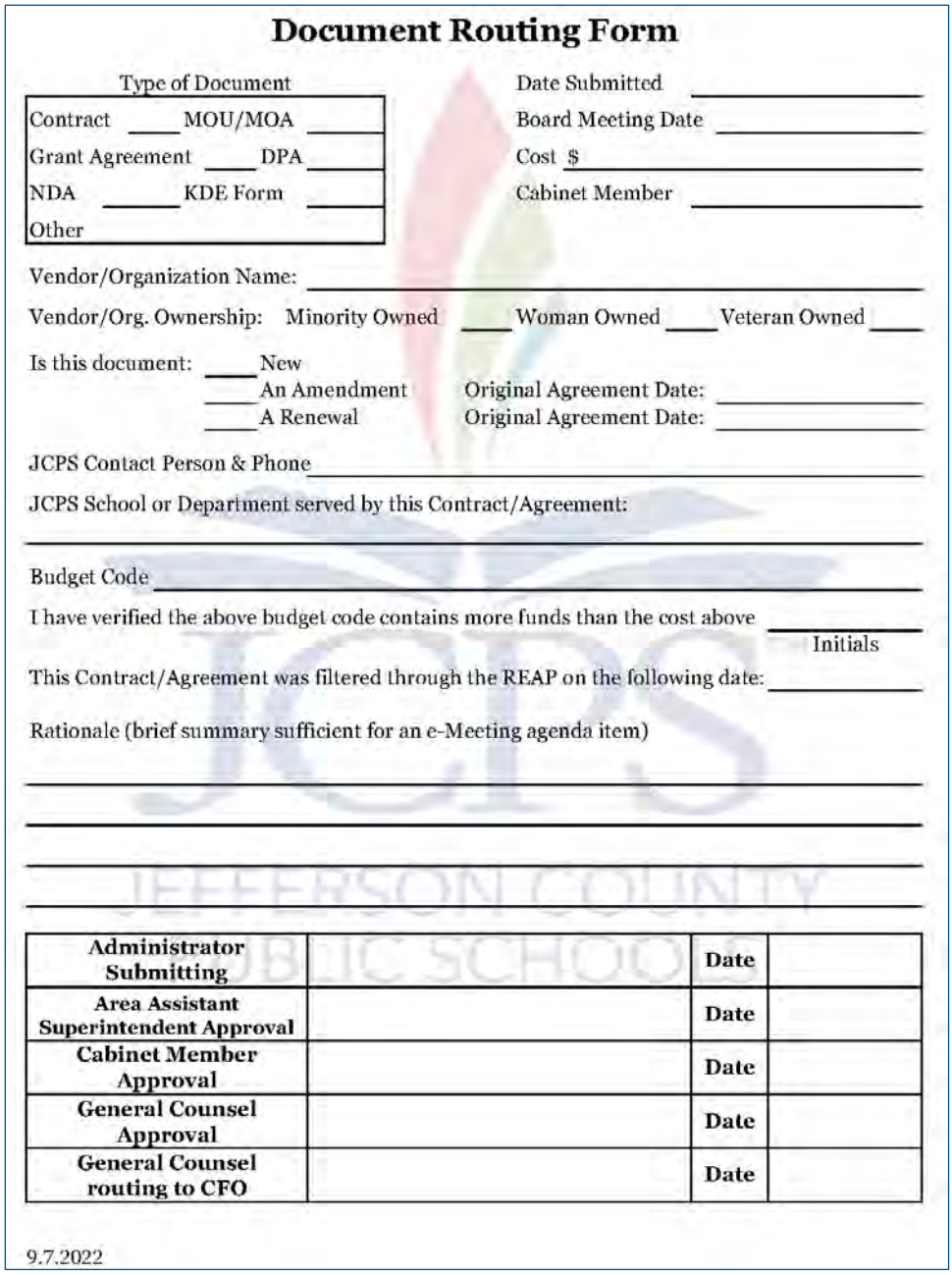
For any service under $5,000 where the vendor will provide the service at your school/office location, an Addendum to Jefferson County Public School District Purchase Order must be on file with an approved purchase order prior to any services being provided (e.g., Blue Apple Players, dance instructors, guest speakers, workshop providers).

Source: JCPS website, January 2024

Discussions with district financial and purchasing staff indicated that their understanding and practice is that board approval must be obtained for Professional Services Contracts that are $20,000 or more. It was also their understanding that board approval is required for a contract amendment increasing the contract amount by any dollar amount.

The purchasing department's website further refers to a form titled "Document Routing Form" (**Exhibit 5-2**). This form was not initially provided to Prismatic as part of the initial data request.

Exhibit 5-2
JCPS Document Routing Form



Document Routing Form

Type of Document

Contract ____ MOU/MOA ____
Grant Agreement ____ DPA ____
NDA ____ KDE Form ____
Other

Date Submitted ____
Board Meeting Date ____
Cost $ ____
Cabinet Member ____

Vendor/Organization Name: ____

Vendor/Org. Ownership: Minority Owned ____ Woman Owned ____ Veteran Owned ____

Is this document: ____ New
____ An Amendment Original Agreement Date: ____
____ A Renewal Original Agreement Date: ____

JCPS Contact Person & Phone ____

JCPS School or Department served by this Contract/Agreement:

Budget Code ____

I have verified the above budget code contains more funds than the cost above ____ Initials

This Contract/Agreement was filtered through the REAP on the following date: ____

Rationale (brief summary sufficient for an e-Meeting agenda item)

Administrator Submitting		**Date**	
Area Assistant Superintendent Approval		**Date**	
Cabinet Member Approval		**Date**	
General Counsel Approval		**Date**	
General Counsel routing to CFO		**Date**	

9.7.2022

Source: JCPS Website, January 2024

The district routinely uses the noncompetitive negotiation purchasing method for professional serveries contracts. One provision of the noncompetitive negotiation purchasing method provides that it can be used when a determination is made that only a single source is available within a reasonable geographical area of the product or service. This provision is referred to as sole source contracting and is used by the district for many of its professional services contracts. staff stated that

sole source contracting is used for almost all professional services contracts.

Since the focus of Prismatic's review for this project centered on transportation, only contracts and other purchasing documents pertaining to the district's transportation initiatives for bus routing, bell times, and school boundaries were reviewed. Professional services contracts, data privacy agreements, and purchase orders reviewed included those summarized in **Exhibit 5-3**.

Exhibit 5-3
Contracts, DAP, & Purchase Orders Reviewed

Vendor	Document Date	Service per Contract/DAP/Purchase Order	Amount
Dynamic Ideas LLC/dba Dynamic Ideas Routing (AR)	June 9, 2021	Contract for: - Bus routing Service - Bell Time Optimization	$346,667.00 $162,500.00
	February 2, 2022	Amendment to June 9, 2021 contract increases amount for Bell Time Optimization	$65,000.00
Dynamic Ideas LLC/dba Dynamic Ideas Routing (AR)	November 1, 2022	Contract for attending small group meetings and board meetings	$19,000.00
Dynamic Ideas LLC/dba AlphaRoute	November 16, 2022	Data Privacy Agreement – Bell Time Optimization (included software license which was not purchased until March 31, 2023)	$150,000.00
	March 28, 2023	Amendment to Data Privacy Agreement dated November 16, 2022 – Data cleaning and two additional bell time scenarios.	$85,000.00
Dynamic Ideas LLC/Dynamic Ideas Routing (AR)	March 31, 2023	Purchase Order – Software, load a chosen bell time and its bus routes, activate editing and provide training, potentially add a small number of customizations.	$30,000.00
Total – Dynamic Ideas LLC (AR)			**$858,167.00**
Hanover Research	June 28, 2023	Contract for custom research services and access to Hanover Research Online Research Library, Peer Generator, and interactive toolkits.	$105,000.00
	July 27, 2023	Hanover Research Service Agreement changed payment date from completion of services of June 27,	N/A

Vendor	Document Date	Service per Contract/DAP/Purchase Order	Amount
		2024 to beginning of services of July 27, 2023.	
Education Logistics Inc.	August 15, 2023	Purchase Order for: - Transportation software – full fleet license based on 750 vehicles - Implementation and project management Services	$192,000.00 $50,000.00
Cooperative Strategies, LLC	November 15, 2019	Contract for Student Assignment Plan Consulting Services. 20,000 a month	$120,000.00
	July 1, 2020	Renewal of November 15, 2019 contract. Extends contract to June ,30, 2021	$240,000.00
	July 28, 2021	Contract for Boundary Analysis. 20,000 a month	$200,000.00
		Additional Analysis, not to exceed	$40,000.00
	July 28, 2022	Extends contract to June 30, 2023. Also extends additional analysis, not to exceed the 40,000.	N/A
	August 2,2023	Extends contract to June 30, 2024. No additional cost. Also extends additional analysis, not to exceed the 40,000.	N/A
Total Cooperative Services			**$600,000.00**
Zonar Systems Inc.	August 24, 2023	Purchase Order for Software – Increased GPS Logging Service	$28,159.24

Source: JCPS, Compile by Prismatic, 2024

Services from the five vendors reviewed were secured by either Noncompetitive Negotiations – Sole Source, Competitive Negotiations, Software Sole Source, or Cooperative Procurement. The purchasing process for each vendor is shown in **Exhibit 5-4**.

Exhibit 5-4
Purchasing Methods Used

Vendor	Purchasing Method
Dynamic Ideas LLC/dba Dynamic Ideas Routing (AR)	Noncompetitive Negotiations – Sole Source
Hanover Research	Noncompetitive Negotiations – Sole Source
Education Logistics Inc.	Cooperative – Government Procurement Alliance
Cooperative Strategies, LLC	Competitive Negotiations - 3 vendor proposals received
Zonar Systems Inc.	Software – Sole Source

Source: Prismatic, 2024

JCPS is one of the nation's larger school districts and thus has the need for a significant expense budget, including one for its transportation department. Data from the Kentucky Department of Education indicates that the district's transportation cost per pupil for 2022 was $895 compared to the state average of $783. District expenses for 2023 totaled $1,641,644,418. The district's transportation program expenses for 2023 totaled $84,268,468 and accounted for 5% of the district's total expenses (**Exhibit 5-5**).

Exhibit 5-5
2023 Expenses by Category

Expenses	Amount	Percent
Instruction	$909,760,084	55%
Student support services	101,932,070	6%
Instructional staff support services	161,840,162	10%
District administrative support services	11,536,587	1%
School administrative support services	120,050,420	7%
Business support services	71,287,990	4%
Plant operations and maintenance	144,355,232	9%
Transportation	84,268,468	5%
Food service support	696,158	0%
Community services	12,115,172	1%
Other	842,150	0%
Interest	22,959,925	1%
Total Expenditures	**$1,641,644,418**	**100%**

Source: JCPS 2023 Comprehensive Financial Report

Findings

FINDING 1 – Administration of Professional Services Contracts

The district does not always formally designate an administrator or manager for professional services contracts.

Assigning a designated staff member to monitor the work of a contractor can help the district to identify small problems before they become larger issues. A designated staff member can identify whether progress is being made in a manner that will likely meet deadlines or objectives and will ensure that vendors are not paid until work is completed to the district's satisfaction.

Article XIII of a JCPS document titled "Instructions for Completing the Contract for Procurement of Professional Services" states:

> The Board shall appoint a Contract Administrator for the purposes of daily administrative decision-making pertaining to the Contract. If Contractor and the Contract Administrator disagree on any

> circumstance or set of facts pertaining to the administration or execution of this Contract, the Board shall resolve the matter after notification by either the Contract Administrator or the Contractor in the manner prescribed by the Regulations. If the Board fails to give notice to Contractor of the appointment of a Contract Administrator, the Contract Administrator shall be the Board's Chief Financial Officer.

The same statement is also included in each of the district's contracts for professional services that Prismatic reviewed. Although not a formal professional services contract, the data privacy agreement with Dynamic Ideas LLC/dba AlphaRoute (AR) effective November 16, 2022 did designate a district representative.

Discussions with staff pertaining to the provisions of the last sentence in Article XIII, which states that the CFO serves as district's Contract Administrator if one is not named, indicated that in practice a contract administrator is rarely named. Contracts for professional services made available to Prismatic did not specify a contract administrator, thus per the contract provision the CFO normally serves in that capacity for all professional services contracts. Instead of a contract administrator, Prismatic was informed that each contract has a contract manager, although they are not usually named in professional services contracts. However, the data privacy agreement with AR effective November 16, 2022 stated that the designated representative for the school board was the GIS executive director.

Whether titled a contract administrator or contract manager, each professional services contract needs a designated staff member with the authority and knowledge to actively monitor the contract, the work of the vendor and related project services. The contract manager normally is accountable for:

- tracking budgets
- comparing invoices and charges to contract terms
- verifying and accepting/rejecting deliverables
- withholding vendor payment until deliverables are met
- approving invoices
- maintaining all documentation supporting payments to the vendor
- closing out the contract

It is beneficial for contract managers to be involved in the procurement of vendors for needed services. In fact, contract managers are often the primary staff member that directs or performs the process to acquire a vendor for services. When the staff member that will be responsible for managing the contract is involved or is the lead staff member that develops the need for the services, scope of services, and timing of key steps, this experience provides them with background information that enables them to better manage the contract.

RECOMMENDATION 5-1:

Improve the district's Professional Services Contract administration by formally designating a contract administrator or contract manager for each contract and develop specific responsibilities for the position.

The contract manager should be available to communicate the status of the contract to management and the board. Payments to vendors should be made by the finance department only after verification by the contract manager that the related services have been performed in accordance with the terms of the contract and the approval should be made a part of the invoice payment files.

The purchasing director should develop a procedure that requires each professional services contract to designate a contract administrator or contract manager. The procedure should include the responsibilities of the contract administrator or contract manager. The procedure should require the contract administrator or manager to be appointed prior to and involved in the selection of the vendor. The procedure should be distributed to all departments.

Prior to approving a professional services contract the purchasing director should ensure an appropriate contract administrator or contract manager has been officially designated.

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 2 – Timing of Professional Services Contract Payments

Payments to the vendors on 2 of the district's professional service contracts appear to have been made prior to receiving services. Also, the final payment to the vendor per a DPA and amendment may have been made prior to all agreed upon services being completed. To protect public funds and to help ensure services have been provided, payments to vendors providing services should be made only after the vendor performs contracted services which justifies the value of the payment.

Prismatic's review of professional services contracts identified 2 contracts where payments from district funds appear to have been made prior to receiving services. The 2 instances are:

Example 1:

The contract with AR dated June 6, 2021 contained a schedule of progress payments for Routing Services:

- $50,000 – upon execution of contract,
- $100,000 at the end of June 2021,
- $150,000 at the end of July 2021, and
- $46,667 at the end of the 2021-2022 school year.

This contract was made with AR per a proposal to JCPS for Routing as a Service and Bell Times Optimization dated May 27, 2021. The proposal stated "We have been in contact with JCPS since last year and have accelerated our work of late, as part of a free demonstration period we extended to the district."

The payment provision of the contract that required a $50,000 payment to be made upon execution of contract implies that the payment of district funds would be made prior to any services being performed. According to district records, this payment was made on June 15, 2021. The timing of the payment indicates that either a payment was made prior to receiving services that would justify the payment or the payment was made to compensate the vendor for work performed prior to the contract being in place, which was described in the vendor's proposal as being a free demonstration.

Example 2:

The contract with Hanover Research effective June 28, 2023 stated "The Board shall pay Contractor the total amount stated below (hereinafter Contract Amount). The Contract Amount shall be paid in a lump sum upon completion of the Services". The contract amount was $105,000 and was to be paid upon receipt of an itemized invoice.

However, another document titled Hanover Research – Services Agreement was signed June 27, 2023. The invoicing schedule section of the agreement stated that the payment due date was June 27, 2023 and later in the agreement it states "Failure to pay promptly will result in project postponement or suspension of service". The term of the contract per the services agreement is June 28, 2023 to June 27, 2024. District records indicate that the payment of $105,000 was processed on June 30, 2023. The contract covers both custom research services and access to the vendor's online research library. It does not, however, identify what portion of the $105,000 is for each of the components. It could be argued that some of the

$105,000 was for access to the vendor's online research library, which the district had access to immediately after the services agreement took effect. However, none of the custom research services had been provided at the time of the payment.

When the total payment is required at the start of a contract period, not only is the district required to utilize public funds prior to receiving all services, but district funds are at risk of being expended without services being received should the vendor not complete the custom research services portion of the contract.

Neither the DPA dated November 16, 2022 nor the amendment dated March 28, 2023 included dates as to when payments were to be made to AR. Four payments were made to the vendor during its work under these agreements. The last payment was made on an invoice dated July 20, 2023. The invoice stated that it was "primarily for the delivery of import file and related work and for additional deliverables/meeting to help ensure smooth implementation". The statement on the invoice, "additional deliverables/meeting to help ensure smooth implementation" seems to indicate that the implementation, which may or may not have been a part of the work the vendor was to provide, was not complete at the time the payment was made. Although difficult to determine from the limited scope of work that was stated in the DPA and amendment, the vendor very well could have completed all the required work under the agreement at the time the last payment was made, but it is questionable. The term of the agreement is from November 16, 2022 until November 15, 2025.

To protect public funds and help ensure that the services covered by professional services or other service contracts are received, payments from public funds should not be made until services are satisfactorily received per the terms of the contract. Recovering funds paid to vendors prior to receiving satisfactory services is difficult and sometimes requires litigation. Although Prismatic's review did not indicate that vendor services were impacted, some vendors may have a reduced incentive to provide the highest quality services once they have been fully paid.

RECOMMENDATION 5-2:

Improve the timing of payments in professional services contracts and data privacy agreements to help ensure the district receives satisfactory services before making payments to vendors.

Some contracts, such as those for subscription services, require a payment at the time the service begins. However, when entering a contract or other agreement for services that are to be provided by a vendor providing professional services, the interests of the district are

best protected by making payments only after satisfactory services have been provided.

To implement this recommendation, the purchasing director should develop guidelines and instructions to follow when developing professional services contracts or data privacy agreements pertaining to specifying when payments to the vendor can be made. The guidelines should either be incorporated into the district's *Instructions for Completing the Contract for Procurement of Professional Services* or attached as an addendum.

Prior to approving a professional services contract or data privacy agreement, the purchasing director should ensure that the agreement specifically identifies the steps or deliverables that must be completed before payments can be processed.

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 3 – Professional Services Contract Scope of Services

The scope of services in some district professional services financial documents lack sufficient information. Some financial contract documents do not contain a sufficient description of services that are to be provided or when they are to be performed or completed.

As a legally binding contract, a well written professional services contract provides protection for both the vendor and the district. A professional services contract typically lists in detail the services that the vendor will perform, the compensation that will be paid, any specific data that is necessary to complete the services when that data will be made available by the district, and a specific timeframe or date that the vendor is expected to complete the services or a schedule of dates for specific milestones.

Professional services contracts typically have a section titled "Scope of Work" or "Services to be Provided." This section of the contract specifies in detail all the criteria for the contract between the vendor and the district pertaining to work that is to be done. It clearly documents the project requirements, milestones, deliverables, final products and documents, and reports or other deliverables that are expected to be provided by the vendor. Projects run more smoothly when both parties can avoid ambiguities and situations that may lead to disputes. A detailed scope of work is a protective measure that enables vendors to be held accountable for their performance and whether they have held up their side of the deal when the term covered by the agreement ends.

When the services to be provided by a vendor require multiple phases, a document is often attached that lists in detail the dates by which the vendor will reach major project milestones. Should the district need to provide considerable data, a similar attachment is added that lists in detail the data and dates by which the district is to provide the necessary information to the vendor.

The district's *Instructions for Completing the Contract for Procurement of Professional Services* are shown in **Exhibit 5-6**.

Exhibit 5-6
Instructions for Completing the Contract for Procurement of Professional Services

This document is the JCPS Contract for Procurement of Professional Services. This document is used to procure the services of an outside contractor. This document is not used to purchase goods. Each field must be completed fully. No fields may be left blank. You may use your tab key to advance to each field in the document that must be completed. Alternatively, you may simply click on each field. It is the responsibility of the department entering the Contract to understand the services, verify that the services were provided and approve any invoices received from the Contractor. **The Cabinet member responsible for this Contract must initial the Contract on the last page to indicate that he/she has seen and approved this Contract**.

Source: JCPS Website, January 2024

A number of fields must be completed (**Exhibit 5-7**).

Exhibit 5-7
Fields to Complete for the Contract for Procurement of Professional Services

The following fields must be completed:

1. Opening Paragraph: Insert Contractor's complete business name and address.
2. Article II – Services: Insert a complete description of the services that the Contractor will provide. If any documents detailing the Contractor's services will be attached, you must state that the "(document name) is attached and incorporated herein by reference."
3. Article III – Compensation: This section details the amount to be paid to the Contractor. **Unless progress payments are specified, the full contract amount will be paid upon completion of the services**. All costs and expenses incurred by the Contractor are included in the contract amount and will not be reimbursed unless costs/expenses are specified in this section.
    a. Contract Amount – Insert the contract amount to be paid to the Contractor.
    b. Progress Payments – If periodic payments are to be made to the Contractor throughout the contract period, you must specify those payments here. If there will be no progress payments, insert "N/A".
    c. Costs/Expenses – If the Contractor will be reimbursed any costs and/or expenses in addition to the contract amount stated above, you must specify those costs/expenses here. If no costs/expenses will be paid, insert "N/A".
    d. Fund Source - Insert the fund source from which this Contract will be paid.
4. Article IV – Term of Contract – Insert the beginning and ending date of the services to be performed.
5. Article V – Performance of Services by Contractor – Unless waived by the Contract Administrator, the Contractor must provide certificates of insurance evidencing the general liability and automobile liability coverage required in Article V and naming the Board as an additional insured. Contractor must also provide certificates of insurance evidencing the workers compensation and professional errors and omissions coverage required in Article V. The certificates of insurance must be submitted with the completed Contract.
6. Signature Page
    a. Insert the effective date of the Contract (this date will generally be the day following the board meeting at which you are seeking approval of the Contract).
    b. Insert the Contractor's Social Security Number or Federal Tax I.D. number
    c. Insert the Contractor's complete business name
    d. Insert the name of the Contractor's authorized representative that will sign the Contract
    e. Insert the title of the Contractor's authorized representative that will sign the Contract.
    f. Insert the name of the Cabinet member responsible for this Contract. The Cabinet member must initial the Contract prior to submission to the Board.
7. Determination and Finding – Complete the Determination and Finding that is attached as the last page of this electronic document.
8. Contractor must include the Contractor's original signature before routing for approval. If sending electronically to the Contractor, convert the document to a PDF and remove the instruction page. The Contract must be printed one-sided.
9. Contract Routing Form – Complete the Professional Services Contract Routing Form which is available as a separate document on the Purchasing page (under Purchasing Forms) of the JCPS website and follow the instructions on that form.
10. Racial Equity Analysis Protocol (REAP) Form – Complete the REAP Form which is available as a separate document on the Diversity, Equity and Poverty Division page of the JCPS website and follow the instructions provided.

Source: JCPS Website, January 2024

The district's standard contract for the procurement of professional services contains 15 articles and provides information for each article .**Exhibit 5-8**).

Exhibit 5-8
Articles which comprise the JCPS Contract for the Procurement of Professional Services

Article I – Entire Agreement; Amendments
Article II – Services
Article III – Compensation
Article IV – Term of Contract
Article V – Performance of Services by Contractor
Article VI – Equal Opportunity
Article VII - Prohibition of Conflicts of Interest
Article VIII – Changes
Article IX – Termination for Convenience of the Board
Article X – Termination for Default
Article XI – Disputes
Article XII – Contractor's Work Product
Article XIII – Contract Administrator
Article XIV – Right to Audit

Source: JCPS Website, January 2024

Contracts and agreements provided to Prismatic did not always provide sufficient detailed information pertaining to the scope of work to enable one to readily determine exactly what services were to be performed. They also did not always sufficiently state when the vendor or district were to provide specific data or when various tasks or milestones were to be completed.

Example 1 - Data Privacy Agreement with AR effective November 16, 2022.

> A standard Professional Services Contract was not completed for the professional services contained in this agreement. Although not stated in any of documents reviewed, it seemed the work covered by this document was a continuation of similar work performed by the contract with AR dated June 9, 2021, which was issued per the proposal from the vendor dated May 27, 2021.
>
> Exhibit A – Description of Services

- Provider shall provide software license and support for the following products at prices equal or below Provider's standard prices rates for the products:

- Bell Time Optimization: Optimize School Bell Times based on relevant district objectives and conditions.

- Compensation - $180,000

The agreement does not include sufficient detail pertaining to what specific services the vendor is required to perform, when the services are to be performed and what actual deliverables are required to complete the contract. The agreement also does not identify when payments are to be made and does not include what specific data the district is to provide and when, if any, to the vendor.

Example 2 – Amendment to Data Privacy Agreement with AR effective November 16, 2022. Amendment dated March 28, 2023:

- This Amendment hereby amends Attachment A to add the following item to the Description of Services: data cleaning and two additional bell time scenarios to optimize school bell times based on relevant district objectives and conditions.

- This Amendment hereby amends Attachment A to strike the compensation amount of $180,000 and replace it with $265,000.

Although the DPA dated November 16, 2022 (Example 1) and amendment to DPA dated March 28, 2023 (Example 2) seemed to be a continuation of the previous contract (period of service June 9, 2021 to no later than June 8, 2022) and a continuation of services discussed in the vendor's previous proposal, there was not a reference in either DPA or Amendment to DPA to continuing the previous contract or provisions of the proposal. There were no specifics as to when the vendor was to complete certain services or deliver a final product to the district.

While not included in the DPA or amendment, invoices from the vendor referred to certain milestones that were completed. Although the invoices included a date the invoice was submitted, they did not identify when the milestones were completed (**Exhibit 5-9**).

Exhibit 5-9
Milestone References on AR Invoices

A. Milestone 1 – Data Cleaning - Invoice dated January, 20, 2023 - $20,000
   - Received, cleaned, and analyzed new data
   - Conducted complicated data forecasting analysis
   - Prepared data for use by Optimization Engine

B. Milestone 2 - First Scenario Optimizations - Invoice dated January, 20, 2023 - $65,000
   - Completed first pair of scenario optimizations in November and January
   - Shared/discussed with JCPS team
   - Provided additional analysis as requested

C. Milestone 3 – Continued Scenario Optimizations – Invoice dated March 3, 2023 - $65,000
   - Completed second pair of scenario optimization in January
   - Additional revision made in February
   - Shared/discuss results with JCPS team
   - Provided additional as requested

D. Milestone 4 – Continued scenario optimizations – Invoice dated April 11, 2023 - $32,500
   - Completed first scenario optimization under extended work agreement
   - Additional revisions made at no cost
   - Shared/discussed results with JCPS team
   - Provided additional analysis as requested

E. Milestone 5 – Board of Education meetings – Invoice dated April 11, 2023 - $0
   - Assisted JCPS with development of Board materials
   - Board meeting Attendance

F. Milestone 6 – Receipt of new data for cleaning and analysis– Invoice dated April 11, 2023 - $20,000
   - Data Analyst assigned to task
   - Preparing new data for upcoming final optimization(s)

G. Milestone 7 – Continued scenario optimization – Invoice dated July 7, 2023 - $32,500
   - Completed second scenario optimization under extended work agreement
   - Additional revisions made at no cost
   - Share/discussed results with JCPS team
   - Provided additional analysis as requested

H. Milestone 8 – Delivery of import file and related work – Invoice dated July 7, 2023 - $0
   - Extensive work to prepare file necessary for import into JCPS routing system
   - Additional deliverables/meeting to help ensure smooth implementation

Source: JCPS, Compiled by Prismatic, 2024

Example 3 – Purchase Order 2337524 with AR dated March 31, 2023. Although not a professional services contract, it does include certain professional services. The purchase order was based on an email from the vendor that stated "consider this an official quote". Without the services being documented in a professional services contract, JCPS does not realize the benefits and protections provided by a formal contract.

The purchase order stated:

- AlphaPlan Routing Software: Initial use period $30,000

- We would load a chosen bell-time option and its bus routes and other data into the software
- We would activate all editing features, provide training, and potentially add a small number of customizations
- We would not provide ongoing tech support, nightly download processing, and other elements that come from day-to-day use of the software when being used as part of live bus operations
- We would provide an implementation plan to ramp up to live operations, starting in June 2023

The purchase order did not adequately explain when the services were to be provided or what was to be included in the implementation plan.

Example 4 – Purchase Order No. 2319325 with AR dated November 11, 2022. Although not a professional services contract, it does include certain services that could be considered professional services. Without the services being documented in a professional services contract the district again does not realize the benefits and protections provided by a formal professional services contract.

The purchase order stated:

Service, fee $19,000.00.

Consulting services included but not limited to:

- attendance at small board group meetings (up to 7);
- up to 3 monthly meeting with Dr. Pollio;
- observe a board meeting prior to attending in December or January;
- attendance at a board meeting in December or January.

The purchase order does not adequately indicate what portion of the $19,000 was attributable to which services. It also does not indicate what documentation was to be provided to support that the services were performed.

There has been much speculation as to what the major items were that caused the situation and busing problems at the opening of schools in 2023-24. In a number of interviews, it was expressed that getting routes from the vendor later than normal, which did not allow drivers time to test and become familiar with the routes sufficiently before school started, was a major contributor. If the DPA with AR had included a detailed plan including when deliverables such as final bus routes were to

be delivered to the district, a possible major cause of the problems could have been eliminated.

It is crucial for both parties in a professional services contract that the contract clearly states who does what and when so that there are no surprises, especially as deadlines approach. By clearly defining roles, responsibilities and timelines and establishing sufficient oversight, projects can be successfully managed, deliverables have a higher chance of meeting due dates, and goals have a better chance of being successfully met.

RECOMMENDATION 5-3:

Improve Professional Services Contract documents' scope of services to help ensure the district receives the services that it needs and is paying for.

A process should be implemented to review the scope of services section of each professional services contract or other financial document for the specific services to be provided, a timeline for completing milestones during the term of the contract, and the final deliverables before contracts are signed. An improved process should help ensure that the mission critical needs are met and that the district receives what it is paying for. Should a vendor not meet expectations, a detailed scope of services will facilitate any litigation that may be necessary.

In order to implement this recommendation, the purchasing director should develop detailed guidelines for developing the scope of services section of professional services contracts. The guidelines should provide guidance for the development of the scope of services that sufficiently describes the services that the district will require the vendor to provide.

The guidelines should either be incorporated into the district's *Instructions for Completing the Contract for Procurement of Professional Services* or attached as an addendum. The updated instructions should be distributed to all departments.

Prior to approving a contract for procurement of professional services the purchasing director should ensure that the scope of services is sufficient to enable the district to properly manage the services to be provided.

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 5-4 – Sole Source Contracting and Reference Checking

A review of documents provided to Prismatic for purchasing and contracting for securing professional services through a sole source process indicated a lack of research and documentation as to why sole sourcing for the services was selected and why the particular vendor was selected. Documents reviewed also did not indicate that references for the selected vendors were requested from the vendors or whether district staff attempted to identify or contact previous customers, thus no references were verified and documented. It is also worth noting that contractual approvals and amendments, particularly those involving AR, were regularly part of the "Consent Calendar". While board members could pull specific items for discussion, this was frequently overlooked, potentially leading to missed opportunities for thorough deliberation on external vendor contracts with the school system.

Article 3.2 - Competitive Sealed Bidding of the district's Model Procurement states:

> Competitive sealed bidding which may include a reverse auction, is the preferred method for the procurement of supplies, services or construction by the Board. All Board contracts shall be awarded by competitive sealed bidding which may include the use of a reverse auction, unless authorized by law or except as provided in the following subparts of these regulations.

Article 3.24 - Noncompetitive Negotiation of the district's Model Procurement states:

> The Director of Purchasing may contract or purchase through noncompetitive negotiation only after a written determination is made by a designee of the Superintendent that competition is not feasible…

A sole source contract is a type of noncompetitive negotiation contract that can be issued without a competitive bidding process. Sole source procurement should be used only when competitive solicitation procedures like sealed bids or competitive proposals are not possible for the requirements or are impracticable. This usually happens in situations where only a single business can fulfill the requirements of a contract.[1]

Although the district's model procurement states a contract or purchase through noncompetitive negotiation may only be made after a written determination is made by a designee of the superintendent that competition is not feasible, there was not any documentation included in files provided to Prismatic indicating whether a district staff member

[1] https://acqnotes.com/acqnote/tasks/sole-soure-justification-and-approval

performed any research to determine if in fact the vendor selected was the only vendor available to perform the services covered by the contract. Letters of justification as to why the particular vendor should be selected using sole source contracting were written by the vendor and not by district staff. Documents also did not indicate that references were checked for the vendor that was selected to receive the contract. A district form titled "Noncompetitive Negotiations Determination and Finding" were most times included with contract documents but were not always fully completed.

In order to properly complete a justification document, a contract administrator/manager must find out what makes the vendor special and justifies a sole source procurement. The contract administrator/manager must be able to show that the chosen vendor has special skills or qualifications that make them the only fit for the project. This could be specialized knowledge, technical expertise, or technology that is not available anywhere else. The document explains why a competitive bidding process is not possible or right for the project. This could be because of a lack of time, the work being very specialized, or something else that makes a sole source procurement necessary.

A **justification letter or document** is needed to document the reason why a specific vendor was selected and to obtain approvals for a sole source contract. The justification document is completed to explain why a certain vendor or contractor should be chosen for a project although they did not go through a bidding process. Although the letter states the vendor is the only one available to perform the services, the project administrator/manager usually must be able to show that the chosen vendor also has the special skills or qualifications that will enable them to successfully complete the requirements of the project.[2]

It is important to have a well-documented sole source justification to ensure the procurement process is clear and can stand up to scrutiny. The document should include all relevant information and fully explain the process used to select the vendor through a sole source procurement. The justification letter should adequately describe the services that are to be acquired and the estimated or exact dollar amount of the contract to be awarded. In addition to demonstrating how it was determined that there was only one source for the services, it should fully document the extent to which checking of references for the selected vendor's prior work was performed.

Kentucky State Law 45A.380 Noncompetitive Negotiation speaks to the issue (**Exhibit 5-10**).

[2] https://acqnotes.com/acqnote/tasks/sole-soure-justification-and-approval

Exhibit 5-10
Kentucky State Law 45A.380

A local public agency may contract or purchase through noncompetitive negotiation only when a written determination is made that competition is not feasible and it is further determined in writing by a designee of the local public agency that:

(1) An emergency exists which will cause public harm as a result of the delay in competitive procedures;
(2) There is a single source within a reasonable geographical area of the product service to be procured;
(3) The contract is for the services of a licensed professional, such as attorney, educational specialist; a technician such as a plumber, electrician, carpenter, or mechanic; or an artist such as a sculptor, aesthetic painter, or musician, provided, however, that this provision shall not apply to architects or engineers providing construction management services rather than professional architect or engineer services;
(4) The contract is for the purchase of perishable foods, such as meat, fish, poultry, egg products, fresh vegetables, and fresh fruits;
(5) The contract is for replacement parts where the need cannot be reasonably anticipated and stockpiling is not feasible;
(6) The contract is for proprietary items for resale;
(7) In school districts the contract relates to an enterprise in which the buying or selling by students is a part of the educational experience;
(8) The contract or purchase is for expenditures made on authorized trips outside of the boundaries of the local public agency;
(9) The contract is for the purchase of supplies which are sold at public auction or by receiving sealed bids;
(10) The contract is for group life insurance, group health and accident insurance, group professional liability insurance, worker's compensation insurance, and unemployment insurance;
(11) The contract is for a sale of supplies at reduced prices that will afford a purchase at savings to the local public agency; or
(12) The contract is with a private real estate developer and contains a requirement:
    a. That the developer increase the size or otherwise improve the collection capacity of the sanitary sewer or storm water pipe serving the affected private real estate development; and
    b. That the local public agency pay only the proportional cost of increasing the size, or otherwise improving the collection capacity, of the sanitary sewer or storm water pipe over the original collection capacity.

Amended 2022 Ky. Acts ch. 150, sec. 1, effective July 14, 2022.

Source: casetext.com, January 2024

The district developed a form to be completed when a noncompetitive negotiation contract is recommended. The form tracks most provisions of Kentucky State Law 45A.380. This form is to be used when recommending a sole source professional services contract. The form provides a place at the end of each provision to be checked if that is the justification or the

reason why the contract justifies a noncompetitive negotiation purchasing process. The form also has an area to add the requisition number which would correlate the form to a specific purchase order, signatures, and dates. While most forms indicated that the reason for a noncompetitive negotiation was line two, all forms provided to Prismatic did not include the requisition number, signatures, or dates. **Exhibit 5-11** provides a sample copy of the form.

Exhibit 5-11
Noncompetitive Negotiation Determination and Finding Form

Jefferson County Public Schools
NONCOMPETITIVE NEGOTIATION
DETERMINATION AND FINDING

1. An emergency exists which will cause public harm as a result of the delay in competitive procedures (Only the Superintendent shall declare an emergency.) —

   State the date the emergency was declared by the superintendent: _____

2. There is a single source for the items within a reasonable geographic area —

   Explain why the vendor is a single source: see attached

3. The contract is for the services of a licensed professional, education specialist, technician, or an artist —

   State the type of service: _____

4. The contract is for the purchase of perishable items purchased on a weekly or more frequent basis —

   State the item(s): _____

5. The contract is for proprietary item(s) for resale: This can include the buying or selling of item(s) by students when it is part of the educational experience —

   State the type(s) of item(s): _____

6. The contract is for replacement parts when the need cannot be reasonably anticipated and stockpiling is not feasible —

   State the item(s): _____

7. The contract or purchase is for expenditures made on authorized trips outside the boundaries of Jefferson County Public Schools —

   State the location: _____

8. The contract is for a sale of supplies at reduced prices that will afford Jefferson County Public Schools a savings (Purchase must be approved by Director of Purchasing) —

   Explain the logic: _____

9. The contract is for the purchase of supplies which are sold at public auction or by receiving sealed bids —

   State the items: _____

I have determined that, pursuant to K.R.S. 45A. 380, the above item(s) should be obtained by the Noncompetitive Negotiation Methods since competition is not feasible.

<Redacted>

Print name of person making Determination	School or Department
Signature of person making Determination	Date
Hanover Research Council LLC Name of Contractor (**Contractor Signature Not Required**)	Requisition Number

Explanation of Noncompetitive Negotiation Methods can be found under K.R.S. 45A.380 and on page 15 in the Procurement Regulations

F-471-1 Revised 04/2020

Source: JCPS and Prismatic, January 2024

In interviews, some JPCS staff noted that the decision to sole source with AR was made because they believed that no other company could provide the services the district was seeking. However, it does not appear that district staff reached that conclusion based on thorough research of what was available on the market. Prismatic was aware in 2018-19 of several firms that could provide routing consulting assistance. Moreover, it does not appear that JCPS verified assertions made by AR that its solution had been implemented in some school districts. As noted in a recent news article, Boston Public Schools has stated publicly that it "only ever used [AR] routing software in a limited capacity" – JCPS likely could have found this out in at the beginning of its relationship with AR by contacting some of AR's former clients.

The district paid the vendor of each sole service contract reviewed the full amount of each contract, indicating that the services provided by each vendor were satisfactory. However, without thoroughly researching the availability of vendors for needed professional services, it is possible that there were other vendors available that could have performed the professional service. It is indeterminable whether the district might have secured the services of a vendor that would have provided better results should a more thorough process have been conducted by district staff.

RECOMMENDATION 5-4:

Improve the district process for using Sole Source contracting.

The process should require the district staff member who is to serve as the contract administrator or manager to thoroughly research the availability of vendors who could possibly provide the needed services. When it is determined that there is only one vendor available, the process used to make this determination should be fully documented, including why the chosen vendor was selected and what special skills or qualifications the recommended vendor has that will enable them to successfully complete the requirements of the project. It should also be required that references be checked and documented.

To implement this recommendation, the purchasing director should develop guidelines to provide guidance and requirements that must be followed before a Sole Source contract can be issued. The guidelines should specify what must be performed when determining that there is only a single vendor capable of providing a service, providing guidance on verifying references, and documenting all processes performed.

The guidelines should be attached as an addendum to the district's form for noncompetitive negotiation determination and should be distributed to all departments.

Prior to approving a contract for procurement of professional services the purchasing director should ensure that the process for determining that

only a single source is available for performing the needed service has been properly performed.

Fiscal Impact:

This recommendation can be implemented with existing resources.

Chapter 6
Cross-Area Findings

This chapter covers several findings that include 2 or more of the threads covered individually in previous chapters, whether it be SCI, SST, RO, or JCPS purchasing. Instead of largely repeating a finding in Chapters 2-5 from a single area viewpoint, they have been combined here.

Findings

FINDING 6-1: Exclusion of Affected Departments During Planning

The decision to exclude JCPS transportation staff from all initiative planning leading up to the start of school was a key point of failure on August 9th. Had they been included, the staff of the JCPS transportation department could have played a pivotal role in assessing the potential impacts of SCI, testing the new SST schedules, and judging the quality of the RO work by AR. Likewise, other affected departments were not part of the planning processes.

The development of all 3 initiatives (SCI, SST, and RO) was largely top-down. Only a few members of the leadership team were involved in the overall planning. A leader in 1 of the initiatives noted that they were not included in planning for the other initiatives, despite the overlap in the timing of rollout. When boundaries were adjusted by an outside contractor, Cooperative Strategies, the transportation department was not consulted. Leadership insufficiently vetted ideas and options with their own experts – those in the JCPS transportation department. Despite the considerable expertise within the transportation department, including a combined history of more than 100 years' experience of creating and managing school bus systems, both in and outside of JCPS, their insights were not sought.

While some JCPS staff members were quick to assume "sabotage" on the part of the transportation department when the events of August 9th played out, the transportation department was not meaningfully involved in SCI, SST, or RO planning. Although the transportation director had

regular meetings with his supervisor, the COO, he was not asked to provide feedback on any of the initiatives while they were being developed. The transportation director, who began his role in JCPS several years ago and who had prior transportation leadership experience in Kentucky's 2nd largest district, noted that he requested to be a part of the planning team when he learned of the SST/RO planning months before August 9th but was denied. The former COO noted that he was not allowed to invite the transportation director to SST/RO planning meetings with the superintendent. AR confirmed that the transportation director was not part of SST/RO discussions.

The GIS executive director indicated that he coordinated with a few members of the transportation department during the RO planning, but no documents were provided that could help determine whether these were substantive coordination efforts. Those in the transportation department did not characterize them as substantive.

Furthermore, the transportation department was not actively involved in critical discussions with the school board throughout various phases of development and approval of the initiatives. Prior to the approval of the SCI initiative, direct representation from the transportation department – particularly, the transportation director – was brought before the board for a presentation and active discussion just once. Similarly, before the approval of the SST initiative, representatives from the transportation department were not brought before the board to participate in discussions. Instead, these conversations were predominantly led by a select few from the leadership team, potentially limiting the understanding of the initiatives' dependence on the transportation department. Because of the major implications of all 3 initiatives on transportation, the transportation department's active engagement was crucial for successful alignment, yet their involvement was not consistently ensured across all phases of the initiatives.

Other JCPS departments could also have played a role in supporting the success of the various initiatives. A representative of the JCPS IT department noted that they were not involved in the planning stages of SCI, SST, or RO. However, they could have brought expertise to bear in the area of using competitive bidding to select routing technology, as they routinely use the RFP process for software and hardware purchases. They likely could have provided project management expertise in the rollout of a new technology. They likely could have provided programming or technical support in developing analyses of various scenarios. They could have been asked to address the historical and problematic practice of relying upon school personnel to manually input bus route information into the SIS. Automating updates between the AR routing solution (or the home grown JCPS systems) and the JCPS SIS might have identified problems earlier, but would at a minimum have relieved the district of manual paper tagging and data entry.

Likewise, the JCPS food services department was not meaningfully engaged in planning for the various initiatives. Department leaders only received sufficient data to begin assessing the impacts of lunch schedule changes on their 2023-24 staffing plans in April 2023.

Finally, it does not appear that school leaders were meaningfully engaged in planning for the various initiatives. Major points from interviews with principals included:

- Several principals recounted efforts to get updates on the plans as they were being developed, only to be rebuffed.
- One noted that they did not find out that their assigned number of buses was going to double until a week before the start of school, leaving little time to address site staging issues.
- When principals received their bus routes and identified problems, they felt that "nobody listened" despite their efforts to communicate. Although they input their concerns into a googlesheet as directed, they did not believe that central office leadership was systematically reviewing and addressing the concerns, nor did they feel that central office leadership was assessing the potential for large-scale problems at the start of school, based on the volume recorded on the googlesheet.
- When one principal team noted that buses on the plan were not scheduled to even arrive at their school for more than an hour after dismissal, central office leadership essentially told them "let's see what happens on the first day of school."

JCPS has had a principal communication committee (PCC) for at least several years. The stated purpose of PCC is for principals to bring concerns and discuss issues directly with the superintendent. Besides the superintendent and chief of schools, the PCC included 18 principals in 2022-23. Available notes include this comment from the December 8, 2022 meeting regarding SST/RO planning, "PCC will be used as an ongoing vetting process and communicate with their teams." However, notes from other meetings do not indicate that the PCC was used to vet any of the contemplated transportation changes. The January 23, 2023 meeting notes include a transportation update that covers many of the talking points district leadership had stated in school board meetings ("We are currently overly accommodating." "Current bus stop walk-time is shortest in the U.S.", etc.) but did not note the receipt of input from principals on SST/RO specifics or generalities. No meeting notes were recorded in February, March, or May 2023. The only transportation-related note recorded for the April 20, 2023 was "Critical we meet and ensure effective 1st day plans with new transportation plans."

On the principal survey undertaken as part of this project, a majority of the principals indicated they were not involved in the process or were given information and directives without the opportunity to provide feedback. Only 1 out of 107 principals stated they were "very involved" in discussions that led to the new school choice plan, while another 17 mentioned that there were principals on a committee to discuss start times. Seeking clarification, Prismatic learned that the committee to which the principals were referring was the PCC. More than half of the principals, 59%, stated their teams did not see their new bus routes until August 2023 (36% said they first saw them in July 2023). When they/their teams first saw the bus routes, 77% stated they had "major concerns" and another 20% stated they had "a few concerns." Of the 101 principals with concerns, only 7 stated they told "no one" about their concerns. The rest told their direct supervisor, their executive administrator, and other JCPS leadership staff. The lack of a district process to initially include principals in a meaningful way in planning was made worse by the lack of a district process to meaningfully collect and analyze their collective input on the resulting implementation plans.

RECOMMENDATION 6-1:

Include representatives of all departments in major initiative planning.

When developing and rolling out new initiatives, it is difficult for leadership to anticipate all the possible consequences or to consider all the angles of associated challenges. For that reason, diversity in a planning group is usually valuable. Group members with an operations background will likely identify different concerns from those with HR background, for example.

As the district moves forward with other major initiatives, it should require representatives of all JPCS departments, as well as those who will carry out the plans, to participate meaningfully in the planning process. Minutes from groups meetings should be kept and posted to a common folder, so that district staff is kept informed and initiative leaders can document progress and changes, receive feedback, and address concerns. This not only allows for ongoing evaluation and adjustment based on real-world experiences and challenges encountered during implementation but also helps build trust among stakeholders and ensures accountability for actions taken.

While community forums work well for informing parents and community members of district initiatives, district staff should have an internal process that occurs prior to community forums to address their concerns and help ensure success of the initiative before the plan is presented to the community. In addition, it is crucial to provide training and capacity-building opportunities for departmental staff and school leaders to enhance their understanding of complex initiatives and their roles in successful implementation.

JCPS should establish systems to foster ongoing collaboration among different departments to ensure that initiatives are thoroughly evaluated from various angles and potential impacts are assessed comprehensively. This also involves conducting post-implementation reviews to identify areas for improvement and refine processes for future initiatives.

JCPS should also consider adopting a practice similar to that employed for the SCI by establishing an advisory committee for each major proposed initiative. Following the model of the Student Assignment Review Advisory Committee (SARAC), which included central office staff, assistant superintendents, teachers, principals, JCPS department representatives, JCTA union representatives, community members, and parents, JCPS could likely enhance the thoroughness of research and planning. SARAC played a pivotal role in providing diverse perspectives and input regarding the district's student assignment plan. Had the SARAC included transportation department leaders, its committee process would likely have identified the potential challenges at the intersection of the student assignment plan and transportation constraints. By appointing a similar advisory committee for each major initiative, JCPS can ensure comprehensive discussions and analysis involving various stakeholders and foster a more inclusive decision-making process.

By implementing these measures, JCPS can enhance collaboration, communication, and stakeholder engagement in the planning and implementation of initiatives, leading to more effective and successful outcomes for the school district as a whole.

Fiscal Impact:

This recommendation can be implemented with existing resources.

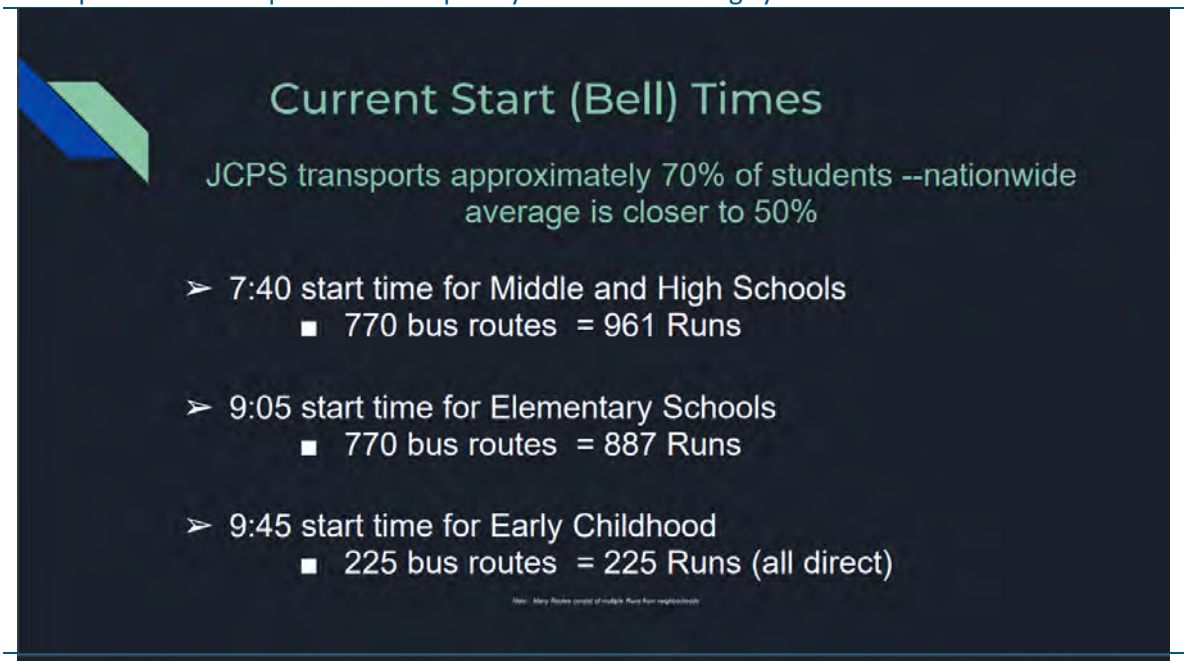
FINDING 6-2 – Information Provided to the School Board and Public

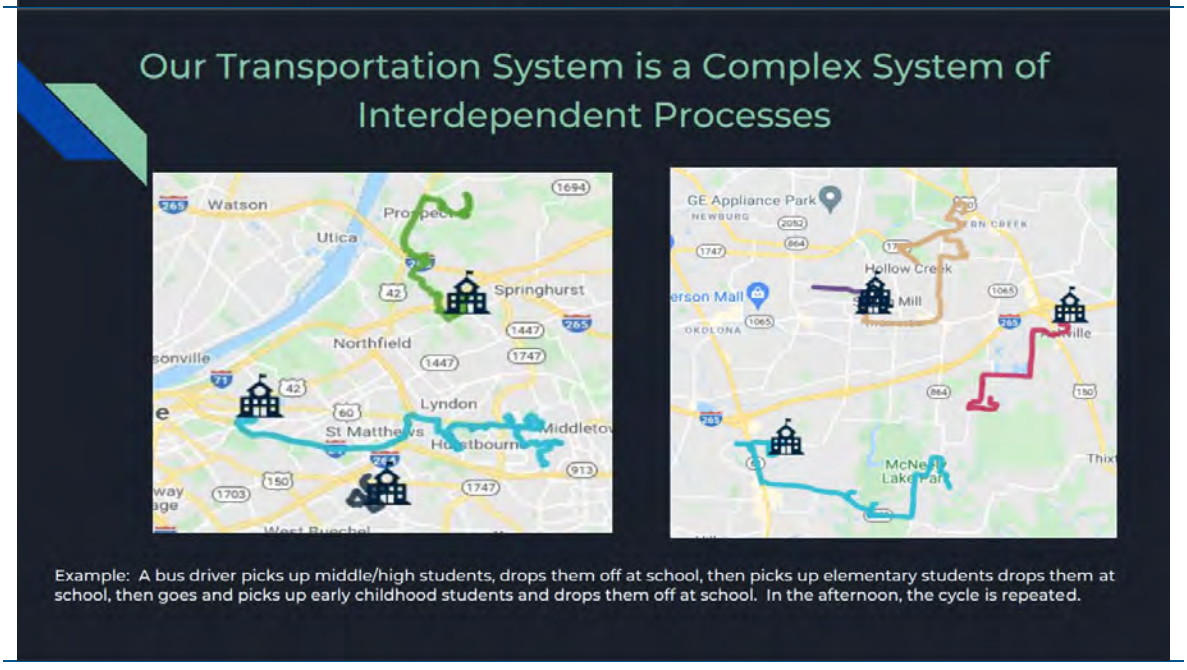
In the course of SCI, SST, and RO planning, district staff did not provide the school board or the public sufficient, documented information about challenges, constraints, and costs. The lack of detailed information made it difficult for the board and public to assess the feasibility of the final plans.

Throughout the progress of the initiatives, JCSP staff offered unsubstantiated information to the school board (**Exhibit 6-1**). Details were not included on presentation slides nor in the oral presentations that accompanied the slides. These pieces of information seem to have been used to justify later actions taken: the SST and RO initiatives.

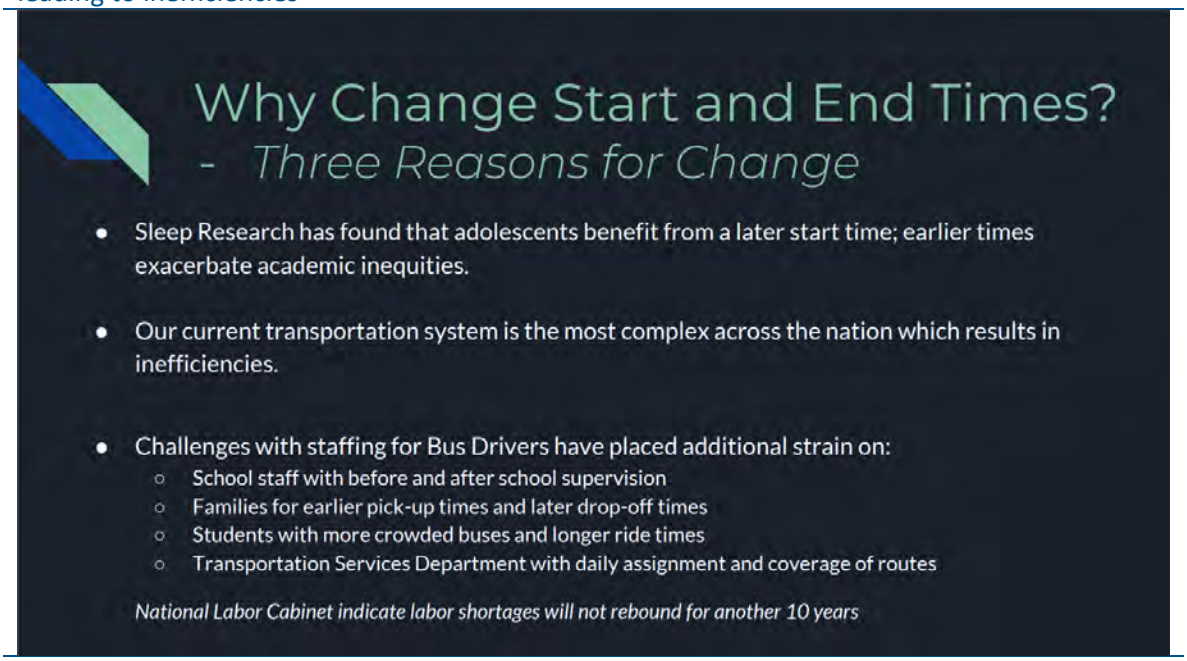
Exhibit 6-1
Examples of Unsubstantiated Information Provided to the School Board

Slides from February 1, 2022, offering unsubstantiated details of percent of students transported and self-perceived complexity of the bus routing system





Slide from March 8, 2022, offering unsubstantiated assertion that system is overly complex, leading to inefficiencies



Source: JCPS, 2023

Despite efforts, Prismatic could find no data to support these district self-perceptions:

- The district does not collect ridership data beyond that required annually by KDE. Prismatic did obtain the *SAAR – Transportation Summary Report* from KDE for the years 2017-18 through 2022-23. For 2022-23, the KDE report showed 50,348.8 students transported daily in the morning and afternoon; this would indicate the transport of 53% of enrollment. In March 2023, JCPS provided a copy of the data from Infinite Campus that is used to report to KDE. Data from 3 points in time for 2022-23 and again for 2023-24 show a range of 63-65% of students being transported. The difference between the 53% and the 63-65% of enrollment is likely due to the timeframe when the KDE data are pulled and the difference in how KDE and JCPS counted a student as "transported." The KDE figure takes into account those only transported once daily (either morning or afternoon), essentially counting them at "half-transported." The JCPS figures count those only transported once daily the same as students transported both morning and afternoon.

  However, neither the KDE nor the JCPS Infinite Campus data are firm records of the numbers of students actually transported. Historically, JCPS has relied upon school staff to collect cards from students as they rode in on the bus and then input the information into Infinite Campus. While a large effort at the

beginning of each year, there does not appear to be any later cross-checking with whether a student riding a particular bus should actually be riding that bus or whether a student who rode a particular bus at the start of school is still riding that bus later in the year. Moreover, principals noted several problems with the "extract" that supports the process for the 2023-24 school year, making it more likely that the 2023-24 Infinite Campus data have errors.

Prismatic also obtained the driver-reported morning bus counts contained in the JCPS Cambridge System (a home-grown application) from December 2023 and compiled them. Those counts totaled 51,109 students; this would indicate the transport of 55% of enrollment (using the December 8, 2023 enrollment of 93,588). There appears to be no statistical basis for the assertion that JCPS actually transports 70% of its students.

District staff in several interviews indicated that they did not believe analysis of ridership was important. Prior to 2023-24 and for 2023-24, JCPS developed its bus routing plan using the number of students eligible to ride. That is not the same as ridership. Most school transportation experts understand that 100% of eligible students never ride. This is true because it is quite rare for a school to have 100% attendance, but also because families frequently choose other methods to get their children to and from school. Districts that track ridership frequently engage in a process of overbooking their buses – if historically only 30% of the eligible HS students ride a particular bus, it can result in cost savings if the district conservatively estimates that only 50% will ride and assigns more students to the bus that there are actual seats. Prismatic could find no publicly available national statistics that state that most school districts only transport 50% of their students.

- JCPS is indeed a complex system of interdependent processes. However, it is no more complex than Prismatic has encountered in many other school districts. Likewise, Prismatic did not find the JCPS system to be the "most complex in the nation" or that its complexity "led to inefficiencies."

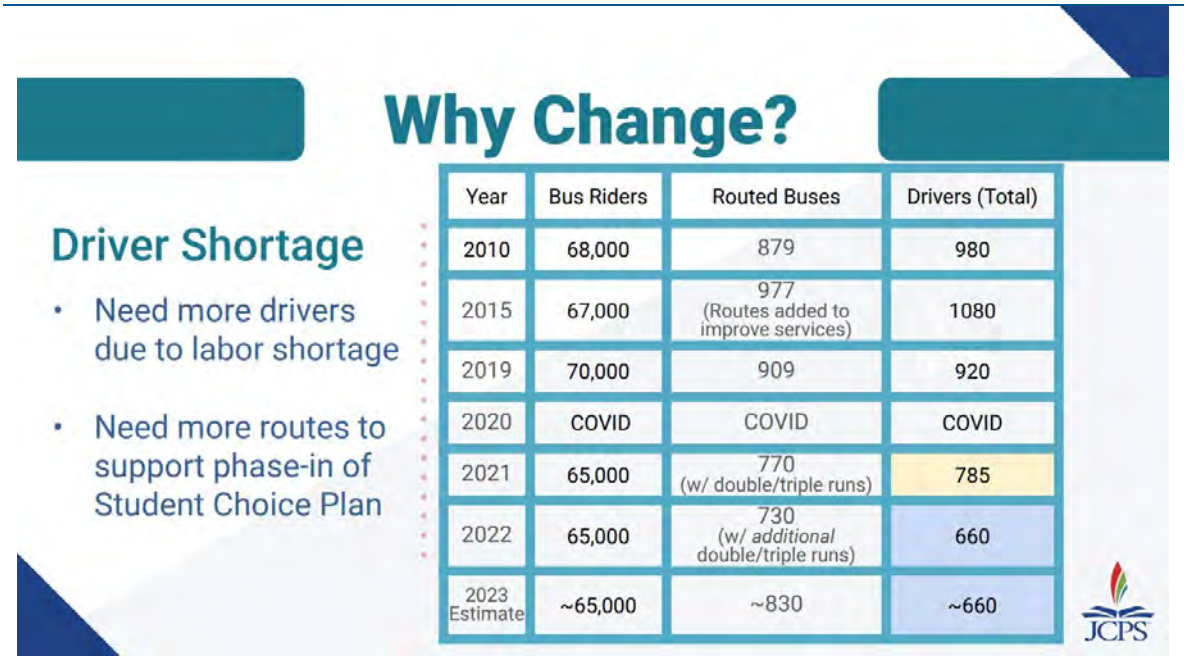
Beyond the lack of detail provided by some contractors to school district staff as detailed in Chapter 4, JCPS staff did not provide potentially crucial information to the school board and the public as the SCI, SST, and RO initiatives were developed. The 1st crucial information not sufficiently shared was the likely increased number of bus routes estimated to be needed to implement the SCI. As noted in Chapter 2, there were staff discussions about the increased need for bus routes due to SCI and grandfathering (p. 2-4). In 2020, the KDE Management Audit

recommended that JCPS "develop a recruitment plan to ensure the district has enough bus drivers and monitors to support the school choice opportunities." Several JCPS staff noted that it was known that the school choice options and the associated grandfathering would require more drivers. They provided one estimate that the SCI, without the other initiatives, would have led to a need for an additional 100 routes. Yet, presentations to the JCPS school board on SCI generally did not include quantification of the transportation costs (or savings) that might be associated with SCI options. In the May 4, 2020, board meeting, one board member asked the superintendent about the need for transportation funding in relation to SCI. The superintendent responded that the transportation impact would depend on the "percentage of students in satellite areas wishing to remain at a local school" then mentioned that a 3rd bell time would "save significant funding." No details were provided at that time. While generalized statements were made to indicate the district understood there would be an impact on transportation by implementing SCI, the impact on transportation was not quantified and detailed prior to the board's vote to approve SCI. Subsequent board meetings and presentations to the board did not return to the issue of transportation needs to meet SCI options.

Nine months after the passage of SCI, district staff notes the need for increased routes due to SCI (**Exhibit 6-2**). In the oral comments that accompanied the slides, JCPS staff mentioned an estimated need to reduce bus routes down to 600 and to maintain a driver pool of 650 but provided no estimate of the increased need for routes solely due to the SCI plan. In oral comments provided at the February 28, 2023 board meeting a JCPS staff member stated "routes will increase due to SCI" but provided no details. This appears to be the 1st time that a need for more drivers due to SCI is shared with the school board.

Exhibit 6-2
Board Slides That Mention a Need for Increased Routes Due to SCI

Slide from February 7, 2023, noting a need for more routes to support SCI, but providing no details



Year	Bus Riders	Routed Buses	Drivers (Total)
2010	68,000	879	980
2015	67,000	977 (Routes added to improve services)	1080
2019	70,000	909	920
2020	COVID	COVID	COVID
2021	65,000	770 (w/ double/triple runs)	785
2022	65,000	730 (w/ *additional* double/triple runs)	660
2023 Estimate	~65,000	~830	~660

Source: JCPS, 2023

In interviews, multiple staff members indicated they knew that SCI would put new burdens on the transportation system. As one staff member termed it, "everyone knew". In 2019, internal discussions indicated a need for 100 additional routes for SCI. Staff adopted that same figure for this round of SCI planning, apparently without documented rigorous analysis. Staff noted that AR did provide some modeling of the impact of SCI and indicated it would require 125 additional routes. It does not appear that these estimates were shared with the school board or publicly.

In interviews and internal documents, multiple staff members also noted that their analyses indicated that JCPS would not begin 2023-24 with the desired 650 drivers. As far back as November 2022, the topic was discussed among staff. At that time, based on historical local and current national trends, they anticipated JCPS would start the school year with ~550 drivers. It does not appear that these estimates were shared with the school board or publicly.

The 2nd crucial information not sufficiently shared was the substantial changes to the routing plan, which, as provided by the contractor, included numerous buses not arriving to pick up students from schools in the afternoon for at least 40 minutes past dismissal. Chapter 4 details the

myriad deficiencies in the routing plan. It also notes that receipt of the plan was not only late according to the planned schedule (which was simply the historical calendar for routing), but that the schedule was likely overly optimistic to begin with. This may explain why concerns about the routing plan were not shared with the school board prior to the opening of school. However, JCPS leadership staff received indications of concerns about the routing plan prior to the start of school from transportation department staff, school principals, and a driver union representative.

In interviews, board members retrospectively noted that they had not received nearly enough information regarding transportation leading up to August 9th. They noted that they were never informed of any problems leading up to the start of school. One board member termed presentations to the school board as "more surface-level than an obvious summary of extensive work." As one board member noted, in many cases, the board has been encouraged to simply "trust" the administration. Several board members noted that they relied upon the assurances of the JCPS staff as the initiatives progressed.

The JCPS school board has an important role to play in helping to ensure that the district is headed in the right direction when it takes on new initiatives. In its publication, *School Board Leadership Guide*, the Kentucky School Board Association (KSBA) articulates this role in a number of ways:

- "Board members should recognize that their responsibility is not to run the system, but to see that it is well-run."
- "The local board represents the community by making sure that tax dollars are used effectively and efficiently on behalf of their students."
- "Accountability refers to the process of measuring and publicly reporting the performance of each school and each district in terms of the achievement of its students as measured by assessment processes, as well as many other aspects of school operations."
- "Board members should expect to hear how school and district programs contribute to improving student achievement and they should be willing to ask questions to better understand how the programs will benefit students."
- "Public funds come from taxes, and it's the job of the elected local board of education to make sure the taxpayers' money is managed properly. The board can delegate administration of these funds to the superintendent and school councils, but it is ultimately responsible. Fiscal management is more than adopting a tax rate and approving a budget. It is seeing that the right programs are funded, that purchasing procedures are followed

> resulting in the best product for the cost, that funds are invested in a way that gets the best return, that assets are properly insured, and generally that all funds are properly managed."

In a similar vein, the KSBA publication notes that:

> [S]uperintendents should:
>
> - Be forthright, even if that means saying they're not certain what will happen.
> - Never withhold pertinent information, even with complex initiatives.
> - Have a system of introducing complex, high-profile initiatives early to the board.
> - Be open to board ideas and questions.

RECOMMENDATION 6-2:

Provide better and documented information to the school board and the public regarding major initiatives.

Throughout the implementation process of new school district initiatives, both the school board and the public should receive continuous updates, data, and detailed information regarding processes and implementation. Full disclosure of data and documentation holds school districts accountable for their actions and the outcomes of their initiatives. When all relevant information is accessible, the board can evaluate the effectiveness of programs and initiatives, hold decision-makers accountable for their decisions, and assess how resources are being allocated within the school district. This transparency helps ensure that resources are used efficiently and effectively to support initiatives that align with the priorities and educational goals of the district. Transparency builds trust between the school district and the community it serves.

Overall, providing full data, details, and documentation for new school district initiatives is crucial for promoting transparency, informed decision-making, accountability, public participation, efficient resource allocation, and continuous improvement within the educational system.

Fiscal Impact:

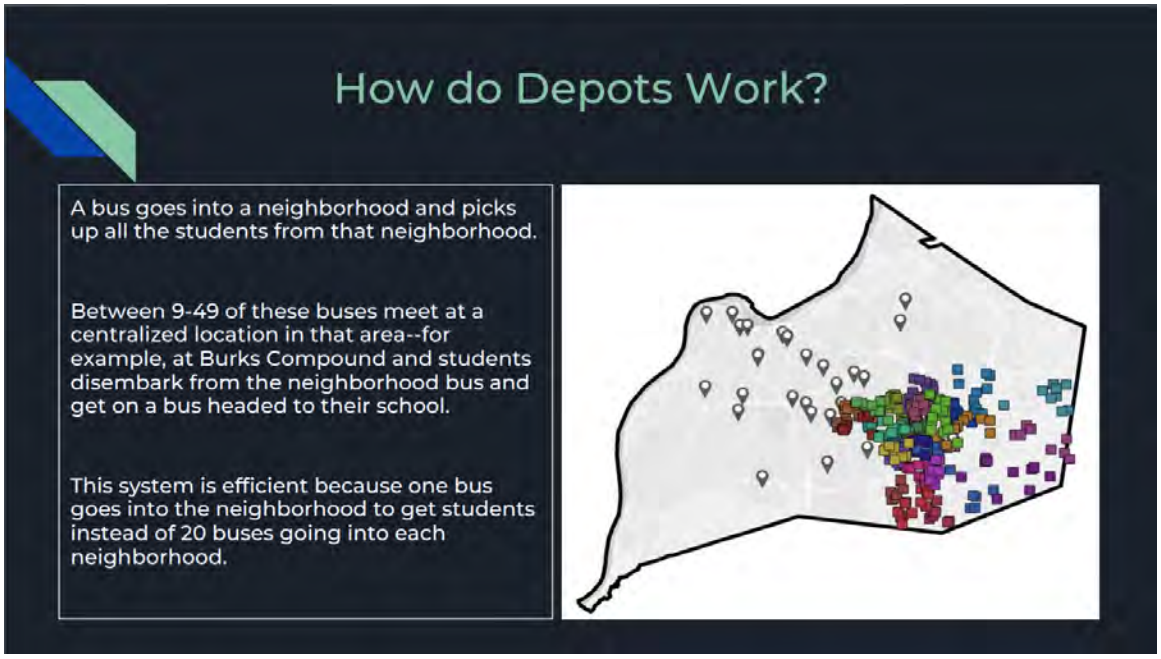
This recommendation can be implemented with existing resources.

FINDING 6-3: Use of Depots

The AR routing solution implemented by the district moved away from the use of depots. While difficult to quantify, this reduction likely contributed to inefficiencies and lower service quality.

In a February 1, 2022 presentation to the JCPS school board, district staff both explained its use of depots and noted it found them to be efficient (**Exhibit 6-3**). As part of the commentary during that meeting, the transportation director estimated that 500 more bus drivers would be needed if the depot system was not in use.

Exhibit 6-3
Depot Slide from February 1, 2022 Presentation



Source: JCPS, 2023

Using admittedly incomplete available JCPS data, Prismatic estimated that, prior to 2023-24, approximately 50% and perhaps as many as 70% of JCPS runs involved depot use. The AR solution reduced depot usage to an estimated less than 20%. **Exhibit 6-4** provides an example of the limited use of depots at 1 compound with the AR solution; staff for that compound noted that historically all available time slots on the page for a particular depot were filled with buses.

Exhibit 6-4
Example Current Usage of Depots

DEPOT #237
DETRICK COMP 3:00

SCHOOL		SLOT	BUS	BUS	SLOT		SCHOOL
GRACE JAMES	H	33	1439	1194	99	JA	ECHO TRAIL / PHOENIX
CONWAY	BB	31	1911	1957	103	W	OVERFLOW
LASSITER / MOORE	JA	29	1875				

DEPOT #238
DETRICK COMP 4:00

SCHOOL		SLOT	BUS	BUS	SLOT		SCHOOL
BRECK METRO	LL	33	1746	1956	99	W	BALLARD
SHAWNEE	M	31	1955	1605	101	D	PHOENIX
HIGHLAND / ESL NEWCOMER	H	29	1838	1839	103	H	OLM SOUTH / PHOENIX
ESL NEWCOMER	H	27	2032	1138	105	D	OVERFLOW / OLMSTEAD

Source: JCPS, 2023

Why depot use was substantially reduced in the AR route plan was not documented. JCPS staff did note that the use of depots arose as a result of the range of choices offered to students in the past. It therefore seems odd that the rollout of a plan that offered more choice overall moved away from depots, which previously worked.

Under the SCI, students in the Choice Zone (western Louisville) could choose to attend their close to home ("resides") school or 1 of several "far away" schools. For example, students in the Valley Elementary Zone could choose to attend Kennedy ES, which is located in the zone, or to attend Dixie ES, Johnsontown Road ES, or Medora ES. All 3 of the far away schools are located close to each other (**Exhibit 6-5**).

Exhibit 6-5
Valley Choice Zone and Far Away Schools

Source: JCPS Choice Zone materials, 2023

Rather than have potentially multiple buses for each of the far away schools travel the entirety of the Valley Choice Zone just for their students, it would likely be more efficient to have multiple buses divide up the zone, pick up all the students for the 3 far away schools then meet at a depot to sort students onto school-specific buses. This example is complicated by the decision to adopt SSTs of 7:30am, 9:30am, and 9:40am respectively for Dixie, Johnsontown Road, and Medora ES.

The substantially different SST of Dixie ES also seems to point to a disconnect between the SCI, SST, and RO initiatives. Knowing the planned flow of a group of students from the Valley Choice Zone to the 3 far away schools, it would have been logical to place all the far away schools on the same (or close) tier. Then, the depot concept could have been employed, or if the number of students was small enough, a few buses could have been deployed to serve all 3 of the far away schools.

Returning to the previous example, if the SST of Dixie ES cannot be adjusted, the depot concept could still be used with just Johnsontown Road and Medora ES which are located 4.3 miles apart. The same concept could be applied to each of the choice zones and their cluster of far away schools. Doing so would likely reduce bus mileage and run time as each bus would only have to cover a portion of the choice zone.

Given the small number of students from the Valley Choice Zone who opted to attend a far away school in 2023-24, it is possible that an analysis by zone would yield opportunities to reduce bus counts without the need for depots. In the Valley Choice Zone example, only 93 students in the choice zone (zip codes 40211 and 40216) opted for a far away school. Using the JCPS guideline of a planned 66 ES students per bus, only 2 buses are needed to cover the choice zone and deliver students to the 3 far away schools (again ignoring the much earlier SST of Dixie ES). If the SST of Dixie ES cannot be adjusted, the same logic could be applied with the remaining 2 schools and only 1 bus from the choice zone would be needed for the 56 students attending Johnsontown Road and Medora ES (**Exhibit 6-6**).

Exhibit 6-6
Number of Valley Choice Zone Students Attending Far Away Schools

	2022-23			2023-24		
Choice Zip Code	**Dixie ES**	**Johnsontown Road ES**	**Medora ES**	**Dixie ES**	**Johnsontown Road ES**	**Medora ES**
40211	54	31	0	31	21	0
40216	8	9	20	7	20	14
Total Students	122			93		
# of Buses Needed	2			2		

Source: JCPS Student Enrollment by Zip Code data, 2023
(These figures do not match those provided by SCI leadership. Despite Prismatic efforts, the 2 data sources do not appear to be reconcilable, so only the zip code data were included here.)

Thus, while a return to depot usage could yield some transportation efficiencies, at the same time, some principals provided examples of inefficient current use of depots. One principal articulated these examples:

- If a student would like to attend an afterschool program within a few minutes' drive of their elementary school, they could be assigned to take a depot bus from the elementary school, then take a 2nd bus back toward the afterschool site. By the time the student completes that journey, the afterschool program has ended.

- Some elementary students who attend their "resides" schools are assigned to a depot switch. Given the proximity of students' residences to their resides schools, this seems nonsensical.

- Some students ride a bus 20 minutes to a depot, wait 40 minutes at an unstaffed depot, then ride another bus to get to a residence that is 15 minutes from the school campus.

RECOMMENDATION 6-3:

Evaluate the potential for implementing greater depot use.

It is unclear why AR largely abandoned the use of depots in the JCPS routing plan, particularly given that:

- the clustering of far away schools in the SCI lends itself to depot usage
- the transportation department had previously demonstrated that it could effectively manage a depot operation

In implementing this recommendation, the transportation department should assess each choice zone independently and determine whether depot usage could reduce run time, both given the current SSTs and given ideal SSTs. Where logical, and where the number of buses involved in a depot is small, staff may recommend that it be placed somewhere other than the historical depot locations. For example, it might be most logical to have a depot of 3-4 buses in the parking lot of an ES completed under the supervision of a paraprofessional already assigned to that school to support breakfast or before school activities. Staff may also find that it can combine buses from choice zones without the need for depots.

While doing this work, the transportation department should assess whether there is inefficient use of depots currently in the system, as alleged by some principals. If so, this should be corrected at same time.

Fiscal Impact:

This recommendation can be implemented with existing resources.

Chapter 7
Conclusions and Recommendations

Conclusions

After reviewing available documents/files, interviewing JCPS leadership, and surveying principals, the Prismatic team concludes that a number of conditions gave rise to the Incident. The conditions included these JCPS areas operating at less than best practices levels:

- Project Management
- System Implementation
- Organizational Communications
- Decision-Making Methodology
- Contractor Performance

Project Management

In the course of this study, Prismatic found little in the way of active project management for SCI, SST, or RO. No evidence of the use of classic tools of project management like Gantt charts was provided. Few project meetings resulted in written notes that were saved (if they were, they were not shared with Prismatic). The only established timeline associated with the initiatives was the historical transportation department planning calendar (Exhibit 4-1, provided in Chapter 4). Understanding the large transportation changes that would be proposed under any 1 of the initiatives, it appears that no decisions were made to move portions of that calendar earlier as a potential buffer against unforeseen circumstances. When vendors were late in providing key deliverables, the district had no backup plans ready to mitigate the issue.

System Implementation

The district had a history of failing to implement routing software. Determining the reasons for those failures were beyond the scope of this work; they may have been due to flaws in the software selected or they may have been due to something else. However, the district itself should

have known the reasons for the past failures and brought that knowledge to bear this time. It does not appear to have done so.

As part of the purchases from AR, JCPS paid for routing software. It was previewed to transportation department staff and limited training was provided. JCPS staff was not able to use it to address problems it saw with routes prior to August 9th. Some staff indicated that the original plan was to run the AR software side-by-side with the existing in-house systems through the Fall 2023, then transition to full use of the AR software in the second half of 2023-24. That kind of transition planning is a best practice; however, Prismatic found no evidence of artifacts that indicate the systems implementation planning went any farther than that. There was no calendar of software training, apparently few meetings with the IT department to work on integration of the routing software with the student information system (SIS), and no target date set for switchover (when the old software would be turned off and the new software would become the primary system).

AR representatives agreed that the plan was to run the routing systems side-by-side, but disputed that the JCPS purchase was for anything other than an undefined "initial use period," indicating that the district would subsequently have to later purchase the full software. As this study progressed, AR representatives indicated in January 2024 that because the district did not "seem to be using the software at all" the contractor intended to shortly remove access to it. This is further evidence that the routing software rollout in 2023 lacked many details typical of a solid system implementation effort.

In terms of general "systems", the district also had shortcomings. As the implication for bus routes became known through SST and RO, the district lacked a system to provide drivers and their supervisors the opportunity to talk through what new procedures or training they might need. Had drivers known in March 2023 that many routes would be un-mirrored and depot use would decrease, driver supervisors might have organized additional days for drivers to practice runs, meetings to ensure drivers understood they would not be repeating morning runs in the afternoons, or even paid drivers to do "familiarization" drives around new areas.

When the concerns regarding lack of stops, bus assignments, and the bus routes bubbled up in July 2023, JCPS did not respond by adding staff to the 485-RIDE phonebank in anticipation of the likely increased call volume. Instead, it staffed the August 9th phonebank with the same number of staff as usual.

These examples indicate a lack of systems to adapt to circumstances, knowing they are about to change. As one JCPS leader noted, while the district was not able to hire as many bus drivers as it wanted, the need for "systems should have been foreseeable."

Organizational Communications

JCPS had difficulties both internally with communications across departments and externally with the school board and greater public. Internally, not all the departments who should have been involved in initiative planning were at the table, as detailed in Chapter 6. This was a fault of structured communications. Also internally, JCPS did not have ways of listening to communications that would have provided early warnings of oncoming school start problems. Some staff reported being ignored when they sounded alarms. When interviewed regarding activities leading up to August 9th, multiple staff noted a negative environment in the central office that discouraged questions and collaboration. Post-Incident, some employees noted that they feared retribution for providing Prismatic with information. These communications faults appear to be a problem of corporate culture.

Externally, JCPS staff did not provide sufficient details about obstacles potentially in the way of successful initiative implementation. The district ended the 2022-23 school year with 731 routes. If the board had known that:

- prior to proposing SCI, the district projected it to require 100-125 additional routes
- prior to proposing SCI, the trend data indicated that JCPS would start the school year with 550 bus drivers
- prior to proposing any of the 3 initiatives, the transportation department staff was not materially involved in their planning

would it have approved all 3 for implementation in 2023-24?

Decision-Making Methodology

Based on the available data, it appears that the SST and RO initiatives became necessary as the details of the SCI were finalized. There are some indications in the board meeting presentations that JCPS leaders were at least somewhat aware of this necessity as they worked toward SCI passage.

As it has stated on previous projects, Prismatic recognizes that the determination of school start times is an educational and leadership decision, not a transportation decision. Choosing to change school start times is one of the few decisions a school board can make that can impact every stakeholder in the district. Depending on the changes made, a district may have to rewrite all its collective bargaining agreements and change the work schedules of all groups of employees. Therefore, it is not a decision to be undertaken lightly. Packaging SST changes as a necessary

consequence of a previous decision deprives the school board and the public of the right to make a considered decision.

JCPS leadership did not seem to have adequately weighed the time needed to implement such sweeping changes as SST or the large-scale RO it undertook. Multiple leaders referenced a school district peer group that they contact for data and advice, but there was no documentation that they queried the peer group as to what would be a reasonable timeline. In Prismatic's experience, a successful SST in a large district takes at least a full year, while large-scale RO changes can take a year or more to achieve.

Contractor Performance

Prismatic found that JCPS tends to rely heavily on sole sourcing of contracts. As noted in Chapter 5, JCPS sole sourcing work indicated a lack of research and documentation as to why sole sourcing was necessary instead of a competitive bidding process.

References for sole source vendors were not verified. This was a particular problem with the AR sole sourcing. In the aftermath of August 9th, a news article reported that Cincinnati Public Schools and Columbus Public Schools had previously had problems in their attempts to implement AR solutions.[1] Neither engagement was reported as ending with AR routes and software continuing to be used in those districts. Both of those districts were ahead of JCPS in attempting to implement AR solutions. Both school districts are within a day's drive of JCPS, so staff could have completed a rigorous reference check with either.

JCPS staff also tended to present sole sourcing agreements in ways that many not have been completely transparent to school board members and the public. For example, the November 16, 2022 contract with AR for $150,000 was listed in the school board documents as a "data privacy agreement." Moreover, staff does not appear to have provided the school board and the public with running totals for vendors in use or specific initiatives. For example:

- The initial contract with Cooperative Strategies was $120,000 (November 15, 2019), but the current running total for that vendor is $600,000.
- The initial contract with AR was $509,167 (June 9, 2021) but the current running total for that vendor is $858,167.
- The contract with AR for routing software was not the first district purchase of such software. Prismatic found evidence of 2

[1] https://apnews.com/article/kentucky-school-bus-problems-alpharoute-a26288e7d4aa4de5b75c4f658705b19a

prior efforts to implement routing software in JCPS, 1 in the 1990s and 1 in the period 2015-19. Prior to making a 3rd purchase, the district does not appear to have engaged in an analysis of why the previous purchases were unsuccessful and to have provided the results of that to the school board.

The problem of the Cooperative Strategies work not explicitly considering and communicating transportation impacts is detailed in Chapter 2. The specific flaws in the AR routing plan are detailed in Chapter 5.

Recommendations

As with all projects Prismatic undertakes, a number of areas considered initially to be within scope were reviewed extensively but ultimately no recommendation was made. This was because either because the data were inconclusive or insufficient.

For example, the available data seem to indicate that JCPS staff is not sufficiently sensitive to the need to comply with state data retention requirements. These requirements are outlined on the JCPS website and they include the retention of emails.[2] Nevertheless, there appears to be a lack of adherence to retention requirements for emails. District employees are required to retain some emails permanently while others are retained for a shorter period. Yet, when seeking emails relevant to topics of conversation in interviews, several principals felt they were missing emails from the July-August 2023 period. In interviews with central office staff, Prismatic expected to be able to gather more email documentation than was ultimately available. Overall, the consulting team concluded there were insufficient data for a recommendation, as it was not possible to document the apparent lack of emails, without being able to prove they had once existed. One possible alternative explanation is that the emails never existed. This possibility was perhaps supported by a JCPS leader who stated they felt encouraged to use cell phone texting instead of district email because it was perceived that texting was less subject to open records requirements.

Across Chapters 2 through 6, Prismatic made 16 recommendations that collectively should address the district conditions noted above. As the district plans for recommendation implementation, it should seek to address culture and ways of work issues systemically.

Other than the Chapter 4 recommendation to adopt integrated routing, GPS, and camera systems, Prismatic believes that the recommendations of this report can be implemented with existing resources, meaning a small dollar cost or some amount of work hours from existing staff.

[2] https://www.jefferson.kyschools.us/node/2355

#	Recommendation
2-2	Develop systematic procedures for communication and collaboration between departments related to school choice and schedule on-going reviews of school choice zones and boundaries with the district transportation department to ensure students receive transportation services to their choice schools as appropriate.
2-3	Assign default schools to students who do not complete a school choice application by the established deadline.
3-1	Review options for adjusting SSTs for 2024-25.
3-2	Review options for moving schools on mini-tier start times to a major tier start time.
3-3	Review options for adjusting all secondary schools to the 8:40 am or later SST for 2024-25.
4-1	Re-establish and adhere to an annual routing timeline.
4-2	Rework AR routes.
4-3	Create more effective communications processes around routing.
4-4	Adopt an integrated routing, GPS, and camera system.
5-1	Improve the district's Professional Services Contract administration by formally designating a contract administrator or contract manager for each contract and develop specific responsibilities for the position.
5-2	Improve the timing of payments in Professional Services Contracts and Data Privacy Agreements to help ensure the district receives satisfactory services before making payments to vendors.
5-3	Improve Professional Services Contract documents' scope of services to help ensure the district receives the services that it needs and is paying for.
5-4	Improve the district process for using Sole Source contracting.
6-1	Include representatives of all departments in major initiative planning.
6-2	Provide better and documented information to the school board and the public regarding major initiatives.
6-3	Evaluate the potential for implementing greater depot use.

Appendix A

Principal Survey Results

This survey was fielded anonymously via web link, December 8, 2023 through January 3, 2024.

n = 109

Overall Results

1. **What is your school level?** n = 102

Elementary	69%
Middle	15%
High	13%
Other	4%

2. **What is your school's start time this year?** n = 102

7:40 am	25%
8:00 am	3%
8:10 am	4%
8:40 am	23%
9:00 am	2%
9:10 am	6%
9:30 am	6%
9:40 am	32%
10:40 am	0%

3. **At what school are you?**

Provided a response	54
Chose not to provide a response	55

4. **How long have you been a principal in JCPS?** n = 101

0-5 years	58%
6-10 years	26%
11-15 years	13%
16-20 years	3%
21+ years	0%

5. **How long have you been in JCPS overall?** n = 102

0-5 years	2%
6-10 years	7%
11-15 years	18%
16-20 years	41%
21+ years	32%

Last School Year (2022-23)

(n=108)

	Yes	No	Not Sure
Did you regularly have some buses arriving in the morning after the start of school?	72%	28%	0%
At the official end of the school day, did you regularly have buses that were NOT lined up and ready to receive students?	77%	23%	0%
Did any of your staff sometimes transport students home in the afternoons in their own personal vehicles because of a lack of bus transportation?	62%	38%	0%
Other than yourself, did you have someone on your staff assigned to handle bus referrals for student discipline?	96%	4%	0%

[asked of those who regularly had some buses arriving in the morning after the start of school in 2022-23] Approximately what percent of your buses regularly arrived after the start of school? (n = 79)

<25%	59%
25-49%	22%
50-74%	13%
75-99%	6%
100%	0%

[asked of those who regularly had some buses NOT lined up and ready to receive students at the official end of the school day in 2022-23] Approximately what percent of your buses were not regularly lined up at school at afternoon dismissal? (n = 77)

<25%	34%
25-49%	2%
50-74%	12%
75-99%	28%
100%	6%

There were a number of alternative bell schedules discussed leading up to the 2023-24 school year. How involved were principals in those discussions?

This question was open-ended. A total of 108 principals provided responses. Each comment was coded and could have covered multiple topics.

Comment	Count
We were told things, "informed of plans," not asked for opinion, no opportunity to share feedback.	34
Not at all. We were NOT involved in the discussions or process.	23
There were principals on the committee to discuss start times.	17
Somewhat involved	15
Principals had opportunities to share data, express concerns, share feedback	10
Other / Additional unrelated comment	9
Not sure, don't know	7

Comment	Count
I was not a principal at that time.	6
Not very involved	5
Principals were told not to complain or express concerns	4
Don't remember	3
Principals were told to complete a survey	2
Very involved	2
Principals faced negative consequences for questioning	1
Principals were made aware of possible changes, 2-3 meetings held to provide updates	1

How involved were principals in discussions that led to the new School Choice plan?
This question was open-ended. A total of 107 principals provided responses. Each comment was coded and could have covered multiple topics.

Comment	Count
Not at all. We were NOT involved in the discussions or process.	27
We were told things, "informed of plans," not asked for opinion, no opportunity to share feedback.	17
There were principals on the committee to discuss start times.	17
Not sure, don't know	16
Principals had opportunities to share data, express concerns, share feedback	14
Somewhat involved	7
I was not a principal at that time.	6
Not very involved	6
Other / Additional unrelated comment	5
Principals were told to complete a survey	2
Very involved	1

Leading Up to the 2023-24 School Year

In Spring 2023, did the Infinite Campus enrollment projections for your school seem unusual? (n=105)

No, they looked as expected.	41%
Yes, they looked lower than expected.	34%
Yes, they looked higher than expected.	13%
Something else	11%

When did you or your administrative team first receive the bus routes for your school? (n=105)

July 2023	36%
August 2023	59%
Not sure	5%

When you/your team first saw the bus routes for the 2023-24, were you concerned? (n=105)

Yes, there were many concerns.	77%
Yes, there were a few concerns.	20%
No, there were no concerns.	1%
Don't really remember.	2%

[asked of those who indicated concerns] To whom did you express your concerns?
This question was open-ended. A total of 101 principals provided responses. Each comment was coded and could have covered multiple topics.

Response	Count
Assistant Superintendent	44
Bus Compound Coordinators	32
Executive Administrator	21
Supervisor/Immediate Supervisor	13
Bus compound manager	10
Administration (non-specific)	8
Amy Dennes	7
No one	7
Other principals	5
Chris Perkins	4
Marcus Dobbs	4
Bus Drivers	4
Staff within own school	4
Other	4
Transportation personnel	2
William De Angelo	1
"Anyone who would listen"	1
District Secretaries	1
Director of Special Education	1
Chief of Schools	1

Response	Count
ECE Department	1
John McClure	1
Jessica Rosenthal	1
Board members	1
Marge Eckerle	1
Transportation depots	1
High school division	1

[asked of those who indicated concerns] What were your concerns?
This question was open-ended. A total of 101 principals provided responses. Each comment was coded and could have covered multiple topics.

Response	Count
Afternoon pickup times / arriving at school after dismissal / lack of space/staffing to supervise students awaiting buses in afternoon	34
Lack of communication / communication problems	29
Students without bus assignment / stop	29
Adding stops / missing stops	17
Unmirroring of bus runs	15
Route length	15
Unsafe bus stops	15
Route changes	15
Bus stop distance	14
Buses arriving after the start of school	11
Incorrect timing listed on route sheets	9
Drivers did not know routes	9
Bus finder/IC not working / inaccurate	7
Families lacked information	9
Overcrowded buses	7
Number of students on bus	5
Under-capacity buses	2
Delay in assigning students to buses	1
Other	39

	Yes	No	Not Sure
[asked of those with concerns] Do you feel that at least some of your concerns were addressed prior to the start of school? n = 101	26%	64%	10%
Did your school host a meeting with the 2023-24 bus drivers prior to the start of school? n = 105	98%	2%	0%
[asked of those who hosted a driver meeting] Did all assigned drivers attend the meeting? n = 103	15%	82%	4%

[asked of those who hosted a driver meeting] Did the drivers express more than the usual concerns about the 2023-24 routes? n = 103

Yes, a lot more than usual	86%
Yes, but no more than usual	9%
No, concerns were not expressed	3%
Not Sure	2%

	Yes	No	Not Sure
Did all of the bus routes assigned to your school have an assigned driver for the 1st day of school? n = 105	59%	18%	23%
[asked of those who >0 unassigned drivers on the 1st day of school] Did that also happen in previous school years? n = 19	5%	84%	11%

In the week before school started, did parents contact you/your team with concerns about bus routes and/or bus stops? n = 104

Yes, a lot more than usual	89%
Yes, but no more than usual	8%
No, not really	0%
Not Sure	3%

On the 1st day of school, how late were the latest students in arriving at school in the morning? n = 104

0 minutes	6%
~10-20 minutes after school start	8%
~21-30 minutes after school start	15%
>30 minutes after school start	71%

	Yes	No	Not Sure
[asked if >0 late students on the 1st day of school] Is this kind of lateness unusual for the first day of school? n = 98	60%	36%	4%

This School Year (2023-24)

How does your school find out which buses are not rolling on a specific day and which buses are covering for it?
This question was open-ended. A total of 103 principals provided responses. Each comment was coded and could have covered multiple topics.

Response	Count
Compound emails	68
App	42
No notification	26
Compound calls	17
Edulog (several also noted that the Edulog data are often incorrect)	13
Unspecified type of contact from bus compound	11
Sub bus arrives at school	4
Compound texts	3
Parents call	2
Bus does not arrive	2
Supervisor text	1
Spreadsheet	1
Bus drivers	1
Dashboard	1
Teams	1

	Yes	No	Not Sure
Currently, do some buses just not arrive at all in the morning or afternoon but you/your team are never officially notified about it? n = 103	38%	59%	3%
Do you have a staff member monitor morning bus arrivals daily and keep notes on the arrival time? n = 103	99%	0%	1%
[Asked if staff keeps notes on daily arrivals] Has your school kept those records? = 102	97%	0%	3%

Currently, how many bus riding students are arriving after the instructional day begins? An approximate number is fine. n = 100

Response	Count
0	11
3-4	1
4	1
5	1
8	1
<10	1
10	1
12	2

Response	Count
15	2
16	1
20	1
20-30	1
20-40	1
22-30	1
25	1
30	3
35-45	1
37	1
39	1
40	5
40-50	3
41	1
45	2
50	6
50-60	1
60	3
60-80	2
60-120	1
60-180	1
63	1
70	3
75-100	1
75-125	1
85	1
100	6
100+	1
102	1
110-125	1
115-140	1
120	2
120-150	1
140	1
150	3
150-200	1
170	1
182	1
200	2
200	2
200-300	1
230	1
70 is typical; we have been about 40 lately	1
Consistently this is not occurring but time to time it is one bus with about 5-8 kids	1

Response	Count
Maybe once every week or two we will have one late bus of 15-20 students.	1
Not sure	1
On average it is 3 buses	1
Usually at least 4 buses	1
This doesn't happen too often	1
Very few at this time <1%	1
When a bus is late, it is 2-3 hours late. On a daily basis if they all come on time, not too many since we are the first start time.	1

Using the midpoint where a principal provided a range, the 95 quantifiable responses yield an average of 65 students.

Currently, how late are the last bus riding students in arriving at school in the morning? n = 102

None (they all arrive ~15 minutes before the bell)	9%
at the bell (0 minutes)	10%
~10-20 minutes after school start	25%
~21-30 minutes after school start	29%
>30 minutes after school start	27%

Currently, at the official end of the school day, how many of your school's buses are lined up and ready to receive students? n = 102

100%	5%
75-99%	19%
50-74%	7%
25-49%	11%
<25%	59%

Currently, how late after dismissal are the last buses arriving at your school in the afternoon? n = 102

<15 minutes	12%
16-30 minutes	8%
31-45 minutes	10%
46-60 minutes	24%
>60 minutes	47%

Currently, how many bus riding students are held at school after dismissal, waiting for their bus? An approximate number is fine. n = 100

	# of Responses	# of Students		
		Minimum	Average	Maximum
~15 minutes after dismissal	81	0	196	1,050
15-30 minutes after dismissal	80	0	152	750
31-45 minutes after dismissal	77	0	95	350
46-60 minutes after dismissal	74	0	59	260
61-120 minutes after dismissal	54	0	27	150
>120 minutes after dismissal	35	0	7	60

	Yes	No	Not Sure
Has any of your staff transported students home in the afternoons in their own personal vehicles because of a lack of bus transportation? n = 102	78%	22%	0%

[Asked if staff is transporting students] How frequently is this happening? n = 80

Daily	10%
A few times a week	30%
A couples times a month	28%
Only a few times overall	33%

	Yes	No	Not Sure
Other than yourself, do you have someone on your staff assigned to handle bus referrals for student discipline? n = 102	98%	2%	0%

	Much Better	Somewhat Better	About the Same	Somewhat Worse	Much Worse
Is the bus transportation situation at your school better or worse than 2022-23? n = 102	8%	8%	9%	10%	66%

	Much Higher	Somewhat Higher	About the Same	Somewhat Lower	Much Lower	Not Sure
Compared to last year, what is the volume of school bus ridership at your school now? n = 102	1%	6%	33%	49%	10%	1%
Compared to last year, what is the volume of parent drop-offs at your school now? n= 102	34%	45%	20%	0%	0%	1%

	Much Faster	Somewhat Faster	About the Same	Somewhat Slower	Much Slower	Not Sure
Compared to last year, is the bus assignment process (getting a new student assigned to a bus) faster or slower for your school? n = 102	0%	1%	17%	31%	47%	4%

Have there been any positive impacts of the new bell schedule for your campus? If so, what are they?
This question was open-ended. A total of 88 principals provided responses. Each comment was coded and could have covered multiple topics.

Response	Count
No positive impact	45
No change from previous year/NA	11
General positive impact	8
Improved transportation efficiency	7
Improved instruction/learning	6
Parental convenience and satisfaction	4
Improved sleep/rest for students	4
Improved student attendance	3
Staff satisfaction	3
Stakeholder satisfaction	2
Increases in school programming/events	2
Improved academic/behavioral performance	1
Other/unrelated comment	1
Don't know	1
Respondent noted bus-related challenges	6

Have there been any negative impacts of the new bell schedule for your campus? If so, what are they?
This question was open-ended. A total of 96 principals provided responses. Each comment was coded and could have covered multiple topics.

Response	Count
Transportation issues	49
Extended work hours and staffing concerns	33
Student tardiness/absences	23
Student supervision demands	21
Disruption in extracurriculars and enrichment opportunities	20
Extended school hours and arriving home after dark	20
Scheduling conflicts	18
Loss of instructional time	18
No negative impact	16
Financial and resource challenges	14
Mental health and well-being concerns of students and staff	14
Deterioration of community relationships and trust	12
Increased car ridership and traffic concerns	12

Response	Count
Administration challenges	11
Communication and coordination problems	11
Academic and behavioral setbacks	9
Work-life balance disruptions	8
Personal and family challenges	8
Special needs and ECE services disruptions	6
Safety and security concerns	6
Negative school climate and culture	4
Neutral/No change to start times	3
Other	13

We have asked you these questions to both understand the root causes of the transportation problems experienced at the start of school and to document the extent to which problems still exist. If you have any other ideas or thoughts about either issue, please tell us here.
This question was open-ended. A total of 62 principals provided responses. Each comment was coded and could have covered multiple topics.

Response	Count
Challenges in transportation system predictability and complexity	22
Proposed solutions and improvement suggestions	13
Increased school-level demand for student supervision and plan execution	10
Staffing concerns at schools and bus compounds	9
Lack of transparency and communication from district leadership	9
Variability in bus drivers and its impact on student behavior	8
Misinformation and frustration with district leadership	8
District leadership ignoring reported concerns	8
Exclusion of school admin and other stakeholders from decision-making process	8
Positive outlooks and support for district improvement	8
Lack of research and poor timeline	6
Insufficient budget and resources, including lack of compensation for overtime	6
Simultaneous implementation of multiple initiatives, including dual student assignments	6
Impact on student learning, enrichment, and extracurriculars	5
Impact on mental health and well-being, including disruptions in work-life balance	5
Traffic and infrastructure concerns	4
Safety concerns	4
Disproportionate impact on student subgroups/demographic groups	4
Nothing	4
Issues with special needs services and transportation	3
Continued lack of communication between schools and bus compounds	3
Climate of fear and unethical leadership within the district	2
Other	16

Appendix B
Peer Survey Results

This survey was fielded via direct email to transportation peers.

n = 7

1. Does your district allow regular education students K-12 to ride on the same bus?

Yes, and this option is routinely used	14%
Yes, but this option is rarely used	14%
No	71%

2. Approximately what percentage of your bus runs include regular education students K-12 to ride on the same bus?

Less than 10%	100%
11-25%	0%
26-50%	0%
51-75%	0%
<75%	0%
Not sure	0%

3. How often does your department collect bus ridership information?

Weekly	29%
Monthly	29%
Quarterly	14%
Twice a year	14%
Once a year	14%
Never	0%

4. What are your average afternoon ride times by school level (in minutes)? (n=4)

	ES	MS	HS
Winston-Salem Forsyth County Schools	45	45	45
Cobb	30	30	30
Austin ISD	40	40	40
Cleveland Metropolitan School District	50	50	60

5. What are your average morning ride times by school level (in minutes)? (n=4)

	ES	MS	HS
Winston-Salem Forsyth County Schools	45	45	45
Cobb	30	30	30
Austin ISD	40	40	40
Cleveland Metropolitan School District	50	50	60

6. Does your district operate a multi-tier bell system this year?

Yes	100%
No	0%

7. How many tiers?

2	0%
3	71%
4	14%
5+	14%

8. How far apart in time/minutes are the starting times for schools in each tier?

- 55 minutes
- 25 minutes on average
- 45-60 minutes
- ~30 minutes
- 45 minutes
- MS, HS 30 minutes later, ES 60 and 90 minutes later
- 1 hour/7:35, 8:35. 9:35 buses arrive at 20 minutes prior

9. In the past 5 years, has your district changed your bell schedule and that resulted in a shift in the number of bus tiers you operate?

Yes	43%
No	57%

10. Why did the district make the bell schedule change?

- reduce cost
- optimize bus utilization
- reduce driver demand
- Maximum transportation efficiency and on time performance
- To reduce buses on the road to address driver shortage.

11. How did your department develop the new bus schedules to accommodate the bell schedule change?

Our staff developed the new bus schedules without outside help.	100%
Our staff developed the new bus schedules with the assistance of an external firm.	0%
An external firm developed the new bus schedules.	0%
Something else:	0%

12. Has the tiering change met the expectations and objectives of the district? Were there any pleasant surprises or benefits to the tiering change?

- Yes. There was a reduction in overall bus service in the district. Approximately 250 less buses. Provided more attractive employment opportunity for drivers (more hours). Saved district significant money. Produced shorter ride time and lower load counts per run
- Yes. We are able to cover all routes and save on cost as well
- We were able to reduce routes by 20%.

13. Were there any unexpected obstacles or problems with the tiering change?

    - Timing is tight. requires good loading/unloading procedures. The margin of error is less related to bus scheduling (e.g. weather delays). School bell changes faced stakeholder resistance (primarily teachers) even for minor changes (10 minutes or less)
    - No.
    - Drivers had to adjust to a triple tier instead of the double tie that they were accustomed to having.

14. Increasing the number of tiers in a bell schedule typically results in longer work hours and thus more pay for bus drivers. How did your drivers react to the tiering change?

    - Favorable outcome. More hours for drivers makes for more appealing employment
    - None
    - It didn't create longer hours but it did reduce layover time that drivers were previously used to having.

15. In order to accommodate the tiering change, did your district reduce transportation services in other areas, such as eliminating magnet transportation or increasing walk zones?

    - No (x2)
    - Minimally. Our tiering change did result in moving some high distance High School students to the county transit system due to inability to accommodate extremely long distance rides logistically (greater than 7 miles from school). Under 5 percent of buses operate in 2 tier to accommodate long distance requirements

16. Which of these options does your district offer?

School Choice	100%
Magnet Schools	71%
Open School Transfer	43%
Some other kind of program where students attend schools outside their zoned school	57%
None of these	0%

17. Do you provide transportation for the choice options your district offers?

Yes, all	29%
Yes, but not for all the choice options	71%
No	0%

18. For any of the choice options your district offers, is there a deadline by which families must apply in order to allow time for routing?

Yes	43%
No	57%
Not sure/don’t remember	0%

19. What is that deadline?

    - End of July
    - We want all student data imported into our transportation software by mid-June.
    - June 30

20. For any of the choice options your district offers, was there a period of grandfathering when it was first introduced?

Yes	57%
No	29%
Not sure/don't remember	14%

21. For any of the choice options your district offers, did you provide transportation during the grandfathering period?

Yes	100%
No	0%
Not sure/don't remember	0%

22. In what month does your district begin school?

August each year	86%
September each year	14%

23. In a typical year, approximately when is the bulk of the routing for the upcoming school year completed?

April before the new school year	0%
May before the new school year	0%
June before the new school year	14%
July before the new school year	71%
August before the new school year	14%

24. Our morning drop-off goal is:

30-45 minutes prior to the start of school	14%
20-30 minutes prior to the start of school	57%
15-30 minutes prior to the start of school	0%
1-15 minutes prior to the start of school	14%
Just before the start of school bell	14%
We do not have a drop-off goal	0%

25. Our morning drop-off allowance is:

Buses can drop students up to an hour before the start of school.	0%
Buses can drop students up to 45 minutes before the start of school.	0%
Buses can drop students up to 30 minutes before the start of school.	14%
Buses can drop students up to 15 minutes before the start of school.	71%

We do not have a drop-off allowance.	14%

26. Our morning drop-off allowance is currently used:

Only in limited, rare circumstances.	14%
With no more than ~10% of our runs.	0%
With no more than ~25% of our runs.	0%
With more than 25% of our runs.	86%

27. Our afternoon pick-up goal is:

All buses lined up and ready to receive students at the dismissal bell.	86%
All buses on campus to receive students no later than 15 minutes after the dismissal bell.	14%
All buses on campus to receive students no later than 30 minutes after the dismissal bell.	0%
All buses on campus to receive students no later than 45 minutes after the dismissal bell.	0%
All buses on campus to receive students no later than 60 minutes after the dismissal bell.	0%

28. Our afternoon pick-up allowance is:

Buses can arrive at school as much as 15 minutes after school ends for their afternoon run.	14%
Buses can arrive at school as much as 30 minutes after school ends for their afternoon run.	0%
Buses can arrive at school as much as 45 minutes after school ends for their afternoon run.	0%
Buses can arrive at school as much as 60 minutes after school ends for their afternoon run.	0%
Buses can arrive at school as much as >60 minutes after school end for their afternoon run.	0%
We do not have an afternoon pick-up allowance.	86%

29. Our afternoon pick-up allowance is currently used:

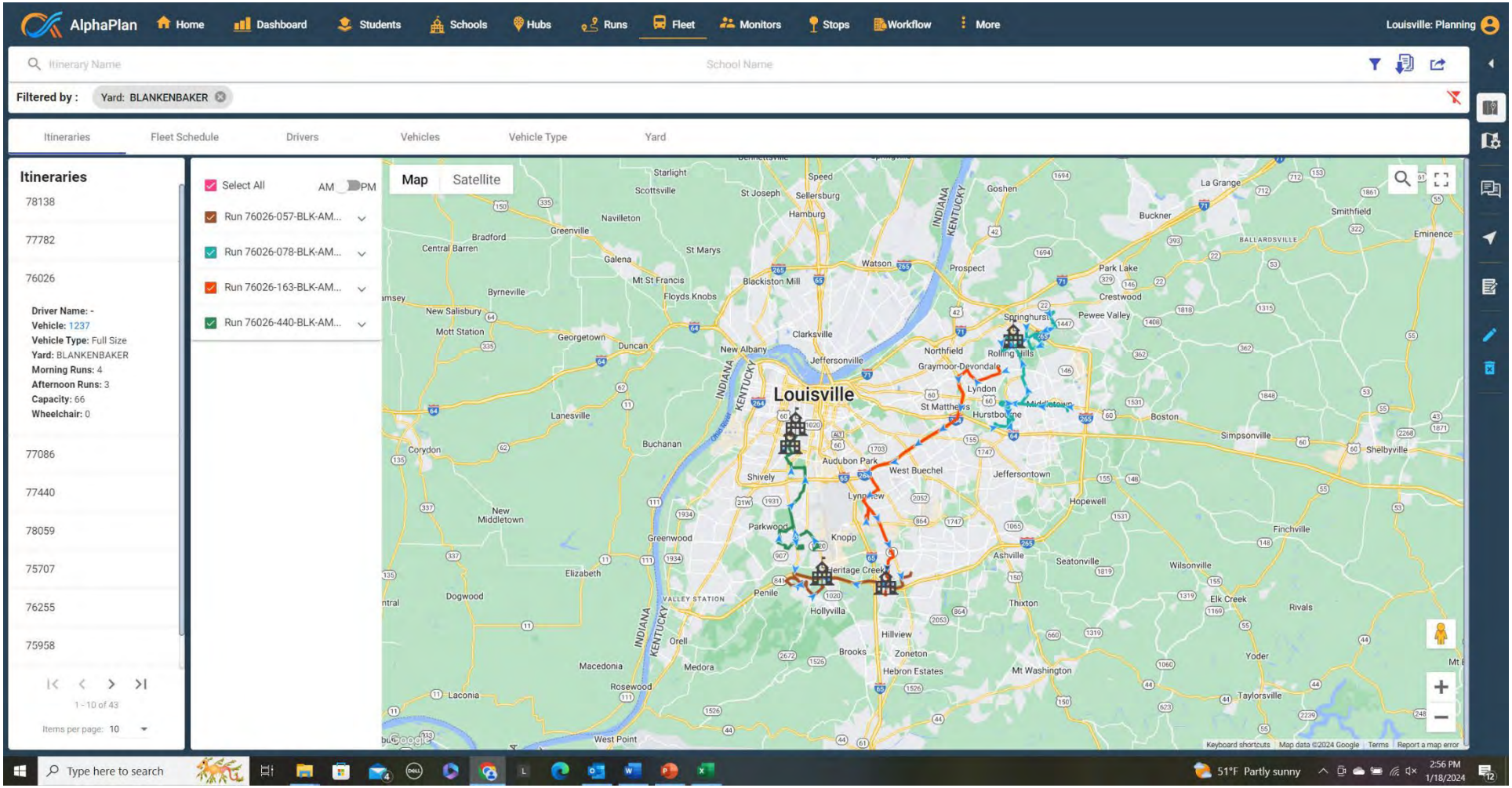
Only in limited, rare circumstances.	57%
With no more than ~10% of our runs.	0%
With no more than ~25% of our runs.	0%
With more than 25% of our runs.	43%

30. What is your school district?

- Winston-Salem Forsyth County Schools
- Saint Louis Public Schools, St. Louis, Missouri
- Milwaukee Public Schools
- Cobb

- Austin ISD
- Washoe County School District
- Cleveland Metropolitan School District

Appendix C
Examples of Lengthy Routes and Runs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Filtered by :
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Itineraries
Fleet Schedule
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Vehicle Type
Yard
Itineraries
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77782
76026
Driver Name: -
Vehicle: 1237
Vehicle Type: Full Size
Yard: BLANKENBAKER
Morning Runs: 4
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
77086
77440
78059
75707
76255
75958
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Run 76026-078-BLK-AM...
Run 76026-163-BLK-AM...
Run 76026-440-BLK-AM...
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Hurstbourne
Springhurst
Northfield
Graymoor-Devondale
Rolling Hills
Pewee Valley
Crestwood
Prospect
Watson
Blackiston Mill
Floyds Knobs
Mt St Francis
Galena
St Marys
Bradford
Central Barren
Greenville
Navilleton
Hamburg
St Joseph
Speed
Sellersburg
Starlight
Scottsville
Goshen
La Grange
Buckner
Smithfield
Eminence
Park Lake
Simpsonville
Shelbyville
Boston
Finchville
Hopewell
Wilsonville
Seatonville
Ashville
Thixton
Elk Creek
Rivals
Yoder
Taylorsville
Mt Washington
Hebron Estates
Zoneton
Brooks
Hillview
Hollyvilla
Heritage Creek
Knopp
Parkwood
Greenwood
New Middletown
Elizabeth
Dogwood
Penile
Orell
Medora
Macedonia
Rosewood
Laconia
West Point
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Buchanan
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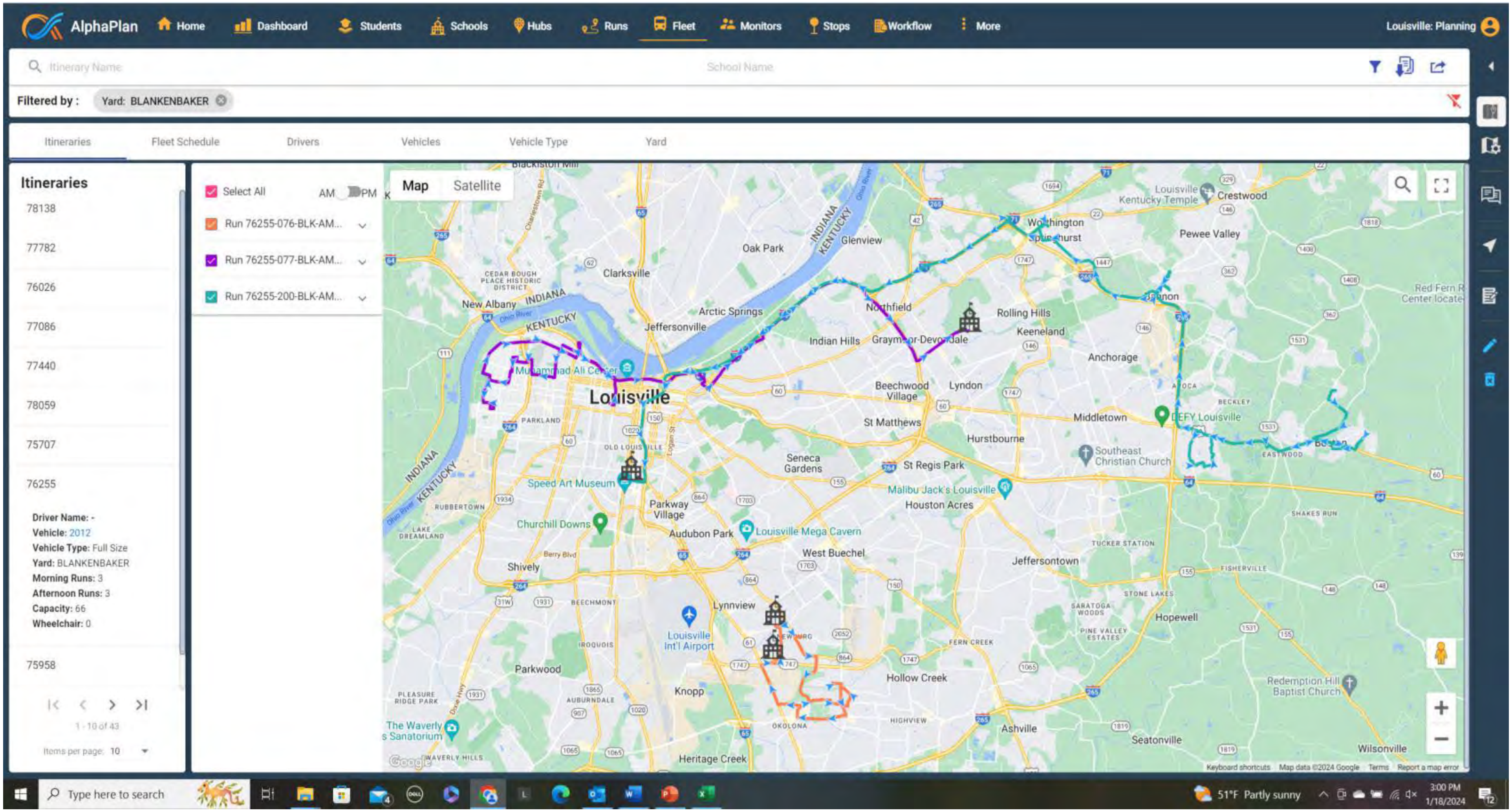
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77782
76026
77086
77440
78059
75707
76255
Driver Name: -
Vehicle: 2012
Vehicle Type: Full Size
Yard: BLANKENBAKER
Morning Runs: 3
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
75958
1 - 10 of 43
Items per page: 10
Select All
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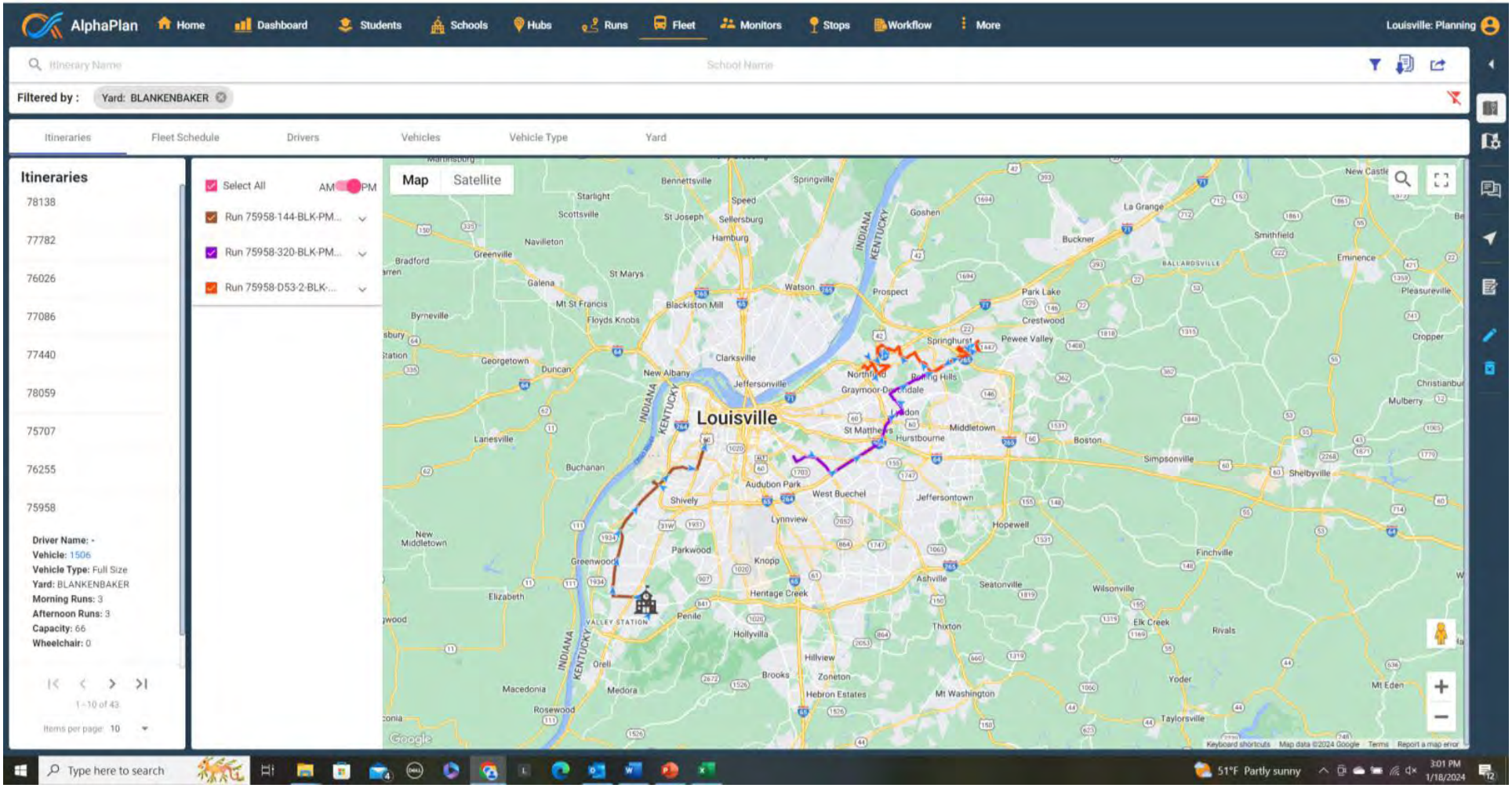
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75707
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Driver Name: -
Vehicle: 1506
Vehicle Type: Full Size
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Morning Runs: 3
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
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Run 75958-D53-2-BLK-...
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St Matthews
Northfield
Springhurst
Pewee Valley
Crestwood
Park Lake
Prospect
Watson
Blackiston Mill
Floyds Knobs
Mt St Francis
St Marys
Galena
Greenville
Navilleton
Bradford
Georgetown
Duncan
Lanesville
Buchanan
Parkwood
Knopp
Heritage Creek
Penile
Hollyvilla
Valley Station
Elizabeth
Greenwood
New Middletown
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Hebron Estates
Hillview
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La Grange
Goshen
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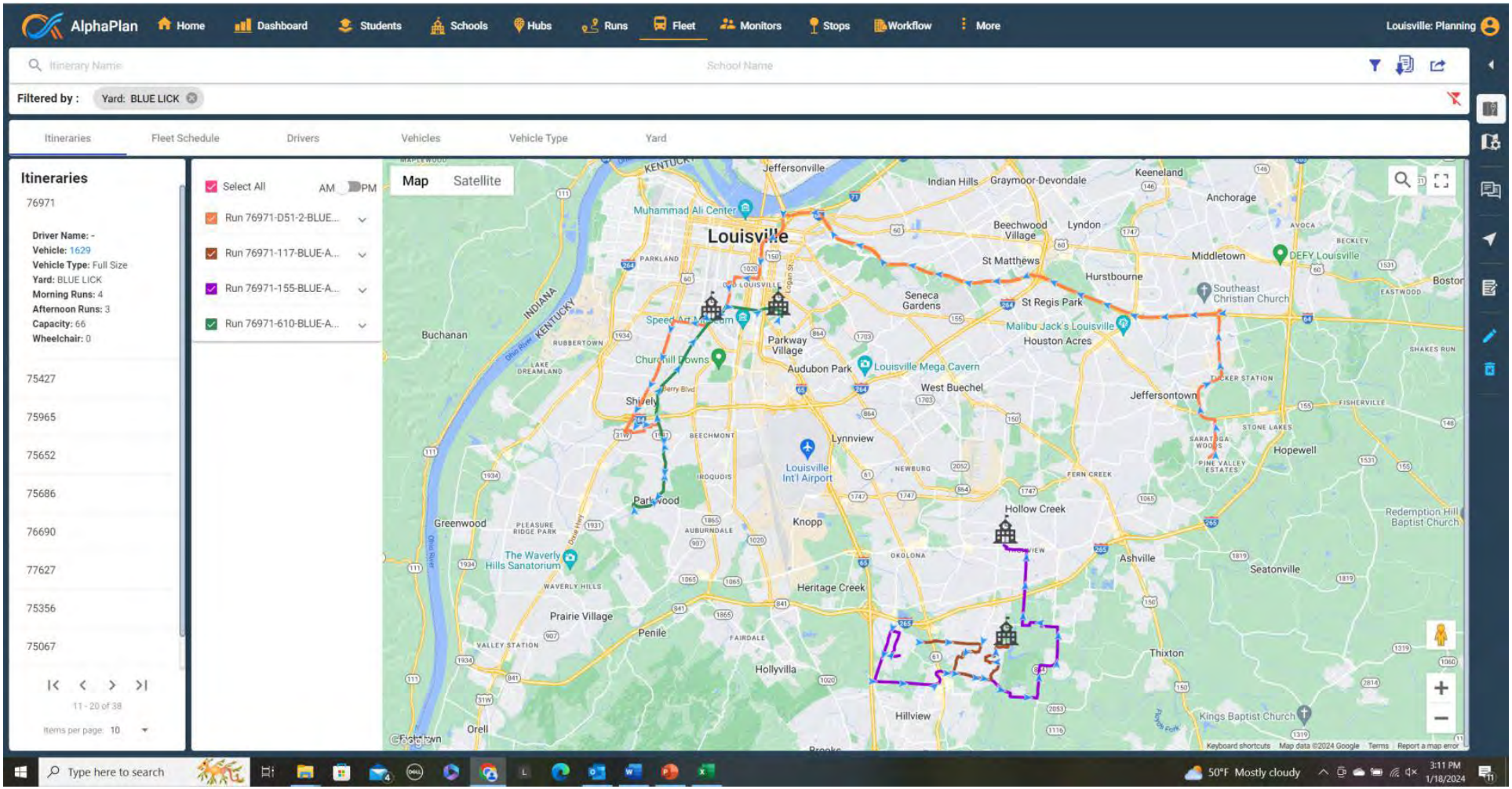
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Vehicles
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Yard
Itineraries
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Vehicle: 1629
Vehicle Type: Full Size
Yard: BLUE LICK
Morning Runs: 4
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
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75356
75067
11 - 20 of 38
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Beechwood Village
Lyndon
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Middletown
DEFY Louisville
Hurstbourne
Southeast Christian Church
Seneca Gardens
St Regis Park
Malibu Jack's Louisville
Houston Acres
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Parkway Village
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The Waverly Hills Sanatorium
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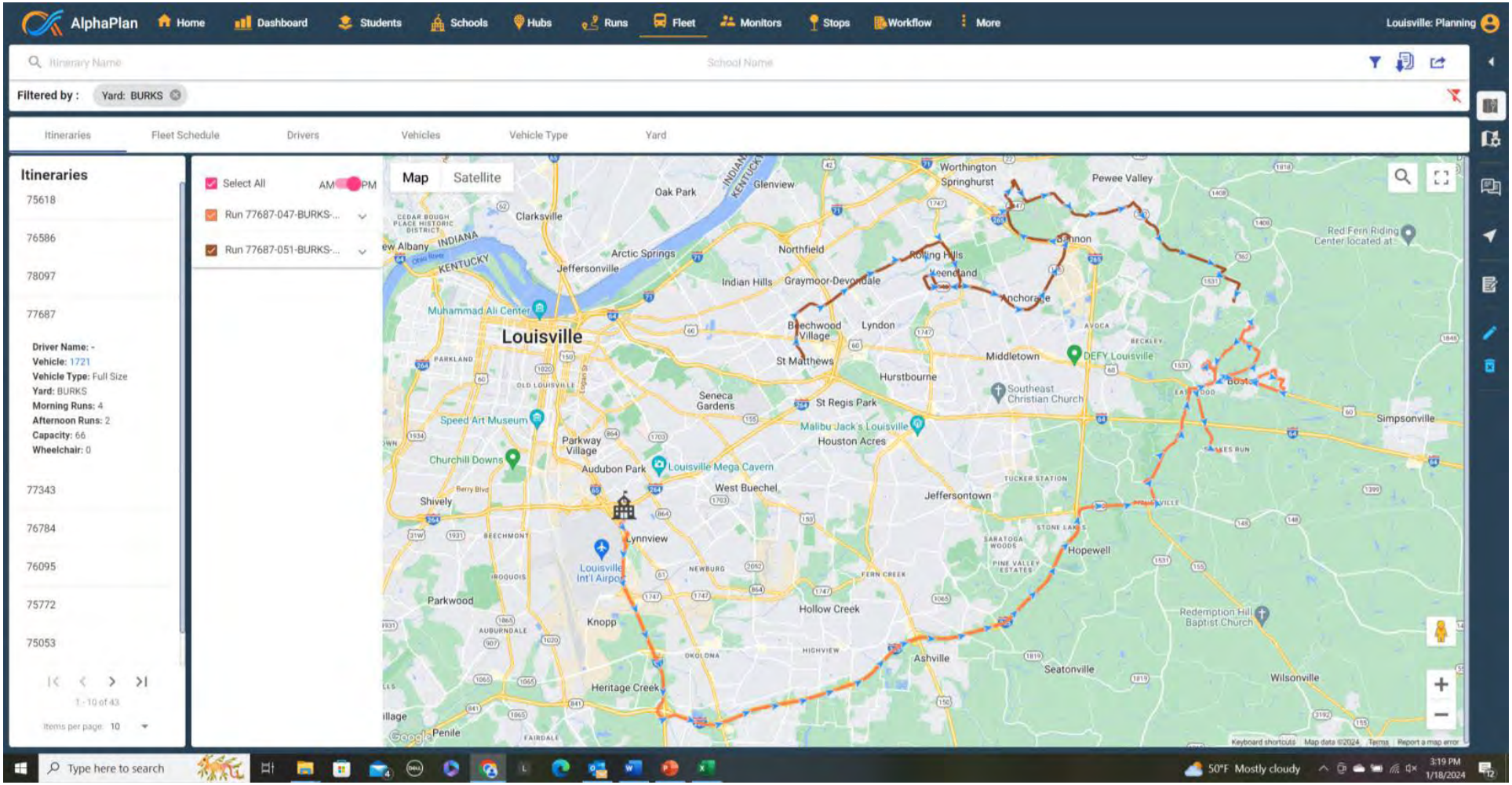
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Worthington Springhurst
Pewee Valley
Red Fern Riding Center located at:
Arctic Springs
Northfield
Rolling Hills
Shannon
Indian Hills
Graymoor-Devondale
Keenland
Anchorage
Muhammad Ali Center
Beechwood Village
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Houston Acres
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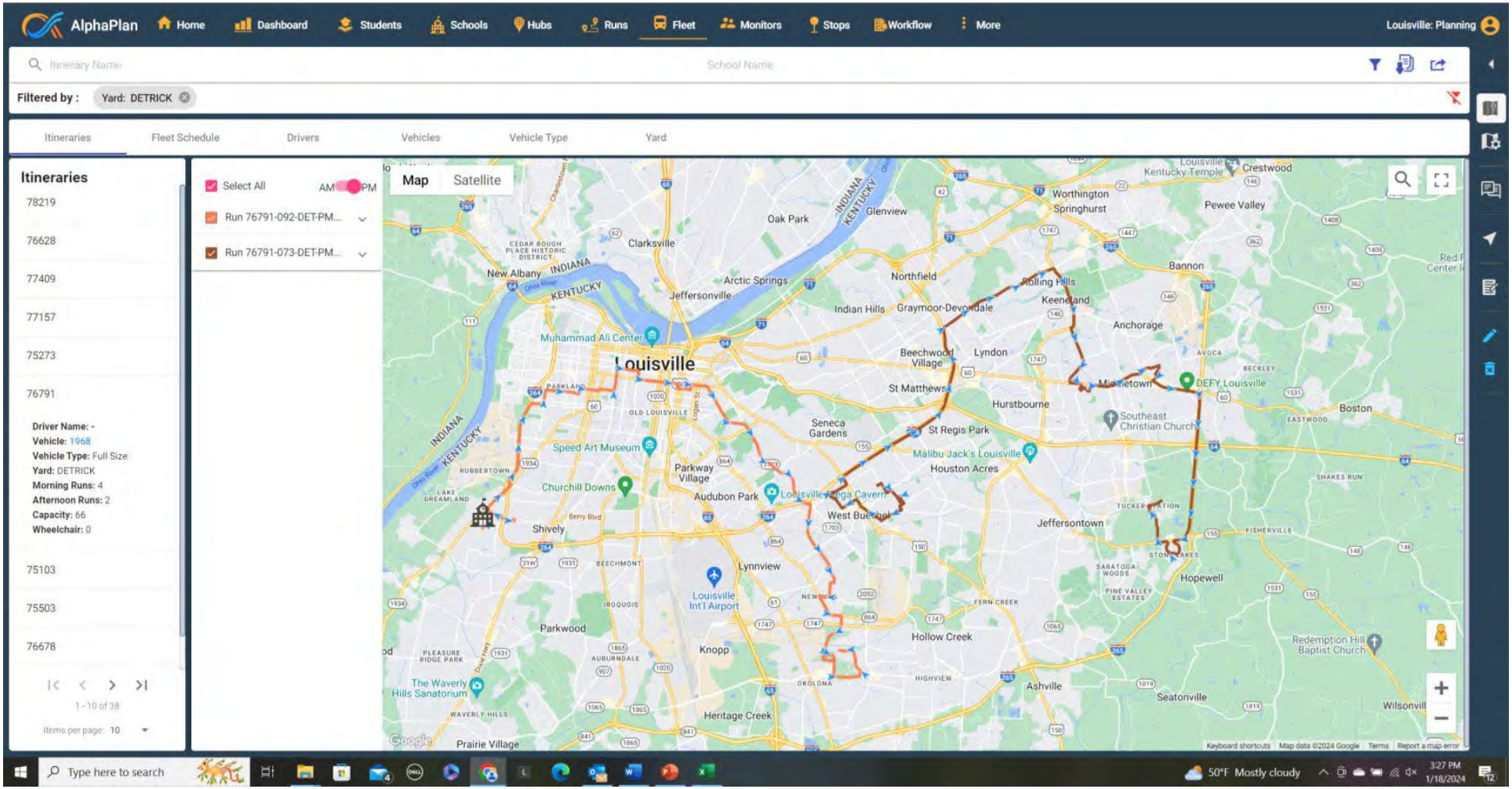
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Afternoon Runs: 2
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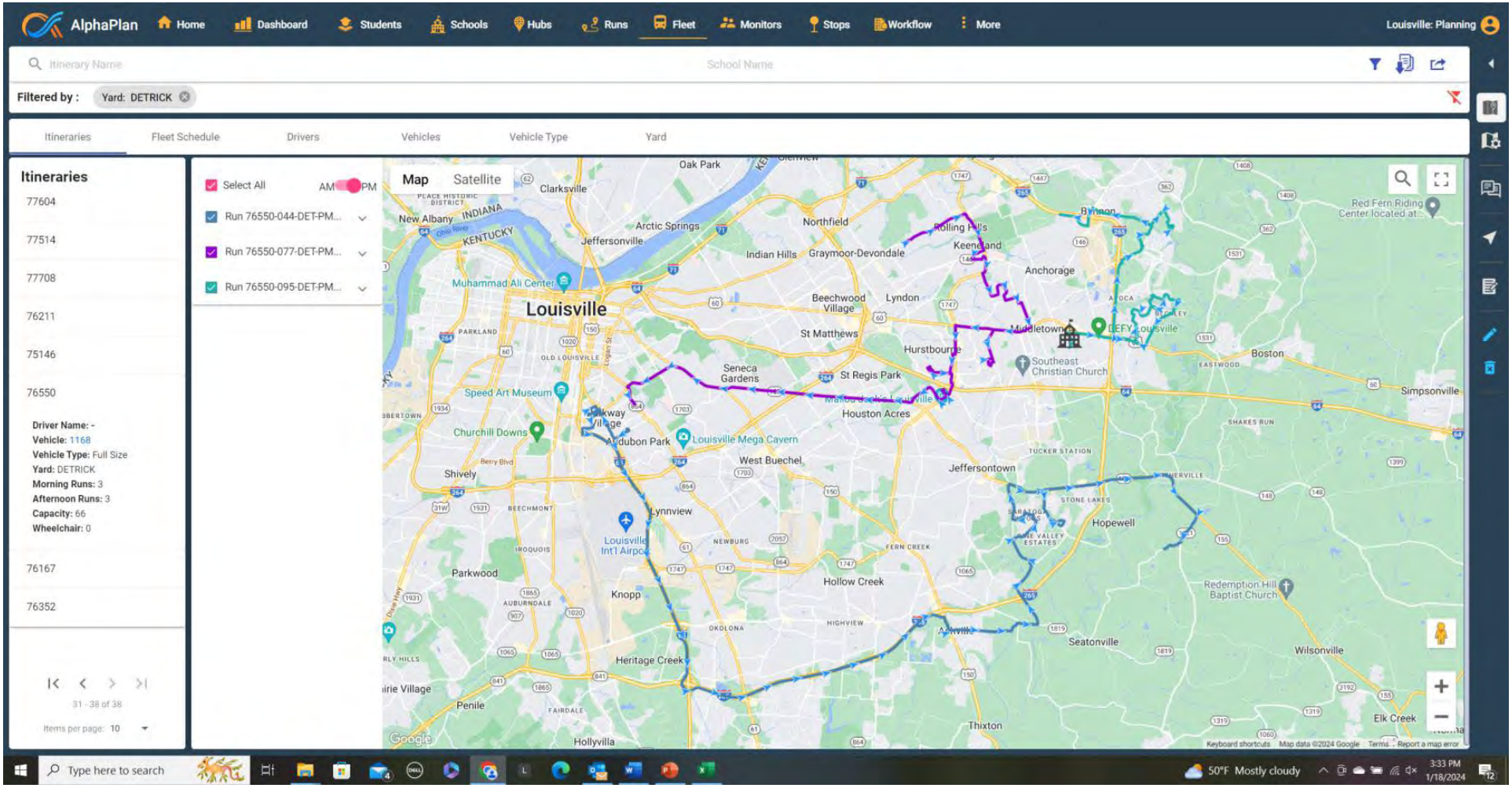
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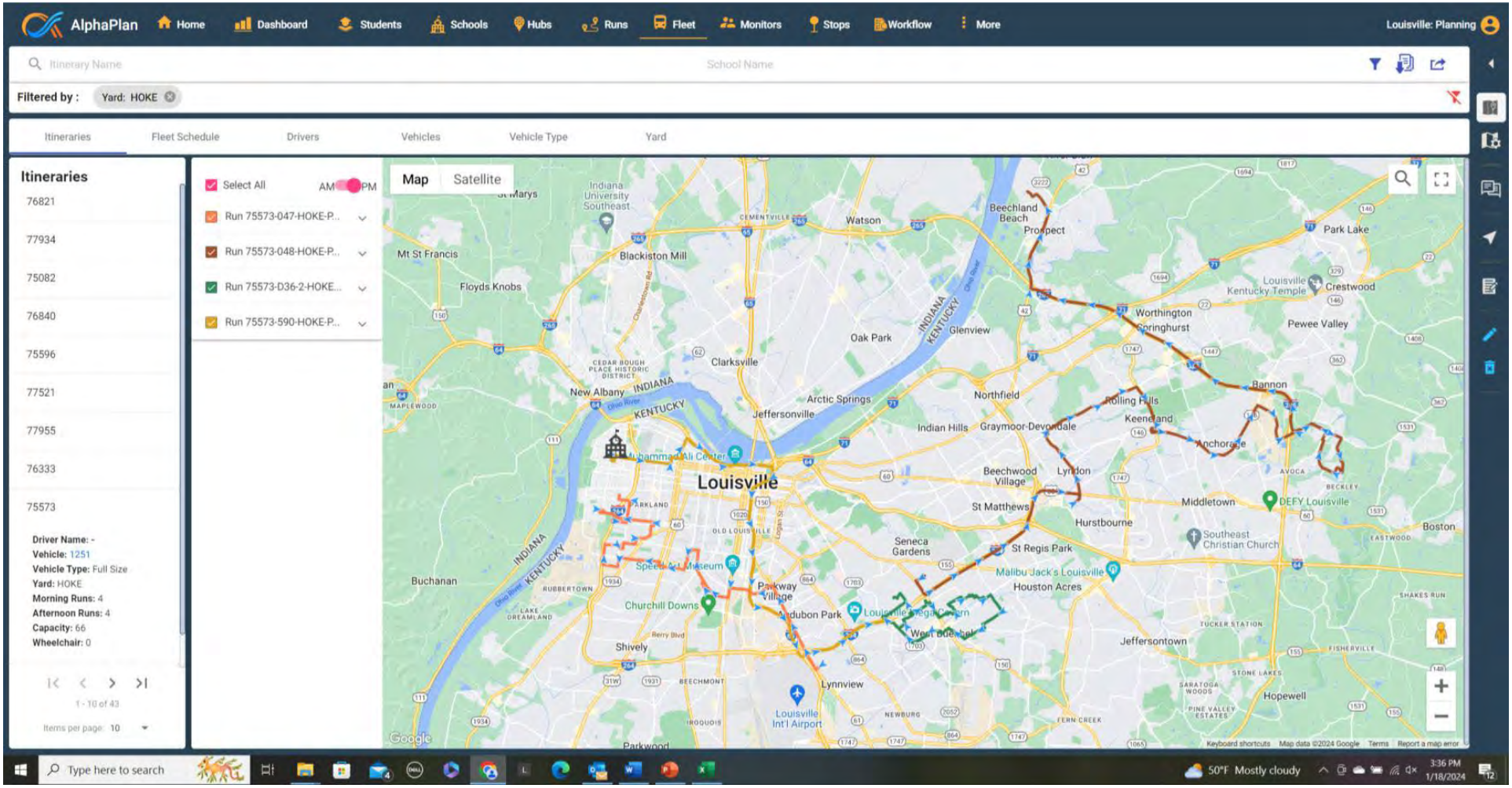
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Worthington Springhurst
Pewee Valley
Oak Park
Glenview
Arctic Springs
Northfield
Rolling Hills
Rannon
Keenland
Anchorage
Indian Hills
Graymoor-Devondale
Beechwood Village
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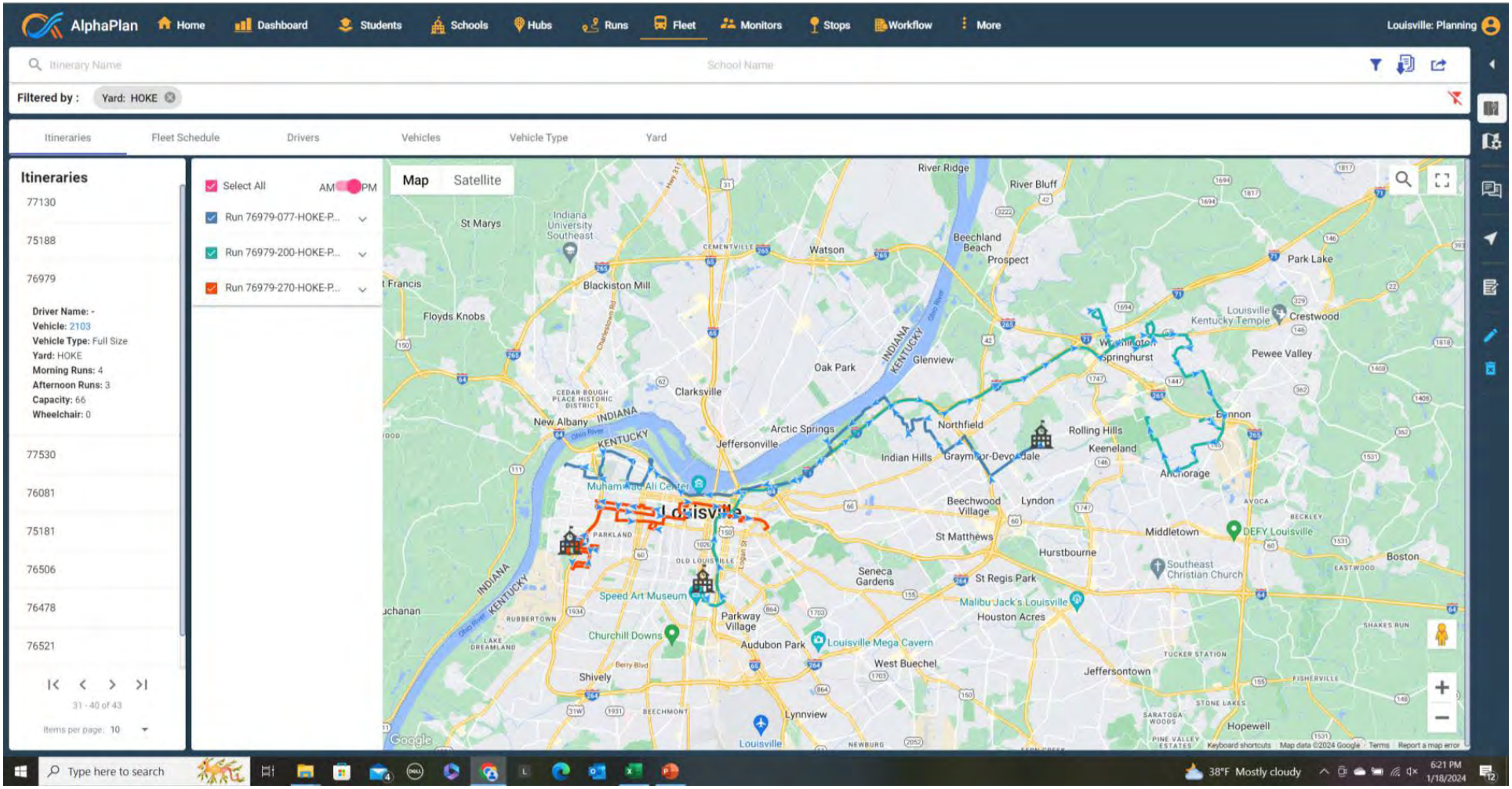
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Itineraries
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Driver Name: -
Vehicle: 2103
Vehicle Type: Full Size
Yard: HOKE
Morning Runs: 4
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
77530
76081
75181
76506
76478
76521
31 - 40 of 43
Items per page: 10
Select All
AM
PM
Run 76979-077-HOKE-P...
Run 76979-200-HOKE-P...
Run 76979-270-HOKE-P...
Map
Satellite
River Ridge
River Bluff
St Marys
Indiana University Southeast
Watson
Beechland
Prospect
Park Lake
Blackiston Mill
Floyds Knobs
Louisville Kentucky Temple
Crestwood
Springhurst
Pewee Valley
Oak Park
Glenview
Clarksville
New Albany
INDIANA
KENTUCKY
Arctic Springs
Jeffersonville
Northfield
Rolling Hills
Keeneland
Bonnon
Indian Hills
Anchorage
Muhammad Ali Center
Louisville
Beechwood Village
Lyndon
St Matthews
Middletown
DEFY Louisville
Hurstbourne
Southeast Christian Church
Boston
Seneca Gardens
St Regis Park
Speed Art Museum
Malibu Jack's Louisville
Houston Acres
Parkway Village
Churchill Downs
Audubon Park
Louisville Mega Cavern
West Buechel
Jeffersontown
Shively
Lynnview
Hopewell
Google
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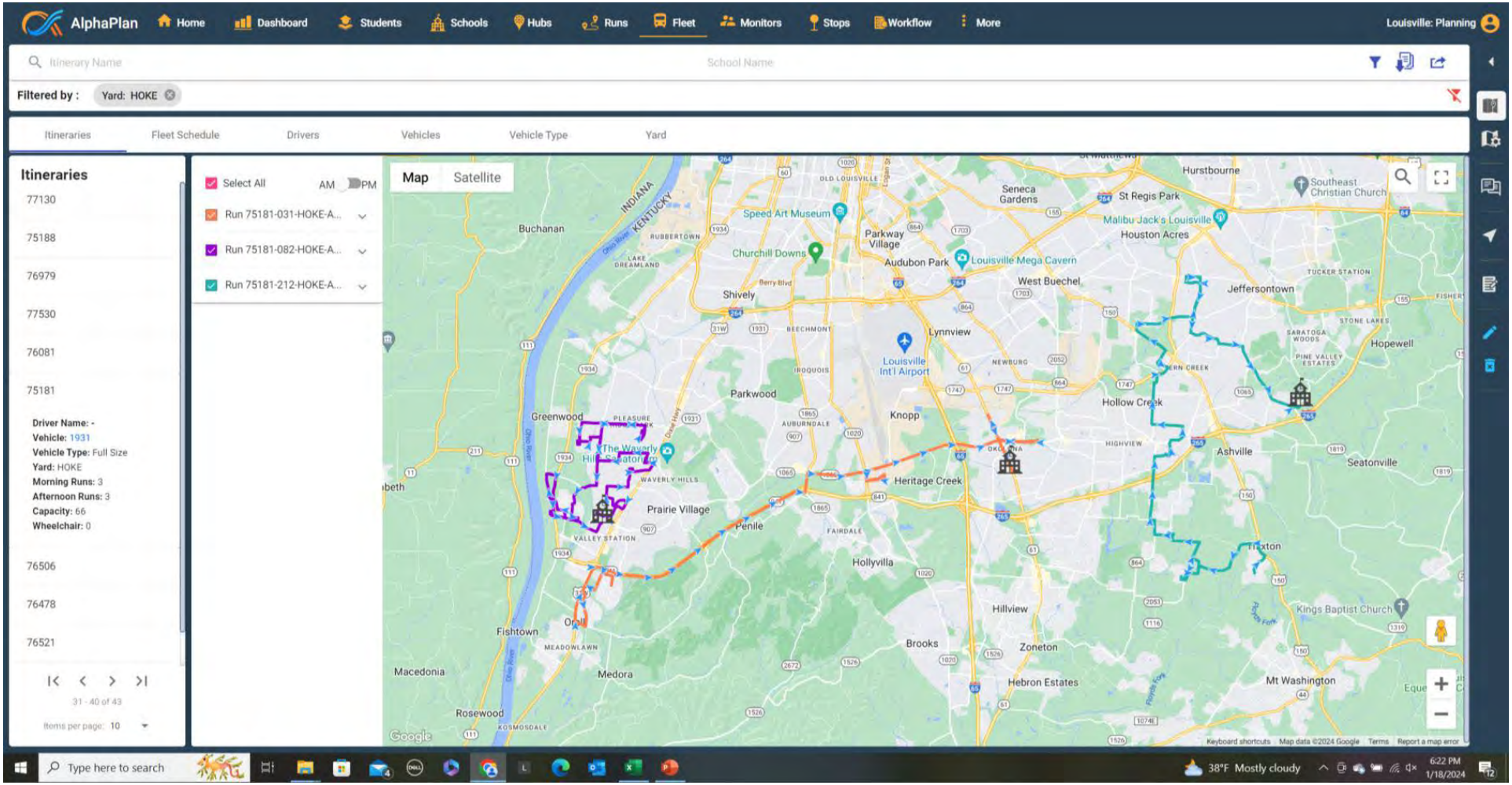
AlphaPlan
Home
Dashboard
Students
Schools
Hubs
Runs
Fleet
Monitors
Stops
Workflow
More
Louisville: Planning
Itinerary Name
School Name
Filtered by :
Yard: HOKE
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
77130
75188
76979
77530
76081
75181
Driver Name: -
Vehicle: 1931
Vehicle Type: Full Size
Yard: HOKE
Morning Runs: 3
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
76506
76478
76521
31 - 40 of 43
Items per page: 10
Select All
AM
PM
Run 75181-031-HOKE-A...
Run 75181-082-HOKE-A...
Run 75181-212-HOKE-A...
Map
Satellite
Buchanan
Speed Art Museum
Churchill Downs
Parkway Village
Audubon Park
Louisville Mega Cavern
Shively
West Buechel
Lynnview
Louisville Int'l Airport
Parkwood
Knopp
Greenwood
Heritage Creek
Prairie Village
Penile
Hollyvilla
Fishtown
Macedonia
Medora
Rosewood
Brooks
Hillview
Zoneton
Hebron Estates
Mt Washington
Hurstbourne
Seneca Gardens
St Regis Park
Malibu Jack's Louisville
Houston Acres
Jeffersontown
Hopewell
Hollow Creek
Ashville
Seatonville
Kings Baptist Church
Google
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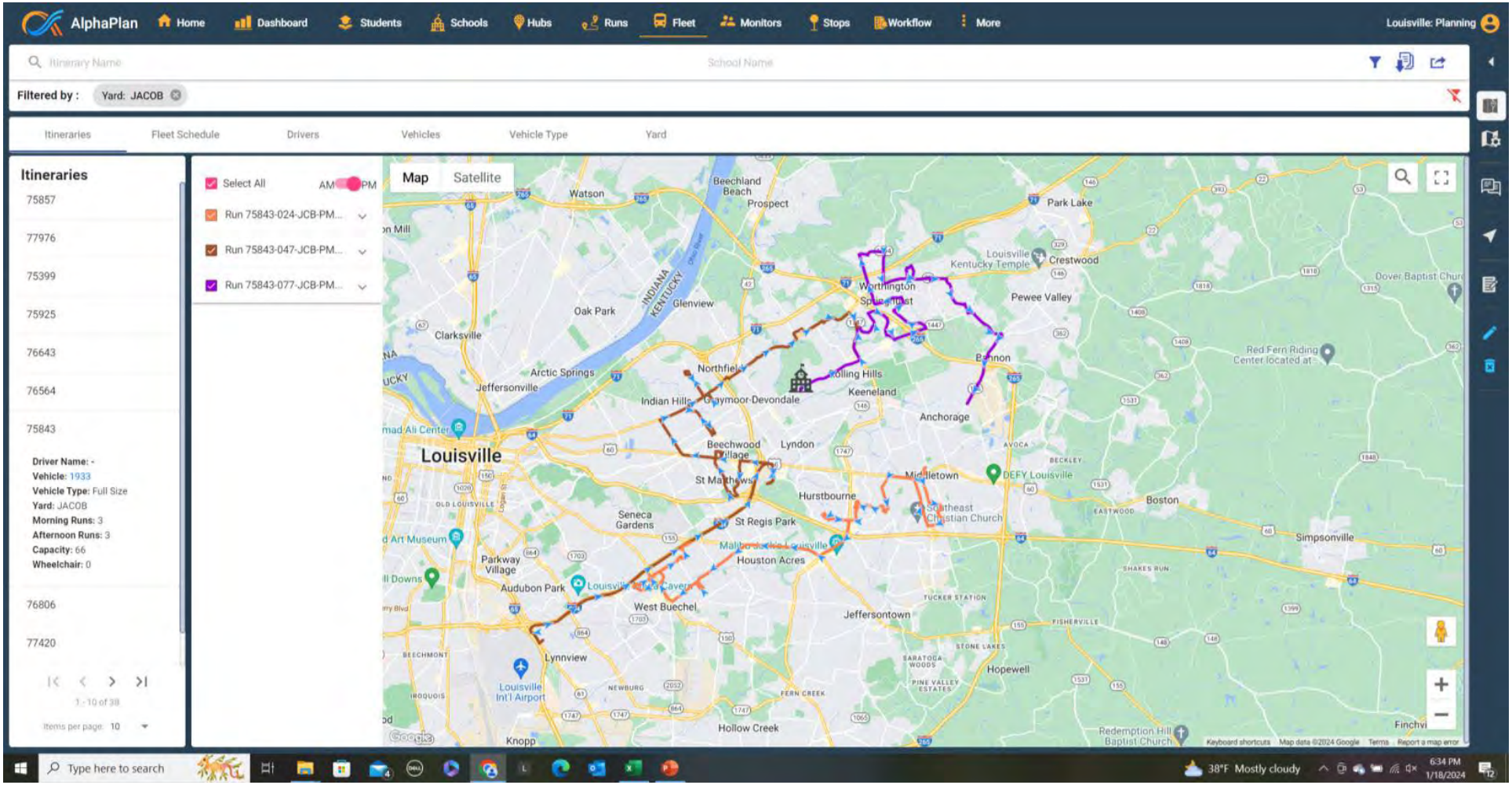
AlphaPlan
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Students
Schools
Hubs
Runs
Fleet
Monitors
Stops
Workflow
More
Louisville: Planning
Itinerary Name
School Name
Filtered by :
Yard: JACOB
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
75857
77976
75399
75925
76643
76564
75843
Driver Name: -
Vehicle: 1933
Vehicle Type: Full Size
Yard: JACOB
Morning Runs: 3
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
76806
77420
1 - 10 of 38
Items per page: 10
Select All
AM
PM
Run 75843-024-JCB-PM...
Run 75843-047-JCB-PM...
Run 75843-077-JCB-PM...
Map
Satellite
Louisville
Watson
Beechland
Prospect
Park Lake
Louisville Kentucky Temple
Crestwood
Worthington Springhurst
Pewee Valley
Oak Park
Glenview
Clarksville
Arctic Springs
Jeffersonville
Northfield
Rolling Hills
Keeneland
Indian Hills
Graymoor-Devondale
Anchorage
Beechwood Village
Lyndon
St Matthews
Middletown
DEFY Louisville
Hurstbourne
Seneca Gardens
St Regis Park
Houston Acres
Parkway Village
Audubon Park
West Buechel
Jeffersontown
Lynnview
Louisville Int'l Airport
Hopewell
Hollow Creek
Knopp
Boston
Simpsonville
Red Fern Riding Center located at...
Dover Baptist Church
Redemption Hill Baptist Church
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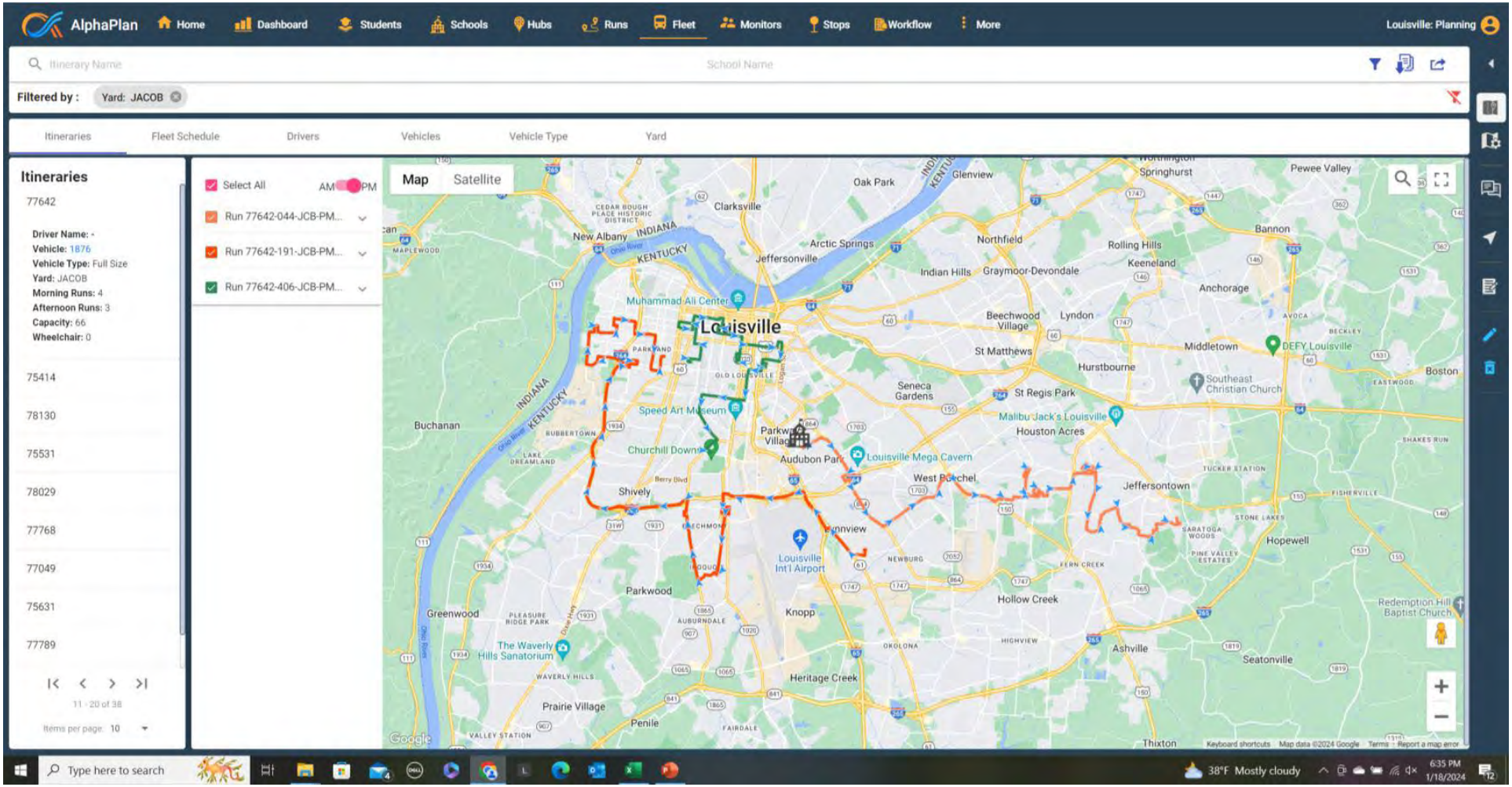
AlphaPlan
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Dashboard
Students
Schools
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Runs
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Workflow
More
Louisville: Planning
Itinerary Name
School Name
Filtered by :
Yard: JACOB
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
77642
Driver Name: -
Vehicle: 1876
Vehicle Type: Full Size
Yard: JACOB
Morning Runs: 4
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
75414
78130
75531
78029
77768
77049
75631
77789
11 - 20 of 38
Items per page: 10
Select All
AM
PM
Run 77642-044-JCB-PM...
Run 77642-191-JCB-PM...
Run 77642-406-JCB-PM...
Map
Satellite
Louisville
Clarksville
New Albany
Jeffersonville
Oak Park
Glenview
Springhurst
Pewee Valley
Bannon
Northfield
Rolling Hills
Keeneland
Arctic Springs
Indian Hills
Graymoor-Devondale
Anchorage
Muhammad Ali Center
Beechwood Village
Lyndon
Middletown
DEFY Louisville
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Boston
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Malibu Jack's Louisville
Houston Acres
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Churchill Downs
Parkway Village
Audubon Park
Louisville Mega Cavern
West Buechel
Jeffersontown
Buchanan
Shively
Fairmont
Louisville Int'l Airport
Hopewell
Parkwood
Hollow Creek
Greenwood
Knopp
Redemption Hill Baptist Church
The Waverly Hills Sanatorium
Ashville
Seatonville
Heritage Creek
Prairie Village
Penile
Thixton
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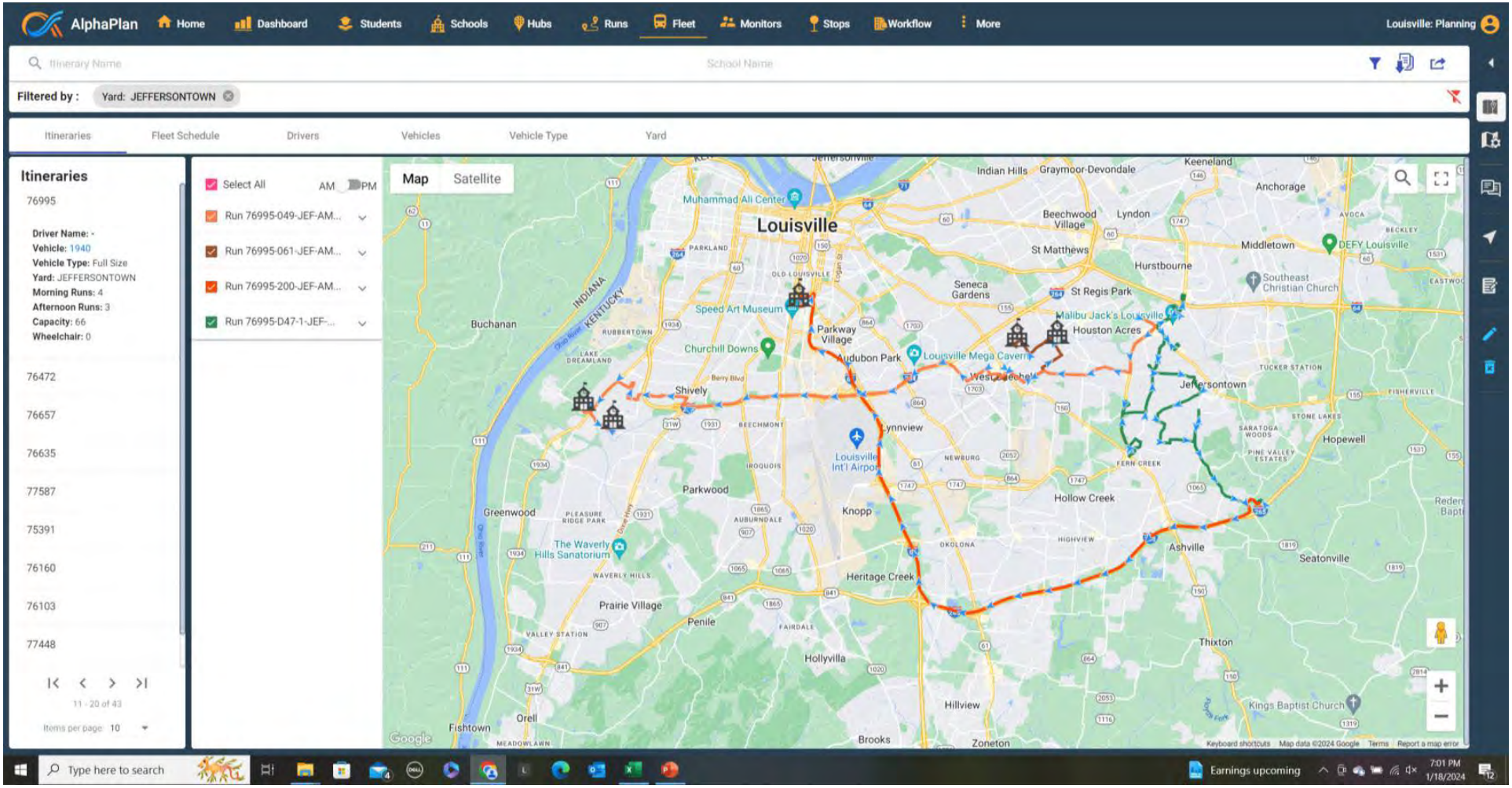
AlphaPlan
Home
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Louisville: Planning
Itinerary Name
School Name
Filtered by :
Yard: JEFFERSONTOWN
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
76995
Driver Name: -
Vehicle: 1940
Vehicle Type: Full Size
Yard: JEFFERSONTOWN
Morning Runs: 4
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
76472
76657
76635
77587
75391
76160
76103
77448
11 - 20 of 43
Items per page: 10
Select All
AM
PM
Run 76995-049-JEF-AM...
Run 76995-061-JEF-AM...
Run 76995-200-JEF-AM...
Run 76995-D47-1-JEF-...
Map
Satellite
Louisville
Muhammad Ali Center
Speed Art Museum
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Parkway Village
Audubon Park
Louisville Mega Cavern
Shively
Buchanan
Indian Hills
Graymoor-Devondale
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Anchorage
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Knopp
Hollow Creek
Hopewell
Greenwood
The Waverly Hills Sanatorium
Heritage Creek
Ashville
Seatonville
Prairie Village
Penile
Hollyvilla
Thixton
Hillview
Kings Baptist Church
Orell
Fishtown
Brooks
Zoneton
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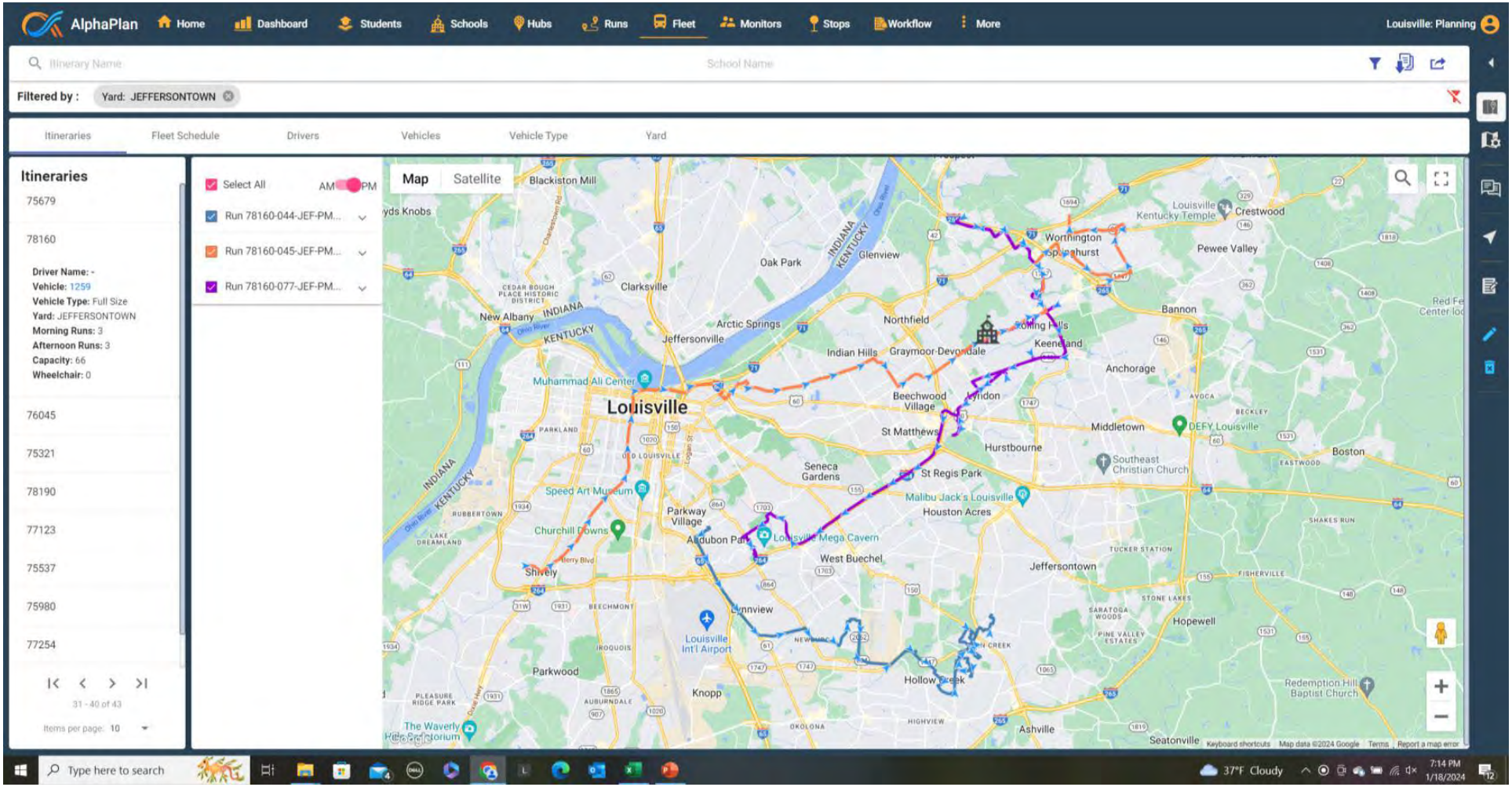
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Louisville: Planning
Itinerary Name
School Name
Filtered by :
Yard: JEFFERSONTOWN
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
75679
78160
Driver Name: -
Vehicle: 1259
Vehicle Type: Full Size
Yard: JEFFERSONTOWN
Morning Runs: 3
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
76045
75321
78190
77123
75537
75980
77254
31 - 40 of 43
Items per page: 10
Select All
AM
PM
Run 78160-044-JEF-PM...
Run 78160-045-JEF-PM...
Run 78160-077-JEF-PM...
Map
Satellite
Louisville
Jeffersonville
New Albany
Clarksville
Oak Park
Glenview
Northfield
Arctic Springs
Indian Hills
Graymoor-Devondale
Keenland
Anchorage
Bannon
Pewee Valley
Worthington Springhurst
Louisville Crestwood
Kentucky Temple
Beechwood Village
Lyndon
St Matthews
Middletown
Hurstbourne
Seneca Gardens
St Regis Park
Houston Acres
Malibu Jack's Louisville
Southeast Christian Church
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Hopewell
Ashville
Seatonville
Redemption Hill Baptist Church
The Waverly Hills Sanatorium
Muhammad Ali Center
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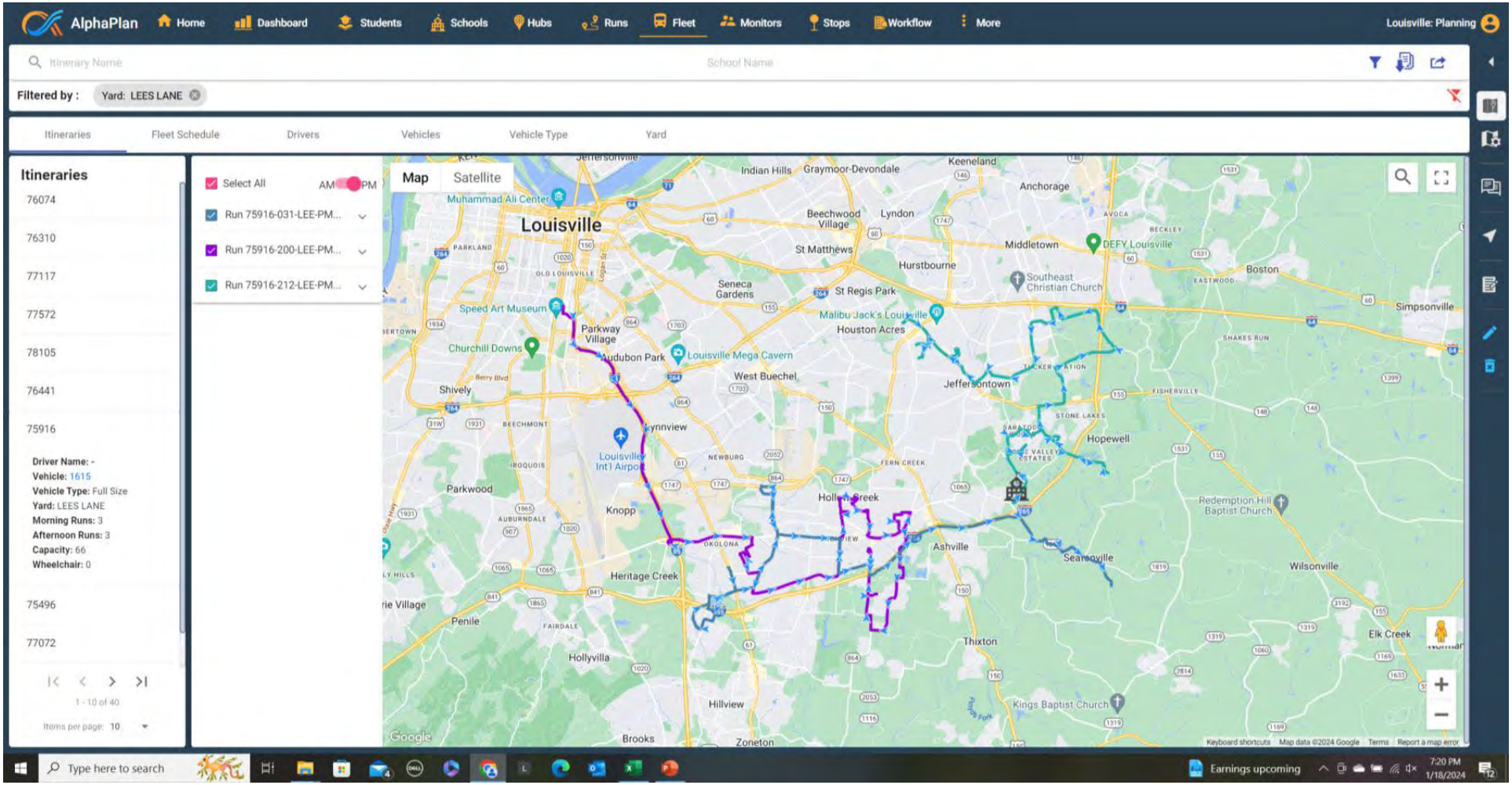
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Students
Schools
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Louisville: Planning
Itinerary Name
School Name
Filtered by :
Yard: LEES LANE
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
76074
76310
77117
77572
78105
76441
75916
Driver Name: -
Vehicle: 1615
Vehicle Type: Full Size
Yard: LEES LANE
Morning Runs: 3
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
75496
77072
1 - 10 of 40
Items per page: 10
Select All
AM
PM
Run 75916-031-LEE-PM...
Run 75916-200-LEE-PM...
Run 75916-212-LEE-PM...
Map
Satellite
Louisville
Muhammad Ali Center
Speed Art Museum
Churchill Downs
Louisville Mega Cavern
Louisville Int'l Airport
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Knopp
Heritage Creek
Penile
Hollyvilla
Hillview
Brooks
Zoneton
Shively
Lynnview
Parkway Village
Audubon Park
West Buechel
Jeffersontown
Hopewell
Ashville
Seatonville
Wilsonville
Elk Creek
Thixton
Kings Baptist Church
Redemption Hill Baptist Church
Southeast Christian Church
DEFY Louisville
Malibu Jack's Louisville
Middletown
Hurstbourne
St Matthews
Beechwood Village
Lyndon
Anchorage
Boston
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Seneca Gardens
St Regis Park
Houston Acres
Indian Hills
Graymoor-Devondale
Keeneland
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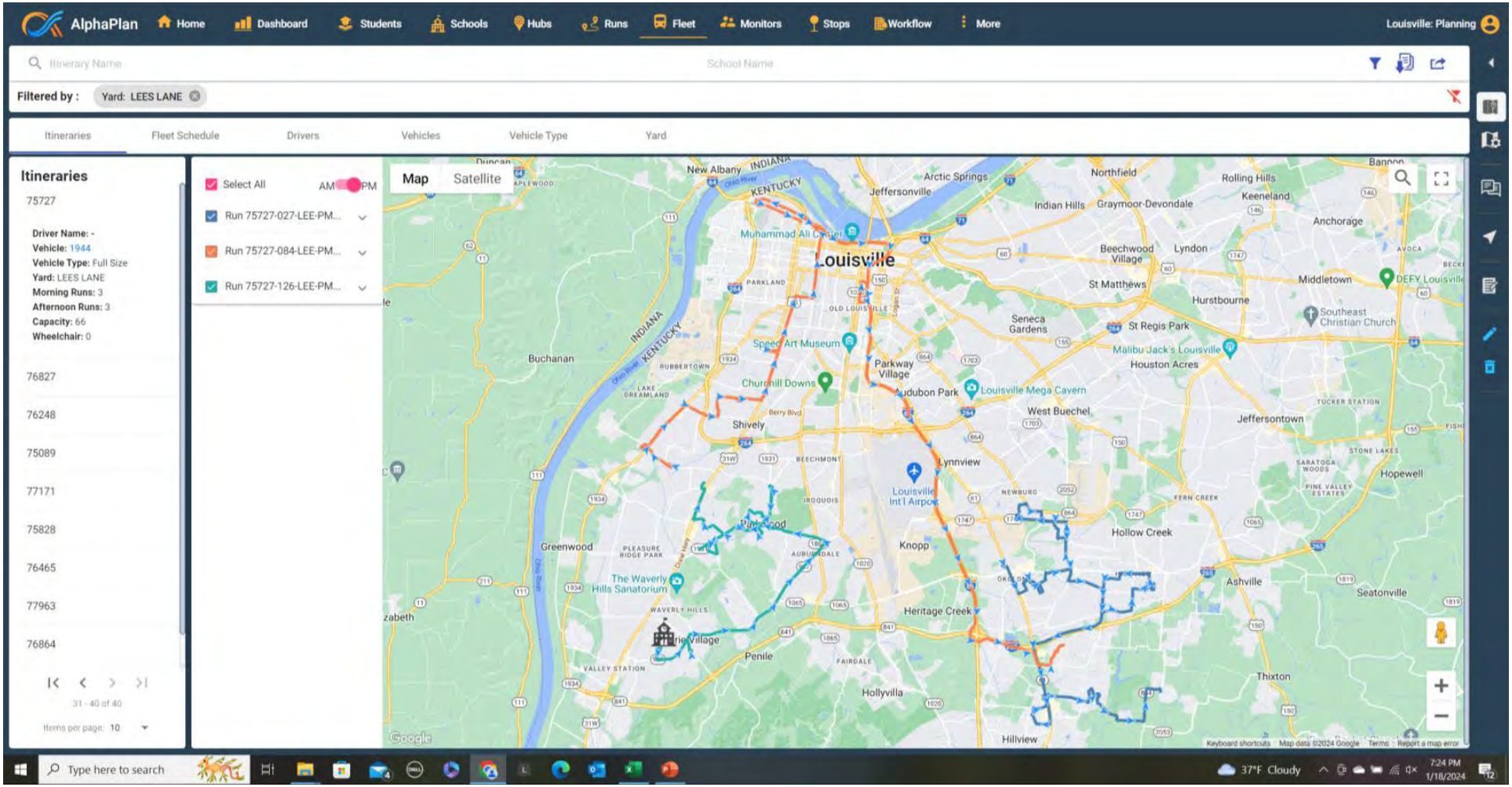
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School Name
Filtered by :
Yard: LEES LANE
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
75727
Driver Name: -
Vehicle: 1944
Vehicle Type: Full Size
Yard: LEES LANE
Morning Runs: 3
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
76827
76248
75089
77171
75828
76465
77963
76864
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Items per page: 10
Select All
AM
PM
Run 75727-027-LEE-PM...
Run 75727-084-LEE-PM...
Run 75727-126-LEE-PM...
Map
Satellite
Louisville
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New Albany
Muhammad Ali Center
Speed Art Museum
Churchill Downs
Louisville Mega Cavern
Louisville Int'l Airport
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Shively
Lynnview
Knopp
Hollow Creek
Heritage Creek
Penile
Hollyvilla
Hillview
Greenwood
Buchanan
Jeffersontown
West Buechel
Houston Acres
St Matthews
Middletown
Anchorage
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Thixton
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Southeast Christian Church
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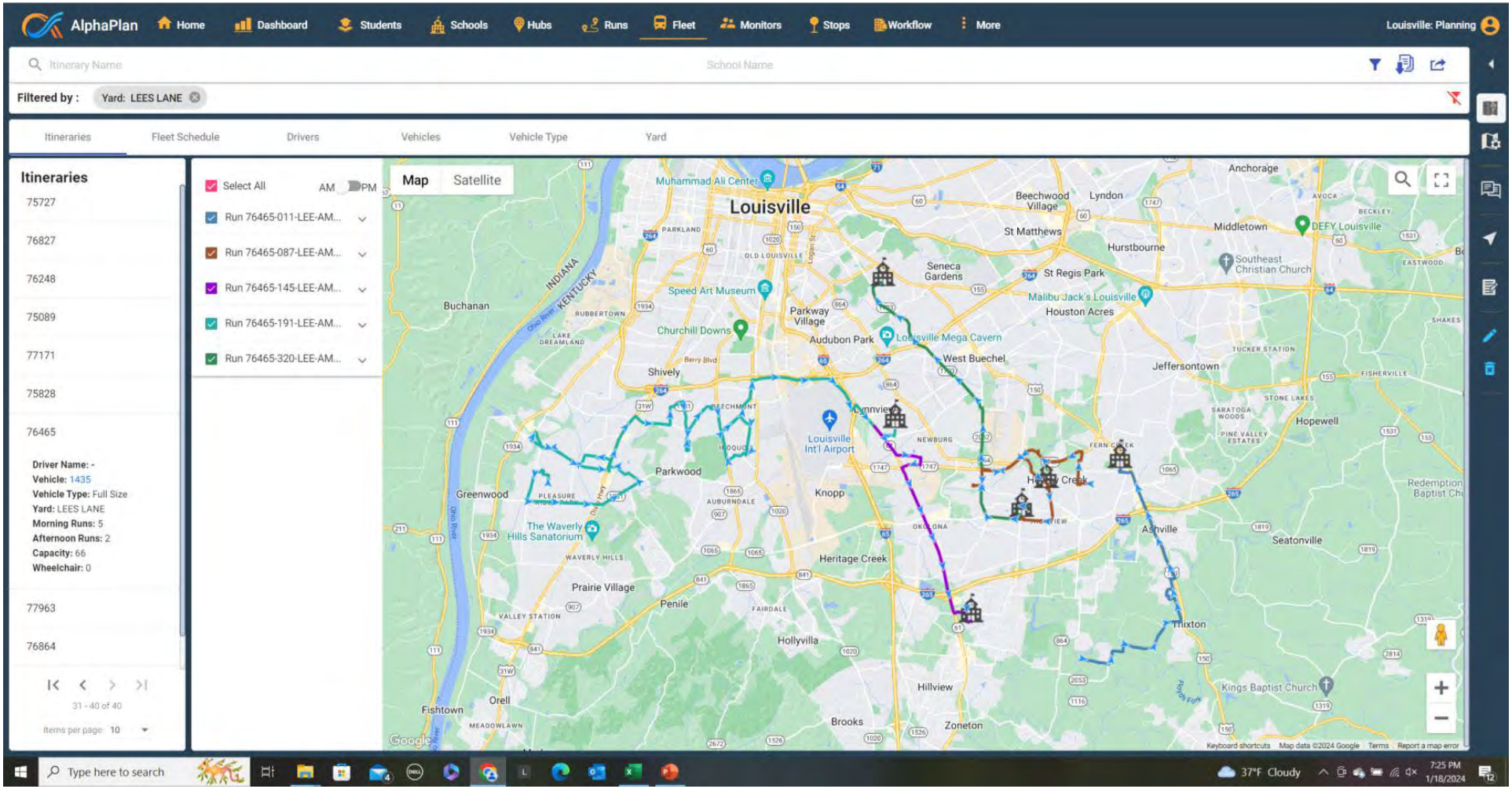
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School Name
Filtered by :
Yard: LEES LANE
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Vehicle Type
Yard
Itineraries
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76827
76248
75089
77171
75828
76465
Driver Name: -
Vehicle: 1435
Vehicle Type: Full Size
Yard: LEES LANE
Morning Runs: 5
Afternoon Runs: 2
Capacity: 66
Wheelchair: 0
77963
76864
31 - 40 of 40
Items per page: 10
Select All
AM
PM
Run 76465-011-LEE-AM...
Run 76465-087-LEE-AM...
Run 76465-145-LEE-AM...
Run 76465-191-LEE-AM...
Run 76465-320-LEE-AM...
Map
Satellite
Louisville
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Speed Art Museum
Churchill Downs
Louisville Mega Cavern
Louisville Int'l Airport
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Knopp
Heritage Creek
Prairie Village
Penile
Hollyvilla
Hillview
Zoneton
Fishtown
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Brooks
Buchanan
Shively
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Parkway Village
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Houston Acres
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Jeffersontown
Hopewell
Seatonville
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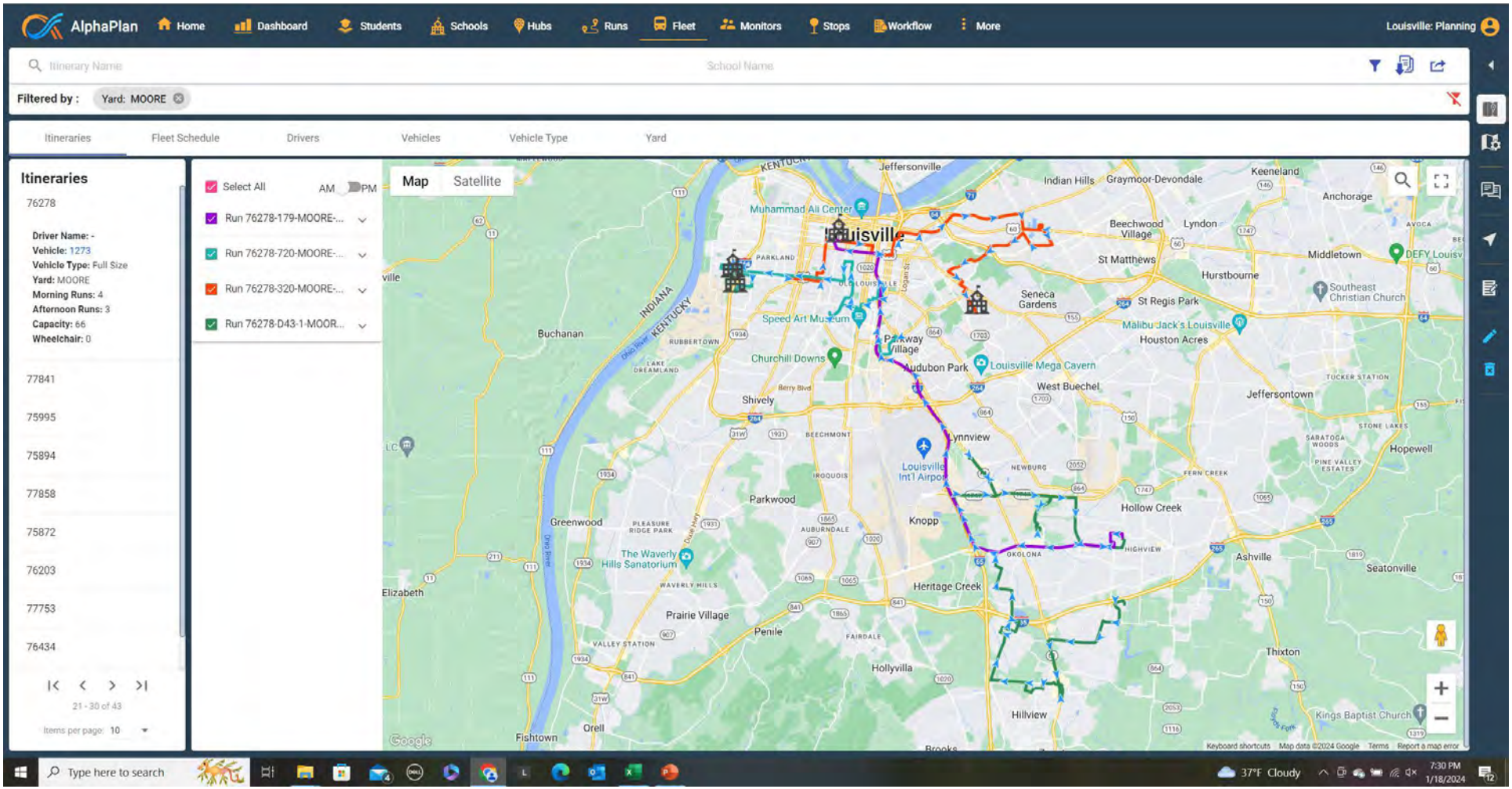
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Schools
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Workflow
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Louisville: Planning
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School Name
Filtered by :
Yard: MOORE
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
76278
Driver Name: -
Vehicle: 1273
Vehicle Type: Full Size
Yard: MOORE
Morning Runs: 4
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
77841
75995
75894
77858
75872
76203
77753
76434
21 - 30 of 43
Items per page: 10
Select All
AM
PM
Run 76278-179-MOORE-...
Run 76278-720-MOORE-...
Run 76278-320-MOORE-...
Run 76278-D43-1-MOOR...
Map
Satellite
Jeffersonville
Muhammad Ali Center
Louisville
Indian Hills
Graymoor-Devondale
Keeneland
Anchorage
Beechwood Village
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West Buechel
Jeffersontown
Shively
Lynnview
Louisville Int'l Airport
Hopewell
Parkwood
Knopp
Hollow Creek
Greenwood
The Waverly Hills Sanatorium
Ashville
Seatonville
Heritage Creek
Elizabeth
Prairie Village
Penile
Thixton
Hollyvilla
Hillview
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KENTUCKY
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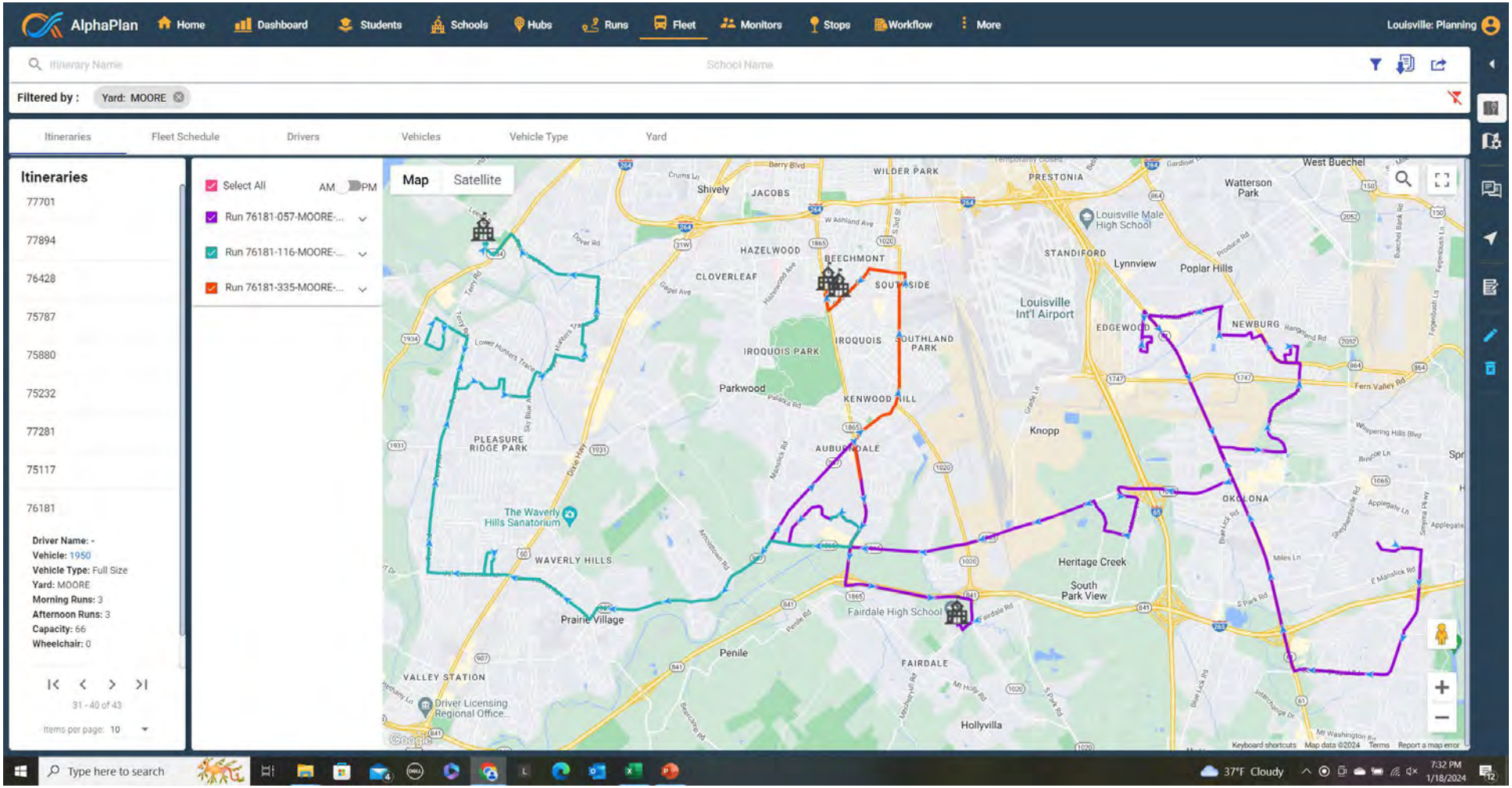
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School Name
Filtered by :
Yard: MOORE
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Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
77701
77894
76428
75787
75880
75232
77281
75117
76181
Driver Name: -
Vehicle: 1950
Vehicle Type: Full Size
Yard: MOORE
Morning Runs: 3
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
31 - 40 of 43
Items per page: 10
Select All
AM
PM
Run 76181-057-MOORE-...
Run 76181-116-MOORE-...
Run 76181-335-MOORE-...
Map
Satellite
Shively
JACOBS
WILDER PARK
PRESTONIA
West Buechel
Watterson Park
Louisville Male High School
HAZELWOOD
BEECHMONT
CLOVERLEAF
SOUTHSIDE
STANDIFORD
Lynnview
Poplar Hills
Louisville Int'l Airport
EDGEWOOD
NEWBURG
IROQUOIS PARK
IROQUOIS
SOUTHLAND PARK
Parkwood
KENWOOD HILL
Knopp
PLEASURE RIDGE PARK
AUBURNDALE
OKOLONA
The Waverly Hills Sanatorium
WAVERLY HILLS
Heritage Creek
South Park View
Prairie Village
Fairdale High School
Penile
FAIRDALE
VALLEY STATION
Driver Licensing Regional Office...
Hollyvilla
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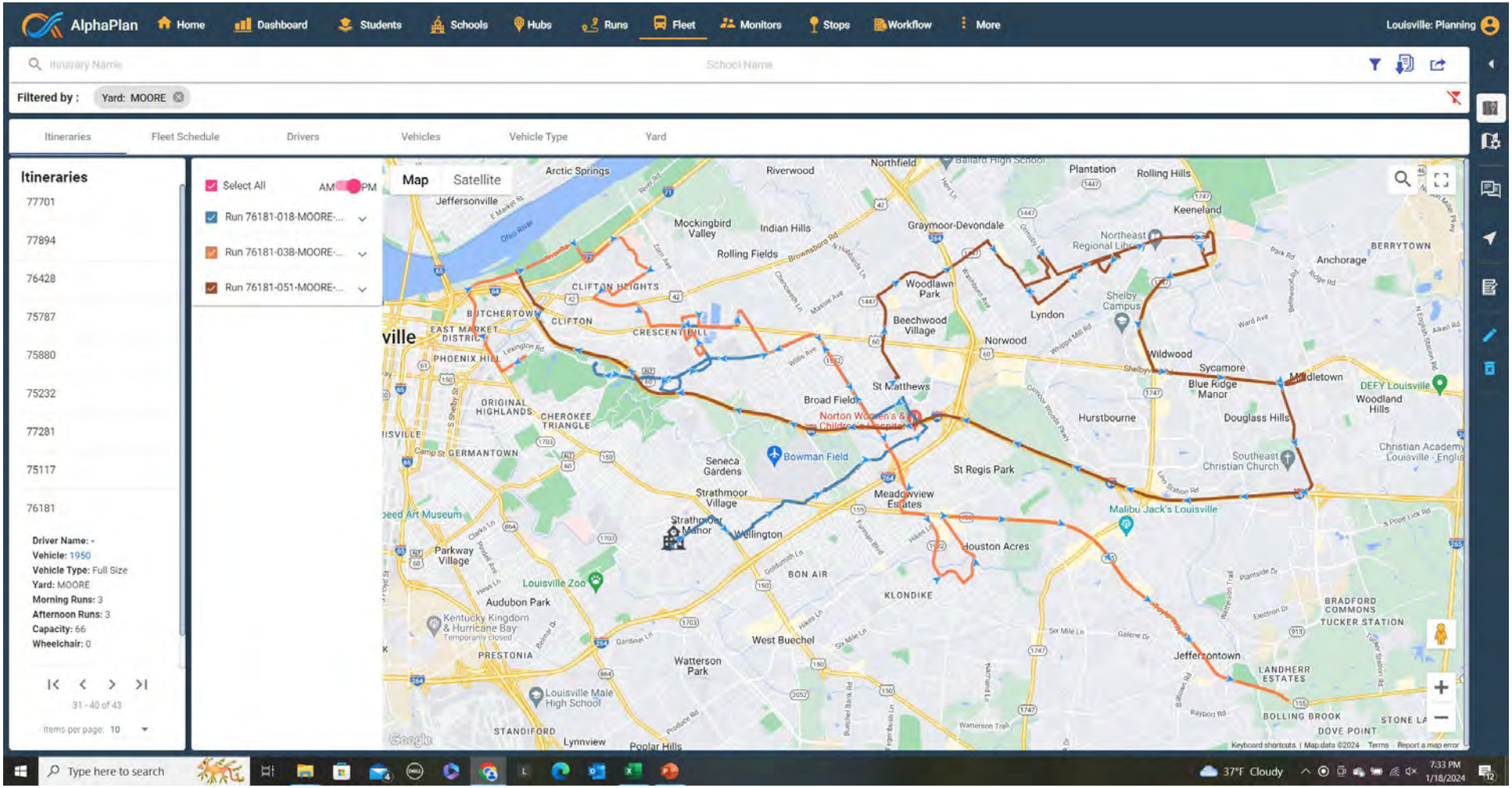
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Fleet
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Louisville: Planning
Itinerary Name
School Name
Filtered by :
Yard: MOORE
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
77701
77894
76428
75787
75880
75232
77281
75117
76181
Driver Name: -
Vehicle: 1950
Vehicle Type: Full Size
Yard: MOORE
Morning Runs: 3
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
31 - 40 of 43
Items per page: 10
Select All
AM
PM
Run 76181-018-MOORE-...
Run 76181-038-MOORE-...
Run 76181-051-MOORE-...
Map
Satellite
Arctic Springs
Riverwood
Northfield
Plantation
Rolling Hills
Jeffersonville
Mockingbird Valley
Indian Hills
Graymoor-Devondale
Keeneland
Rolling Fields
Northeast Regional Library
Anchorage
BERRYTOWN
CLIFTON HEIGHTS
Woodlawn Park
Shelby Campus
Lyndon
BUTCHERTOWN
CLIFTON
Beechwood Village
EAST MARKET DISTRICT
CRESCENT HILL
Norwood
PHOENIX HILL
Wildwood
Sycamore
Blue Ridge Manor
Middletown
DEFY Louisville
Woodland Hills
St Matthews
Broad Field
ORIGINAL HIGHLANDS
CHEROKEE TRIANGLE
Norton Women's & Children's Hospital
Hurstbourne
Douglass Hills
GERMANTOWN
Bowman Field
Seneca Gardens
Southeast Christian Church
Christian Academy Louisville
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Strathmoor Village
Meadowview Estates
Malibu Jack's Louisville
Strathmoor Manor
Wellington
Houston Acres
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Louisville Zoo
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KLONDIKE
Audubon Park
Kentucky Kingdom & Hurricane Bay
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TUCKER STATION
PRESTONIA
West Buechel
Watterson Park
Jeffersontown
LANDHERR ESTATES
Louisville Male High School
BOLLING BROOK
STONE LA
STANDIFORD
Lynnview
Poplar Hills
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37°F Cloudy
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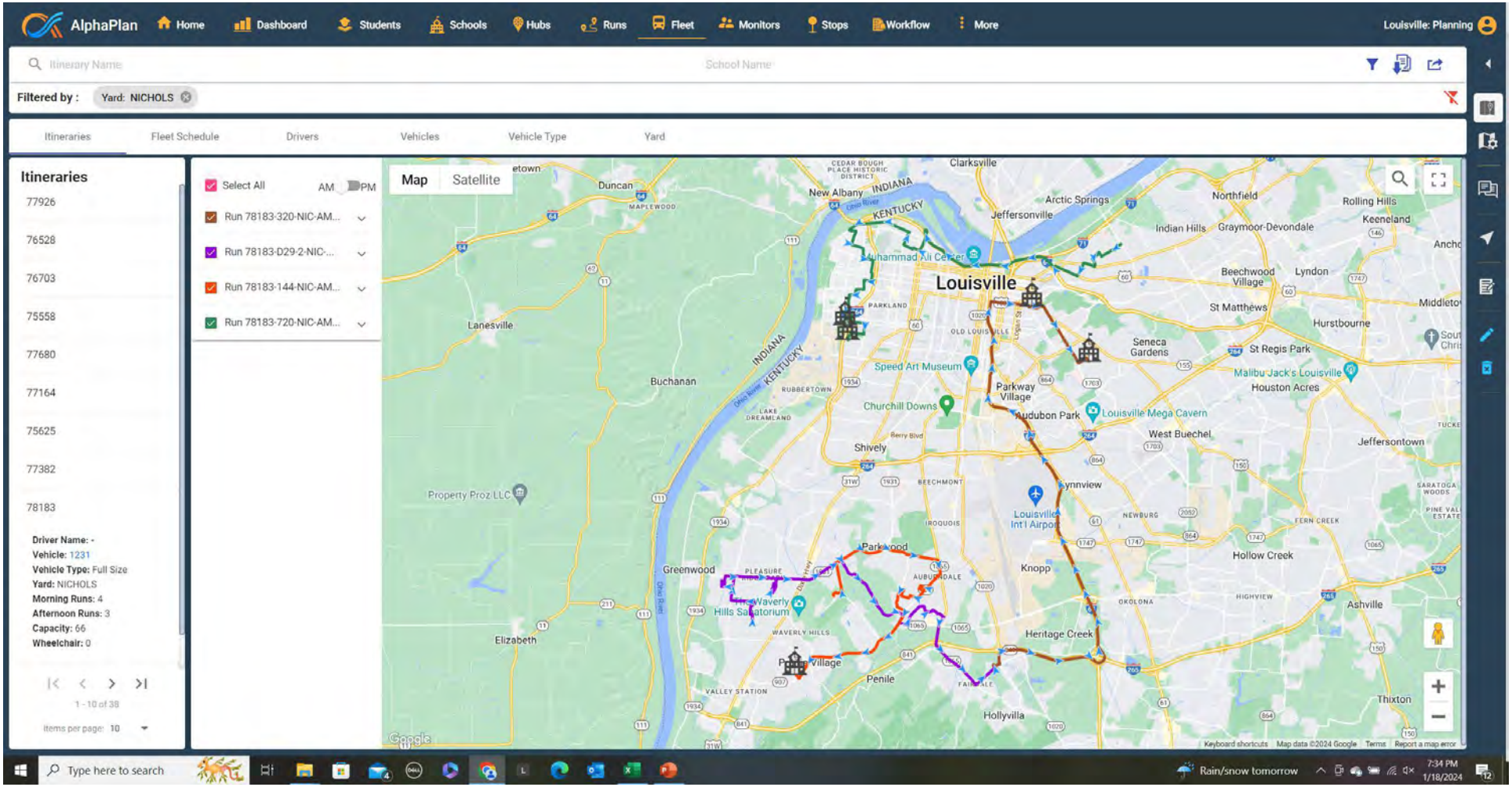
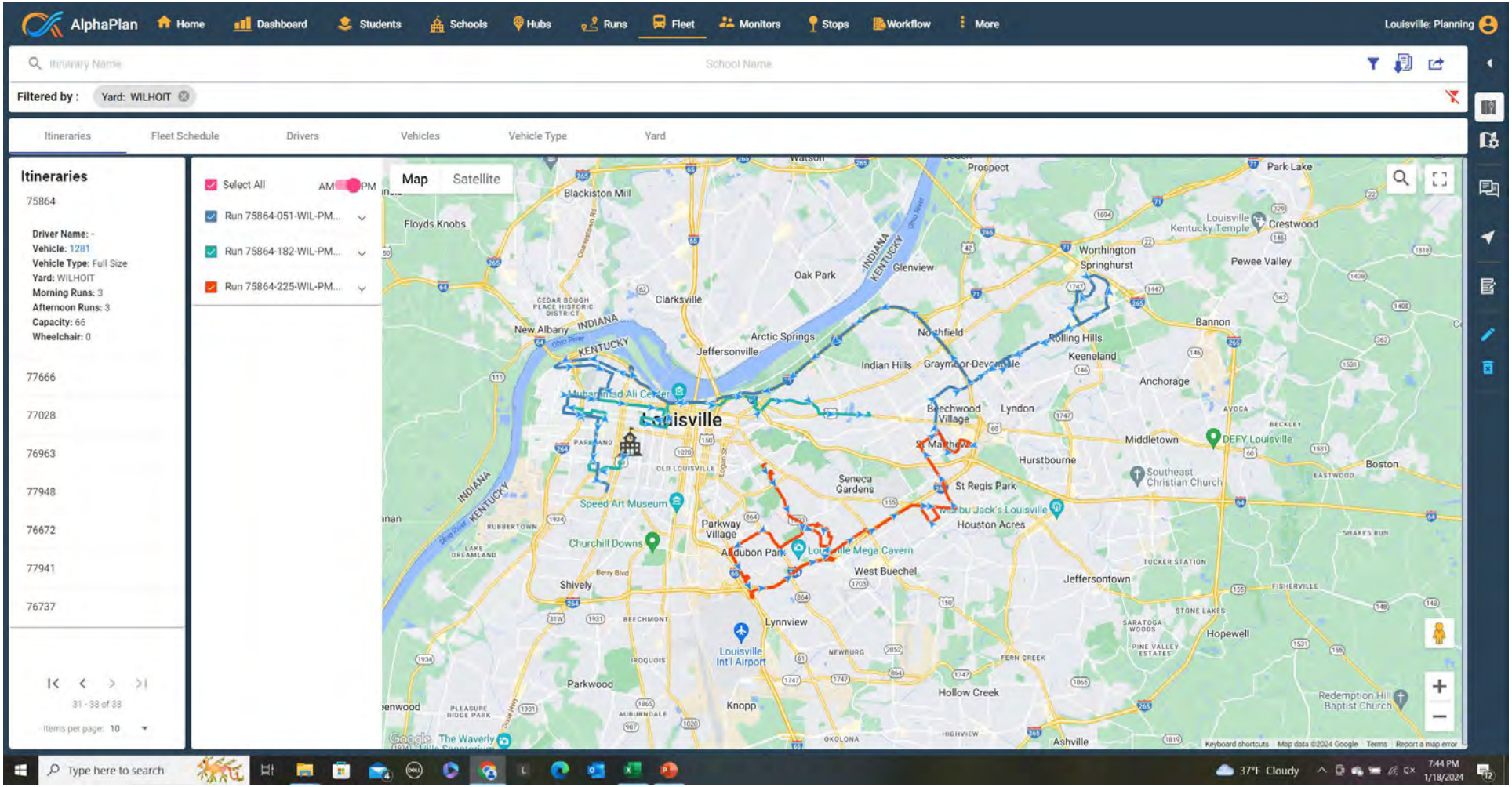
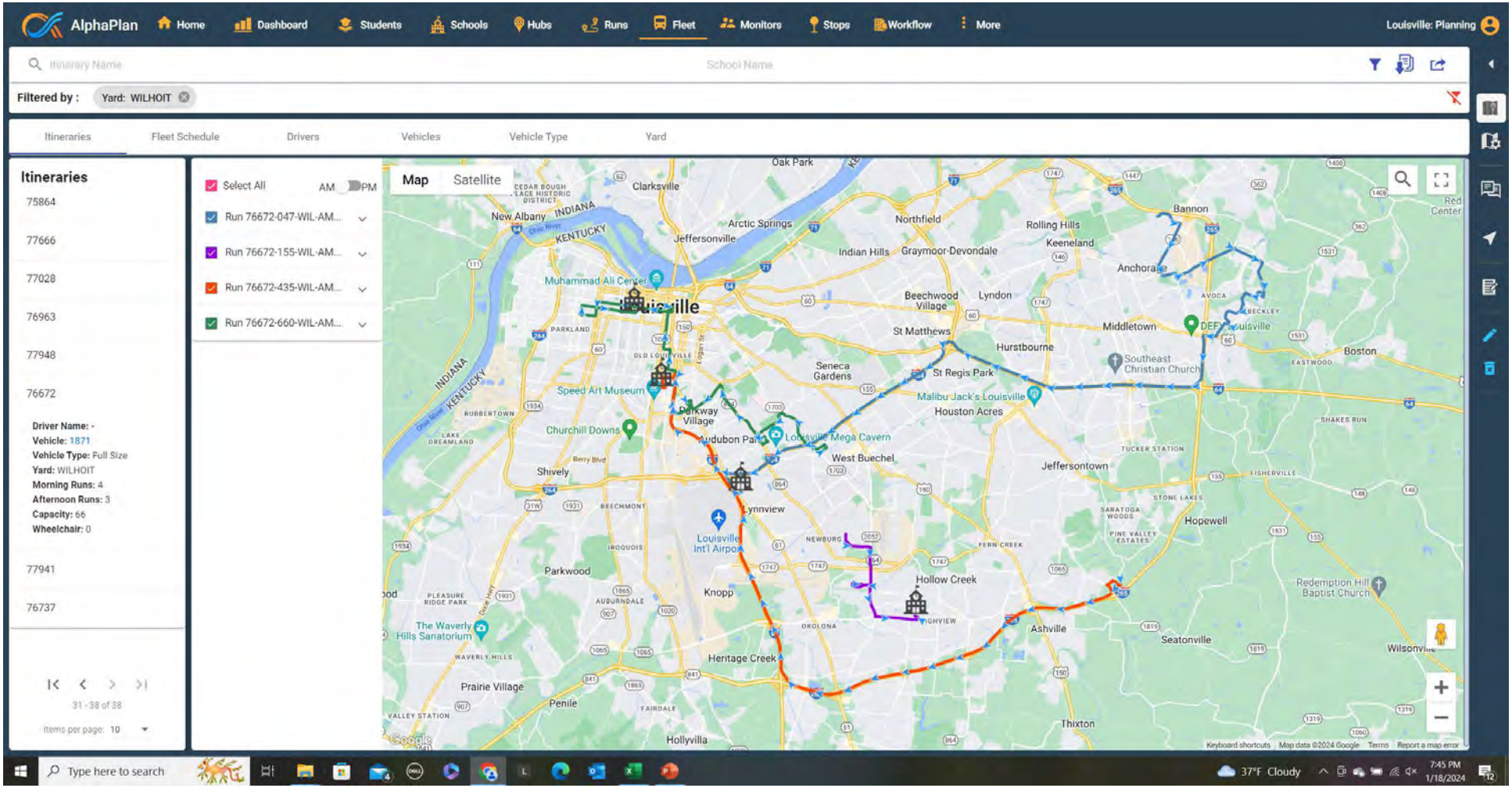
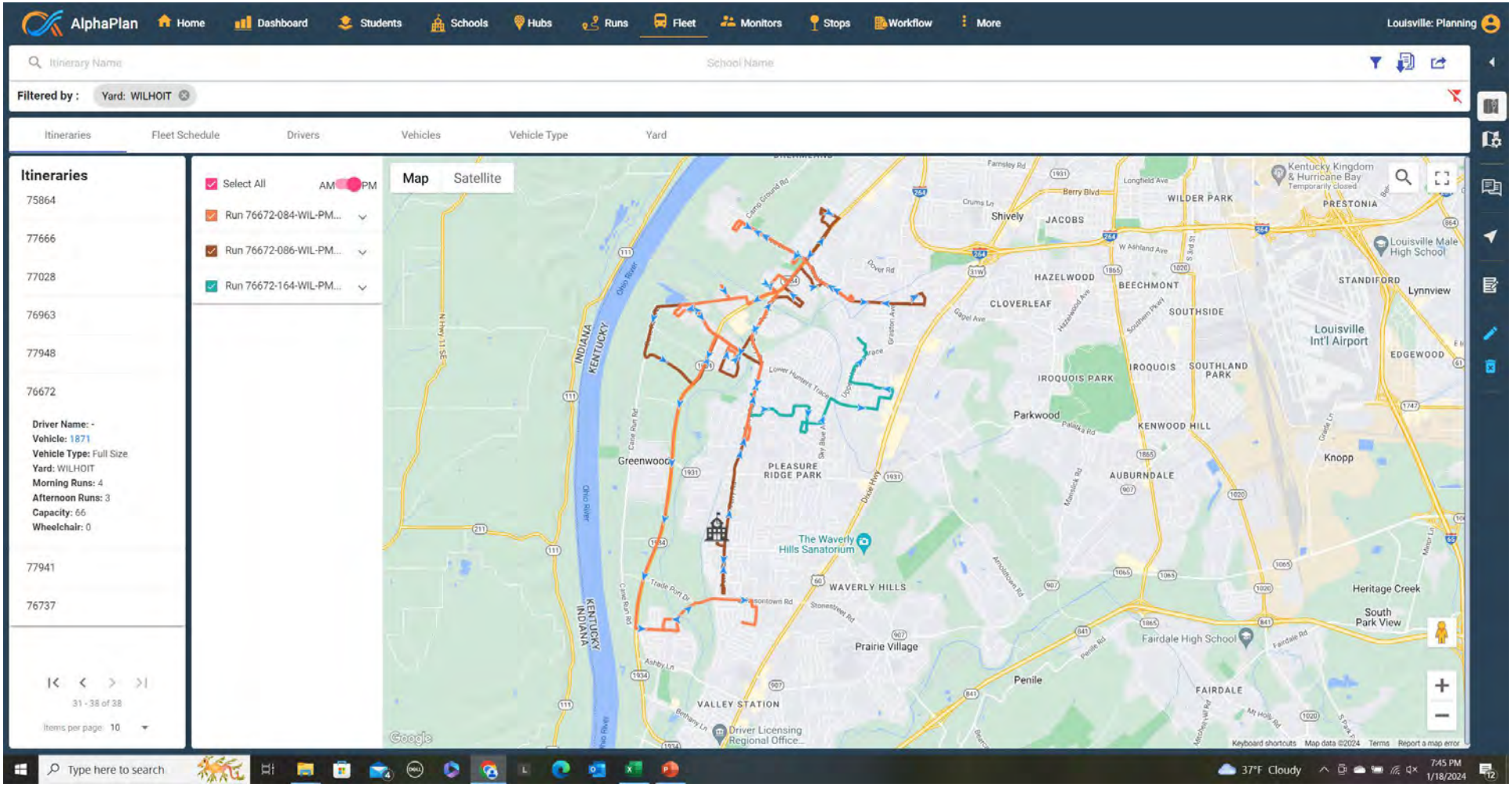
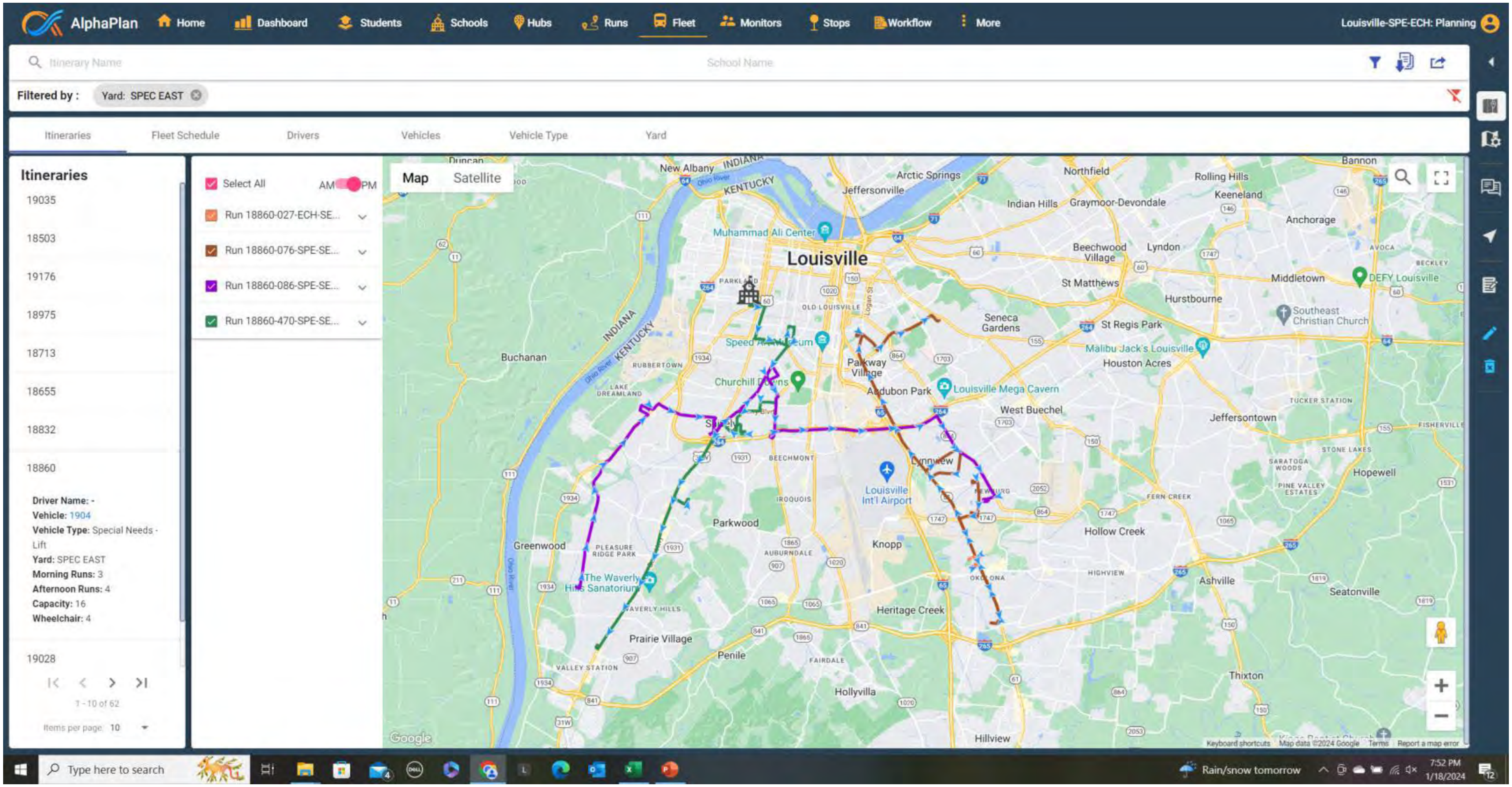
1/18/2024

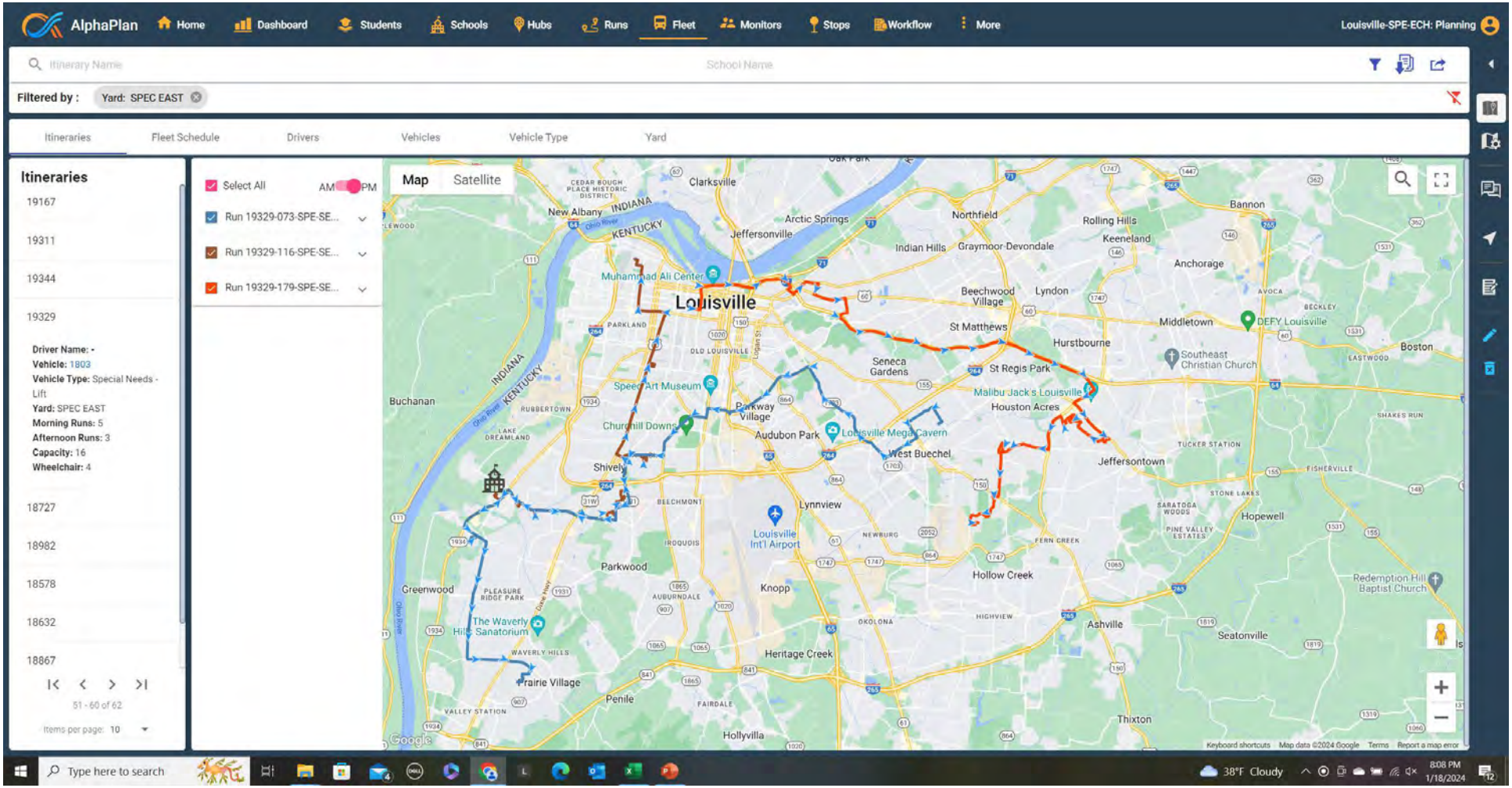

AlphaPlan
Home
Dashboard
Students
Schools
Hubs
Runs
Fleet
Monitors
Stops
Workflow
More
Louisville: Planning
Itinerary Name
School Name
Filtered by :
Yard: NICHOLS
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
77926
76528
76703
75558
77680
77164
75625
77382
78183
Driver Name: -
Vehicle: 1231
Vehicle Type: Full Size
Yard: NICHOLS
Morning Runs: 4
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
1 - 10 of 38
Items per page: 10
Select All
AM
PM
Run 78183-320-NIC-AM...
Run 78183-D29-2-NIC-...
Run 78183-144-NIC-AM...
Run 78183-720-NIC-AM...
Map
Satellite
Louisville
Jeffersonville
New Albany
Clarksville
Lanesville
Buchanan
Property Proz LLC
Greenwood
Elizabeth
Penile
Hollyvilla
Shively
Parkway Village
Churchill Downs
Speed Art Museum
Louisville Mega Cavern
Louisville Int'l Airport
Knopp
Heritage Creek
Hollow Creek
Ashville
Thixton
Jeffersontown
West Buechel
Houston Acres
St Regis Park
Seneca Gardens
St Matthews
Beechwood Village
Lyndon
Hurstbourne
Northfield
Rolling Hills
Keeneland
Graymoor-Devondale
Indian Hills
Arctic Springs
Google
Type here to search
Rain/snow tomorrow
7:34 PM
1/18/2024

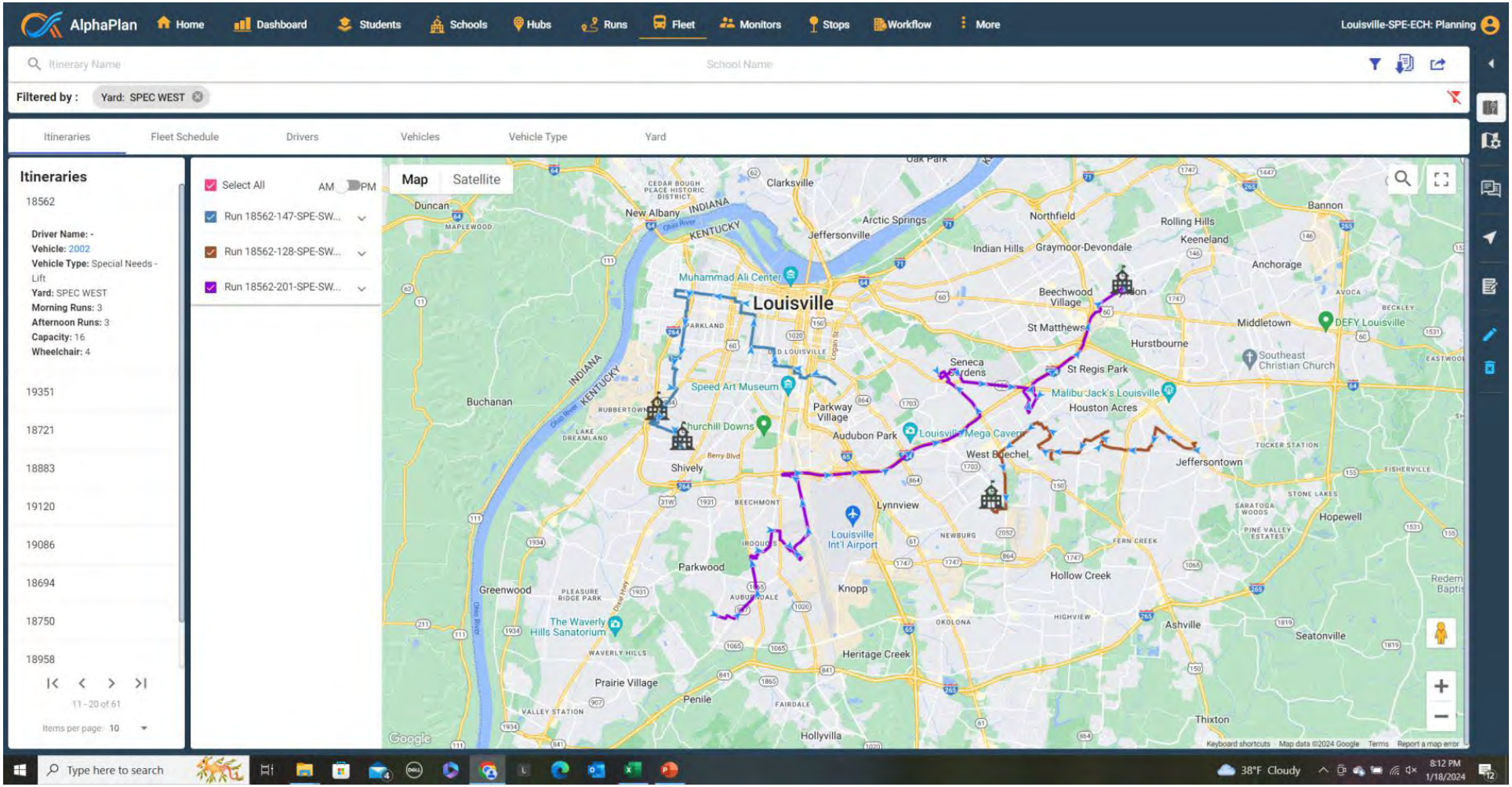

AlphaPlan
Home
Dashboard
Students
Schools
Hubs
Runs
Fleet
Monitors
Stops
Workflow
More
Louisville: Planning
Itinerary Name
School Name
Filtered by :
Yard: WILHOIT
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
75864
Driver Name: -
Vehicle: 1281
Vehicle Type: Full Size
Yard: WILHOIT
Morning Runs: 3
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
77666
77028
76963
77948
76672
77941
76737
31 - 38 of 38
Items per page: 10
Select All
AM
PM
Run 75864-051-WIL-PM...
Run 75864-182-WIL-PM...
Run 75864-225-WIL-PM...
Map
Satellite
Louisville
Jeffersonville
New Albany
Clarksville
Floyds Knobs
Blackiston Mill
Oak Park
Glenview
Arctic Springs
Indian Hills
Northfield
Rolling Hills
Keeneland
Anchorage
Bannon
Worthington Springhurst
Pewee Valley
Crestwood
Park Lake
Prospect
Beechwood Village
Lyndon
Middletown
Hurstbourne
Seneca Gardens
St Regis Park
Houston Acres
Parkway Village
Churchill Downs
Speed Art Museum
Louisville Mega Cavern
West Buechel
Shively
Jeffersontown
Lynnview
Louisville Int'l Airport
Parkwood
Knopp
Hollow Creek
Hopewell
Ashville
Boston
Redemption Hill Baptist Church
Type here to search
37°F Cloudy
7:44 PM
1/18/2024

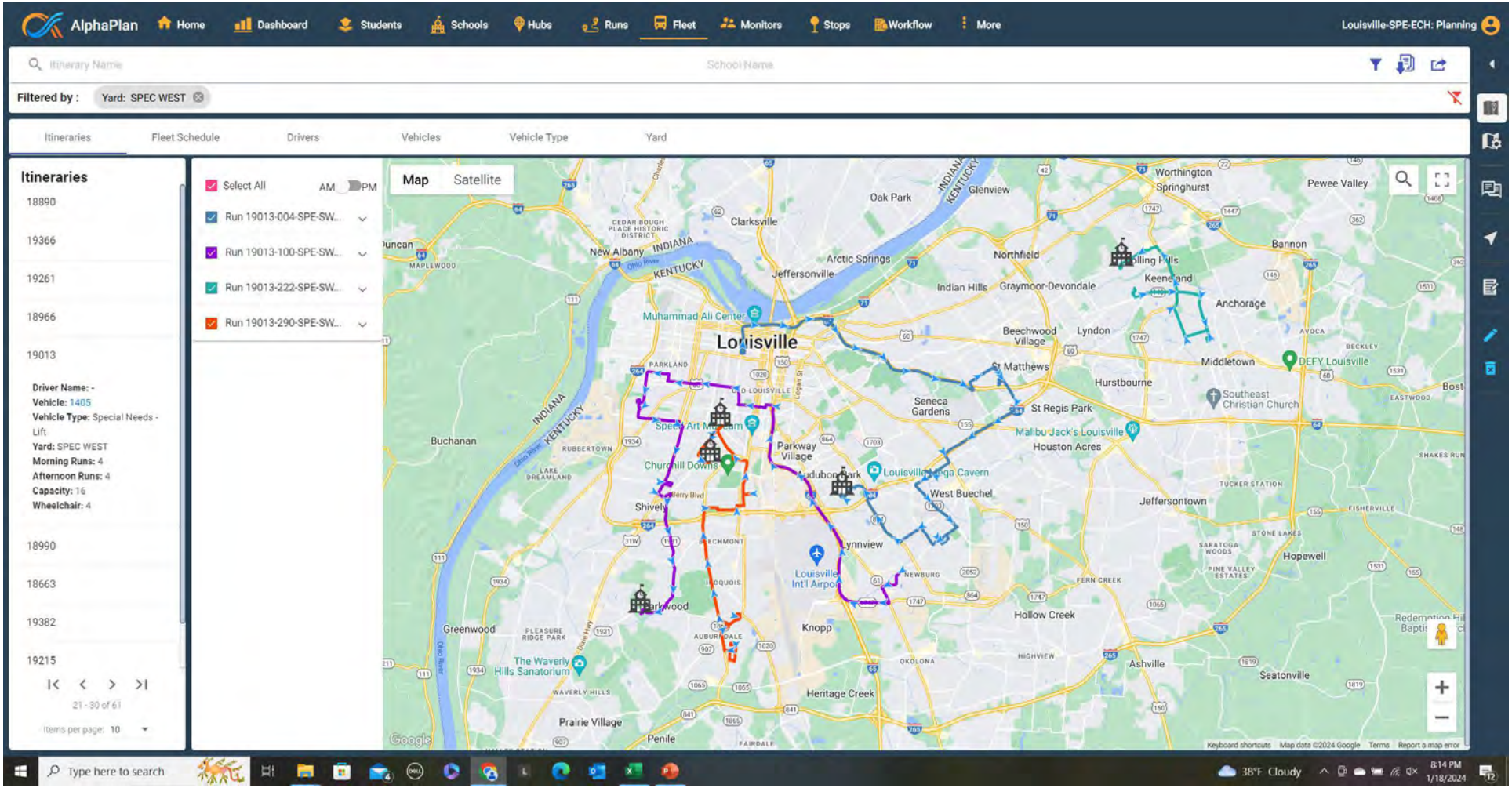

AlphaPlan
Home
Dashboard
Students
Schools
Hubs
Runs
Fleet
Monitors
Stops
Workflow
More
Louisville: Planning
Itinerary Name
School Name
Filtered by :
Yard: WILHOIT
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
75864
77666
77028
76963
77948
76672
Driver Name: -
Vehicle: 1871
Vehicle Type: Full Size
Yard: WILHOIT
Morning Runs: 4
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
77941
76737
31 - 38 of 38
Items per page: 10
Select All
AM
PM
Run 76672-047-WIL-AM...
Run 76672-155-WIL-AM...
Run 76672-435-WIL-AM...
Run 76672-660-WIL-AM...
Map
Satellite
Oak Park
Clarksville
New Albany
INDIANA
KENTUCKY
Jeffersonville
Arctic Springs
Northfield
Rolling Hills
Keeneland
Bannon
Anchorage
Indian Hills
Graymoor-Devondale
Muhammad Ali Center
Beechwood Village
Lyndon
Middletown
St Matthews
Hurstbourne
Seneca Gardens
St Regis Park
Southeast Christian Church
Boston
Speed Art Museum
Parkway Village
Malibu Jack's Louisville
Houston Acres
Churchill Downs
Audubon Park
Louisville Mega Cavern
West Buechel
Shively
Jeffersontown
Lynnview
Louisville Int'l Airport
Hopewell
Parkwood
Knopp
Hollow Creek
Redemption Hill Baptist Church
The Waverly Hills Sanatorium
Ashville
Seatonville
Heritage Creek
Prairie Village
Penile
Thixton
Hollyvilla
Type here to search
37°F Cloudy
7:45 PM
1/18/2024


AlphaPlan
Home
Dashboard
Students
Schools
Hubs
Runs
Fleet
Monitors
Stops
Workflow
More
Louisville: Planning
Itinerary Name
School Name
Filtered by :
Yard: WILHOIT
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
75864
77666
77028
76963
77948
76672
Driver Name: -
Vehicle: 1871
Vehicle Type: Full Size
Yard: WILHOIT
Morning Runs: 4
Afternoon Runs: 3
Capacity: 66
Wheelchair: 0
77941
76737
31 - 38 of 38
Items per page: 10
Select All
AM
PM
Run 76672-084-WIL-PM...
Run 76672-086-WIL-PM...
Run 76672-164-WIL-PM...
Map
Satellite
Shively
JACOBS
WILDER PARK
PRESTONIA
HAZELWOOD
BEECHMONT
CLOVERLEAF
SOUTHSIDE
STANDIFORD
Lynnview
Louisville Male High School
Louisville Int'l Airport
EDGEWOOD
IROQUOIS PARK
IROQUOIS
SOUTHLAND PARK
Parkwood
KENWOOD HILL
Knopp
Greenwood
PLEASURE RIDGE PARK
AUBURNDALE
The Waverly Hills Sanatorium
WAVERLY HILLS
Heritage Creek
South Park View
Prairie Village
Fairdale High School
Penile
FAIRDALE
VALLEY STATION
Driver Licensing Regional Office
INDIANA
KENTUCKY
OHIO RIVER
Google
Keyboard shortcuts
Map data ©2024
Terms
Report a map error
Type here to search
37°F Cloudy
7:45 PM
1/18/2024

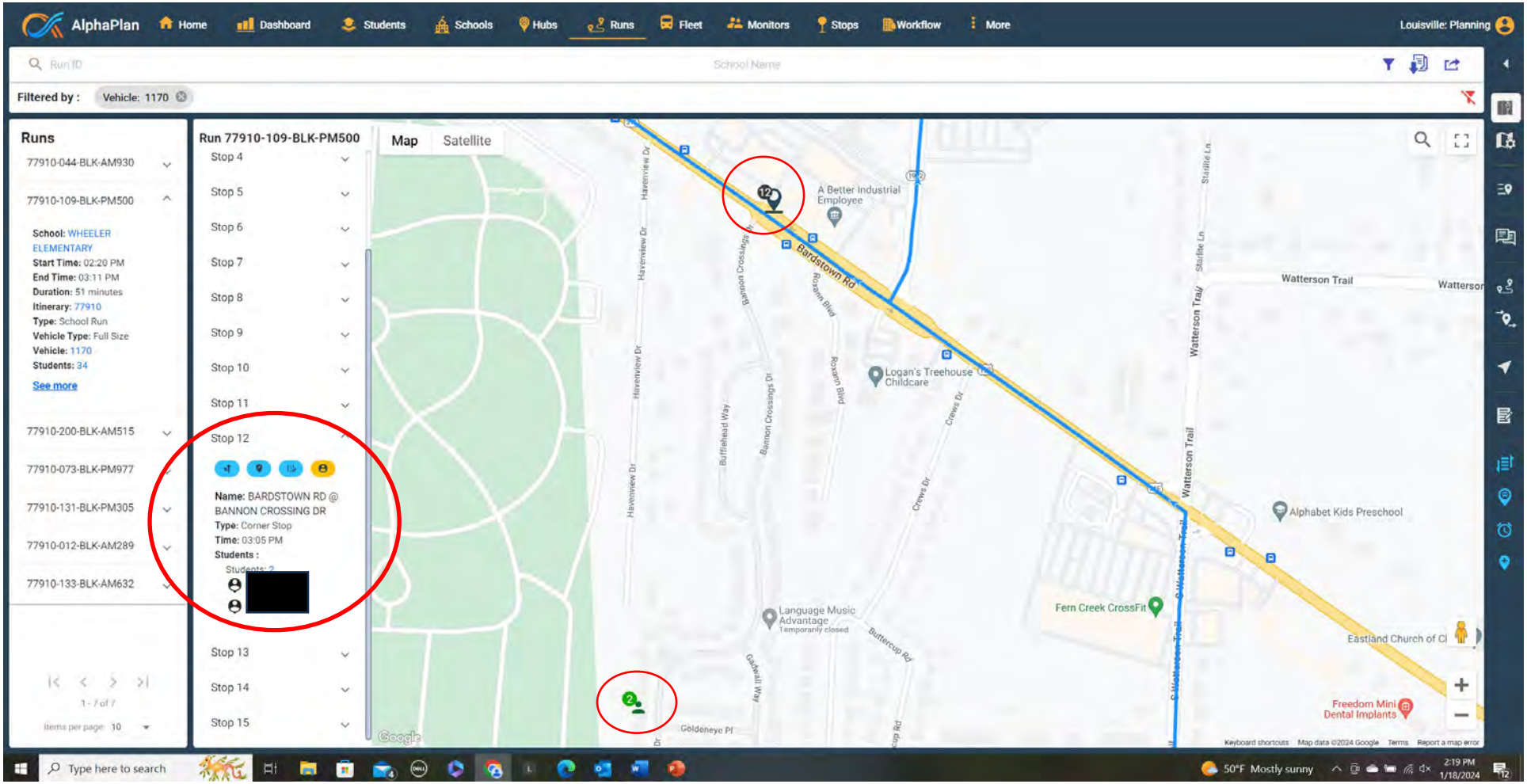

AlphaPlan
Home
Dashboard
Students
Schools
Hubs
Runs
Fleet
Monitors
Stops
Workflow
More
Louisville-SPE-ECH: Planning
Itinerary Name
School Name
Filtered by :
Yard: SPEC EAST
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
19035
18503
19176
18975
18713
18655
18832
18860
Driver Name: -
Vehicle: 1904
Vehicle Type: Special Needs - Lift
Yard: SPEC EAST
Morning Runs: 3
Afternoon Runs: 4
Capacity: 16
Wheelchair: 4
19028
1 - 10 of 62
Items per page: 10
Select All
AM
PM
Run 18860-027-ECH-SE...
Run 18860-076-SPE-SE...
Run 18860-086-SPE-SE...
Run 18860-470-SPE-SE...
Map
Satellite
Louisville
Type here to search
Rain/snow tomorrow
7:52 PM
1/18/2024


AlphaPlan
Home
Dashboard
Students
Schools
Hubs
Runs
Fleet
Monitors
Stops
Workflow
More
Louisville-SPE-ECH: Planning
Itinerary Name
School Name
Filtered by :
Yard: SPEC EAST
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
19167
19311
19344
19329
Driver Name: -
Vehicle: 1803
Vehicle Type: Special Needs - Lift
Yard: SPEC EAST
Morning Runs: 5
Afternoon Runs: 3
Capacity: 16
Wheelchair: 4
18727
18982
18578
18632
18867
51 - 60 of 62
Items per page: 10
Select All
AM
PM
Run 19329-073-SPE-SE...
Run 19329-116-SPE-SE...
Run 19329-179-SPE-SE...
Map
Satellite
Louisville
Clarksville
New Albany
Jeffersonville
Muhammad Ali Center
Speed Art Museum
Churchill Downs
Louisville Mega Cavern
Louisville Int'l Airport
The Waverly Hills Sanatorium
Parkwood
Knopp
Heritage Creek
Prairie Village
Penile
Hollyvilla
Lynnview
Shively
Buchanan
Greenwood
Arctic Springs
Northfield
Rolling Hills
Bannon
Keeneland
Indian Hills
Graymoor-Devondale
Anchorage
Beechwood Village
Lyndon
St Matthews
Middletown
DEFY Louisville
Hurstbourne
Southeast Christian Church
Boston
Seneca Gardens
St Regis Park
Malibu Jack's Louisville
Houston Acres
Parkway Village
Audubon Park
West Buechel
Jeffersontown
Hollow Creek
Hopewell
Redemption Hill Baptist Church
Ashville
Seatonville
Thixton
Type here to search
38°F Cloudy
8:08 PM
1/18/2024

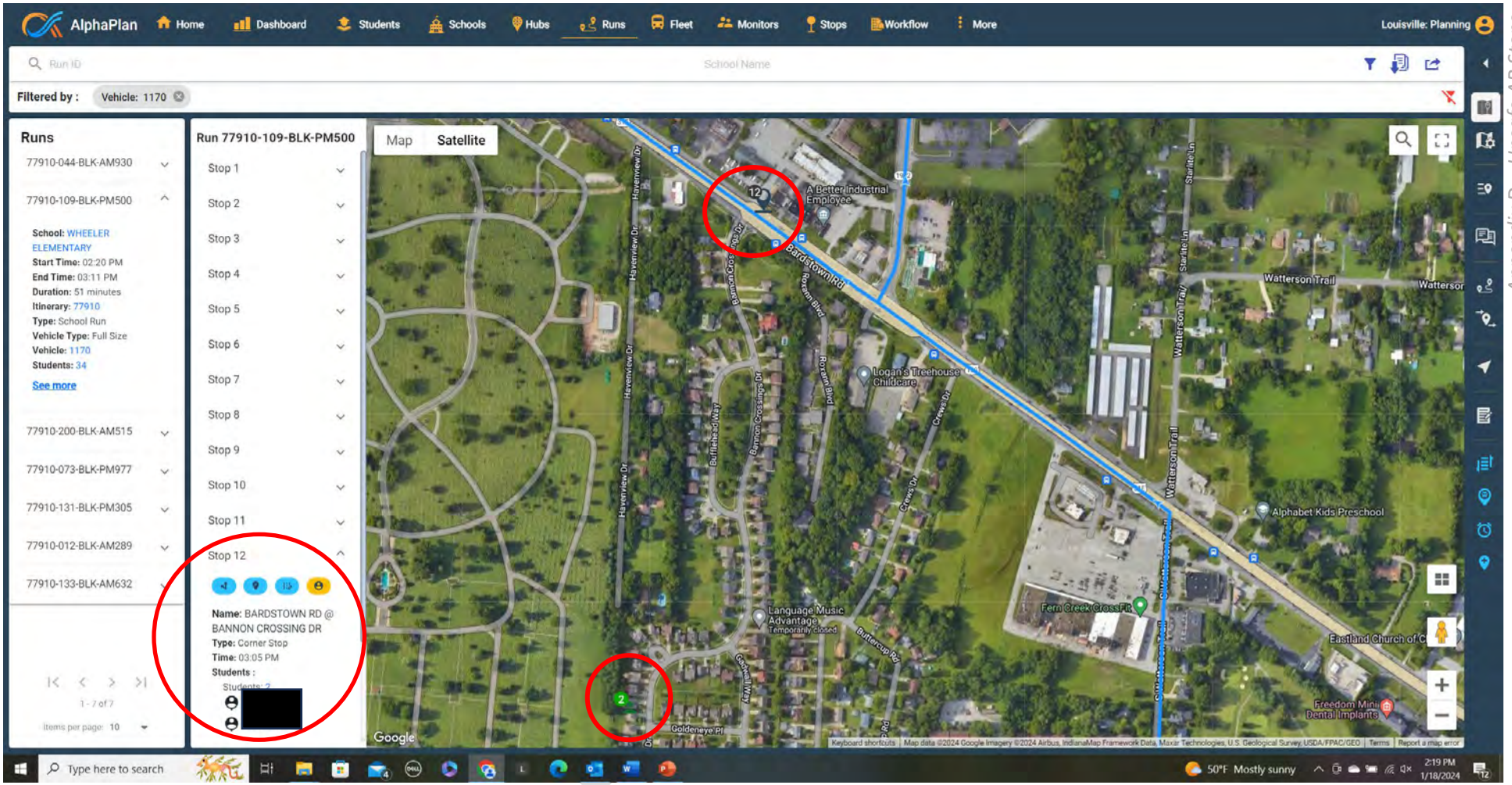

AlphaPlan
Home
Dashboard
Students
Schools
Hubs
Runs
Fleet
Monitors
Stops
Workflow
More
Louisville-SPE-ECH: Planning
Itinerary Name
School Name
Filtered by :
Yard: SPEC WEST
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
18562
Driver Name: -
Vehicle: 2002
Vehicle Type: Special Needs - Lift
Yard: SPEC WEST
Morning Runs: 3
Afternoon Runs: 3
Capacity: 16
Wheelchair: 4
19351
18721
18883
19120
19086
18694
18750
18958
11 - 20 of 61
Items per page: 10
Select All
AM
PM
Run 18562-147-SPE-SW...
Run 18562-128-SPE-SW...
Run 18562-201-SPE-SW...
Map
Satellite
Louisville
Clarksville
New Albany
Jeffersonville
Muhammad Ali Center
Speed Art Museum
Churchill Downs
Parkway Village
Audubon Park
Louisville Mega Cavern
West Buechel
Shively
Lynnview
Louisville Int'l Airport
Parkwood
Knopp
Hollow Creek
Heritage Creek
Prairie Village
Penile
Hollyvilla
Thixton
Ashville
Seatonville
Hopewell
Jeffersontown
Houston Acres
Malibu Jack's Louisville
St Regis Park
Seneca Gardens
St Matthews
Beechwood Village
Hurstbourne
Middletown
DEFY Louisville
Southeast Christian Church
Anchorage
Graymoor-Devondale
Indian Hills
Keeneland
Rolling Hills
Northfield
Arctic Springs
Bannon
Buchanan
Greenwood
The Waverly Hills Sanatorium
Google
Type here to search
38°F Cloudy
8:12 PM
1/18/2024


AlphaPlan
Home
Dashboard
Students
Schools
Hubs
Runs
Fleet
Monitors
Stops
Workflow
More
Louisville-SPE-ECH: Planning
Itinerary Name
School Name
Filtered by :
Yard: SPEC WEST
Itineraries
Fleet Schedule
Drivers
Vehicles
Vehicle Type
Yard
Itineraries
18890
19366
19261
18966
19013
Driver Name: -
Vehicle: 1405
Vehicle Type: Special Needs - Lift
Yard: SPEC WEST
Morning Runs: 4
Afternoon Runs: 4
Capacity: 16
Wheelchair: 4
18990
18663
19382
19215
21 - 30 of 61
Items per page: 10
Select All
AM
PM
Run 19013-004-SPE-SW...
Run 19013-100-SPE-SW...
Run 19013-222-SPE-SW...
Run 19013-290-SPE-SW...
Map
Satellite
Louisville
Clarksville
New Albany
Jeffersonville
Oak Park
Glenview
Worthington Springhurst
Pewee Valley
Northfield
Arctic Springs
Indian Hills
Graymoor-Devondale
Keeneland
Anchorage
Bannon
Muhammad Ali Center
Beechwood Village
Lyndon
St Matthews
Middletown
DEFY Louisville
Hurstbourne
Southeast Christian Church
Seneca Gardens
St Regis Park
Malibu Jack's Louisville
Houston Acres
Buchanan
Parkway Village
Churchill Downs
Louisville Mega Cavern
West Buechel
Jeffersontown
Shively
Lynnview
Louisville Int'l Airport
Hopewell
Hollow Creek
Greenwood
Knopp
The Waverly Hills Sanatorium
Ashville
Seatonville
Heritage Creek
Prairie Village
Penile
Google
Type here to search
38°F Cloudy
8:14 PM
1/18/2024

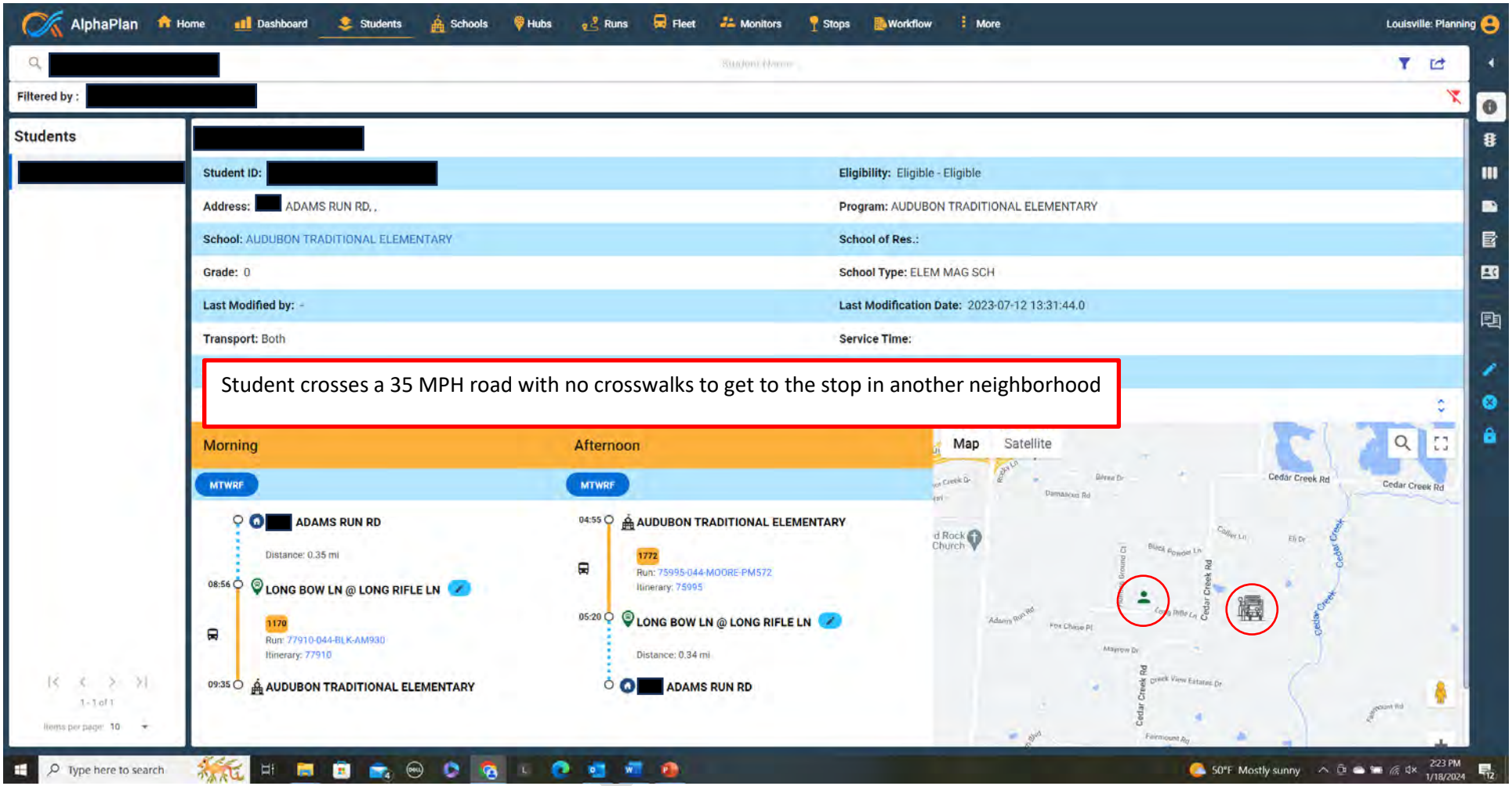
Appendix D
Unsafe AR Stops



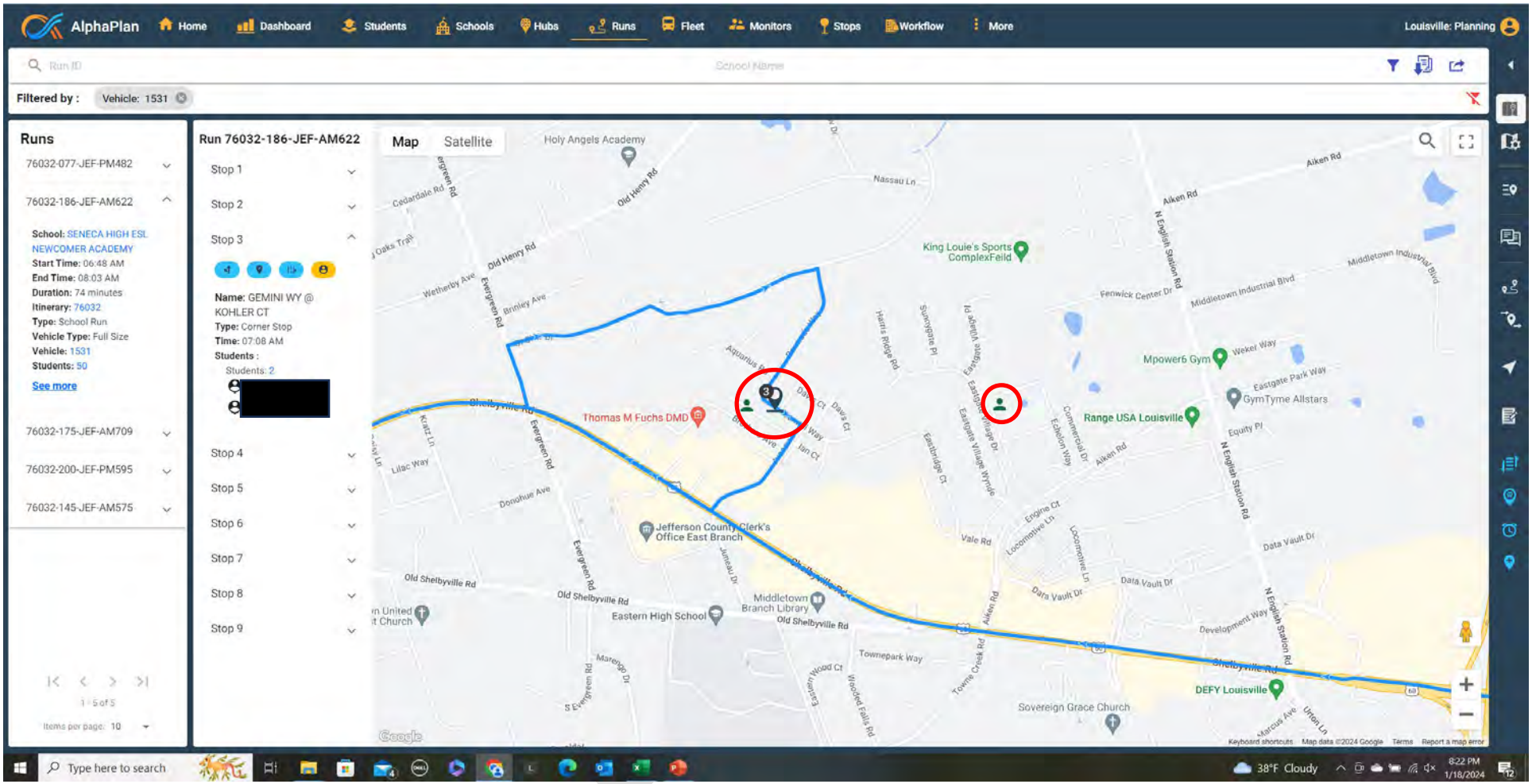
The screenshot on page D-3 is the satellite view of the screenshot on page D-2. The students would need to leave the neighborhood and cross a 6-lane divided road with no crosswalk to get to the stop.



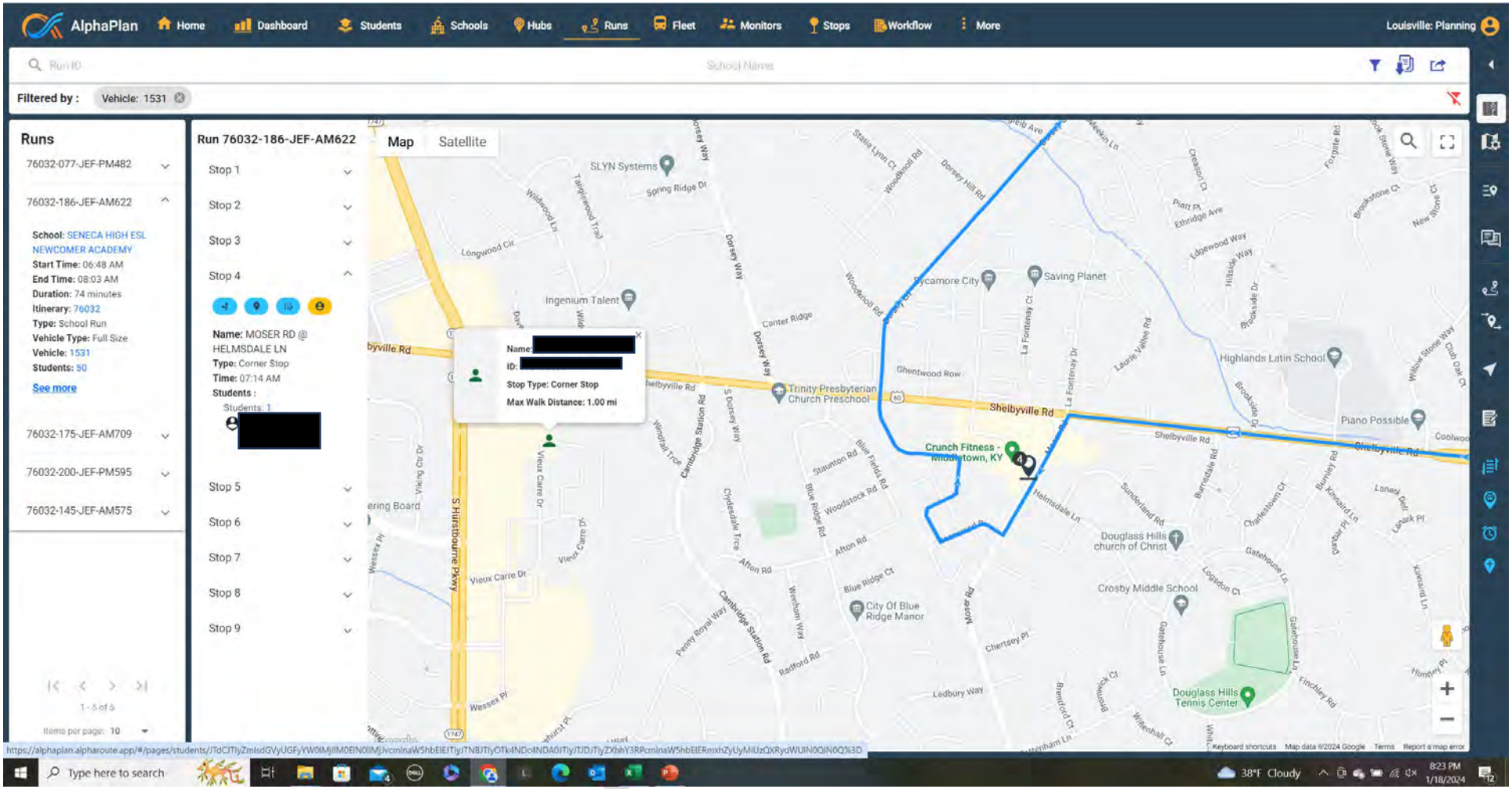
The screenshot on page D-3 is the satellite view of the screenshot on page D-2. The students would need to leave the neighborhood and cross a 6-lane divided road with no crosswalk to get to the stop.



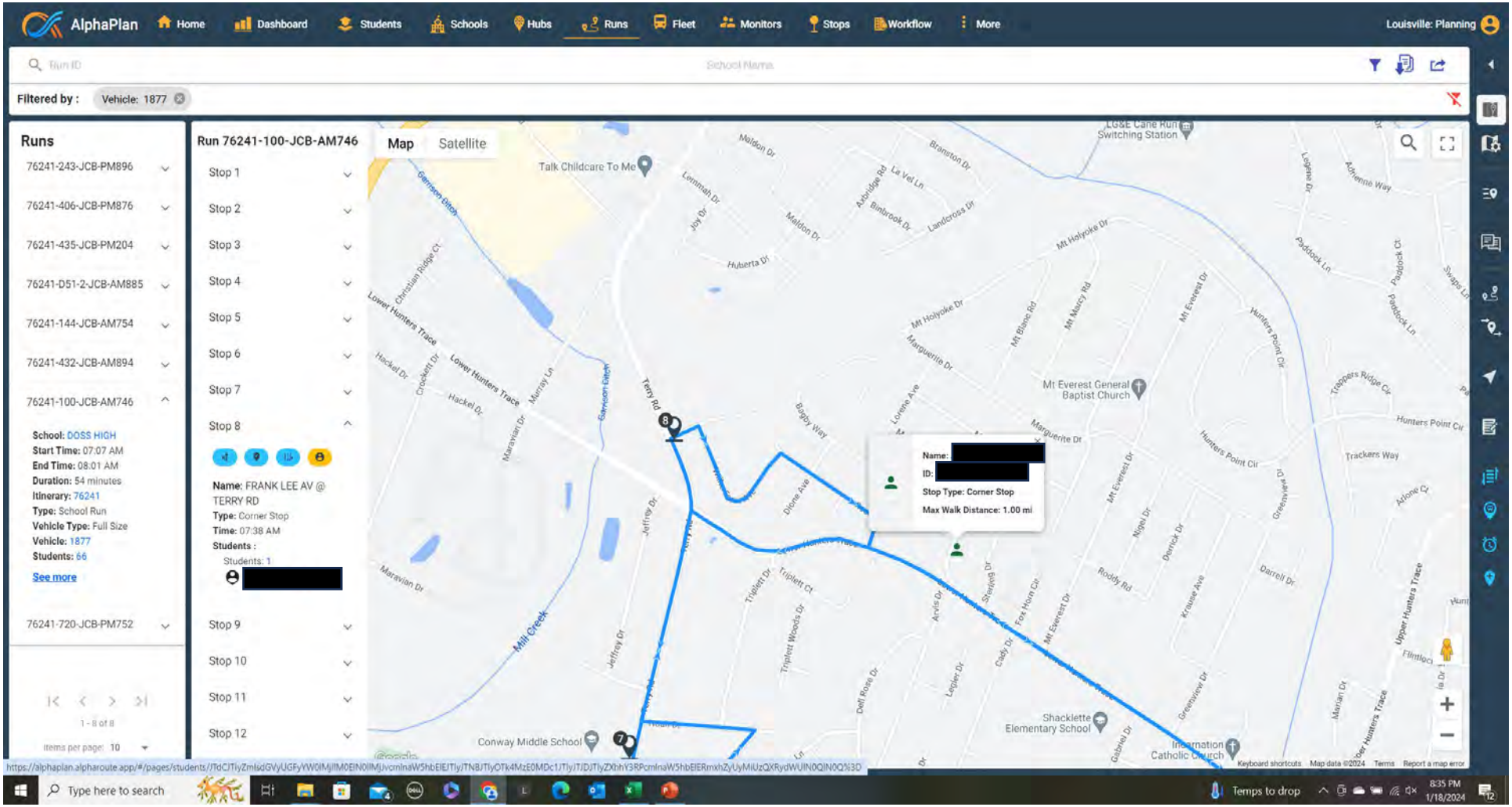
This student must cross a 35 MPH road with no crosswalk to get to the bus stop. This stop is in another neighborhood.



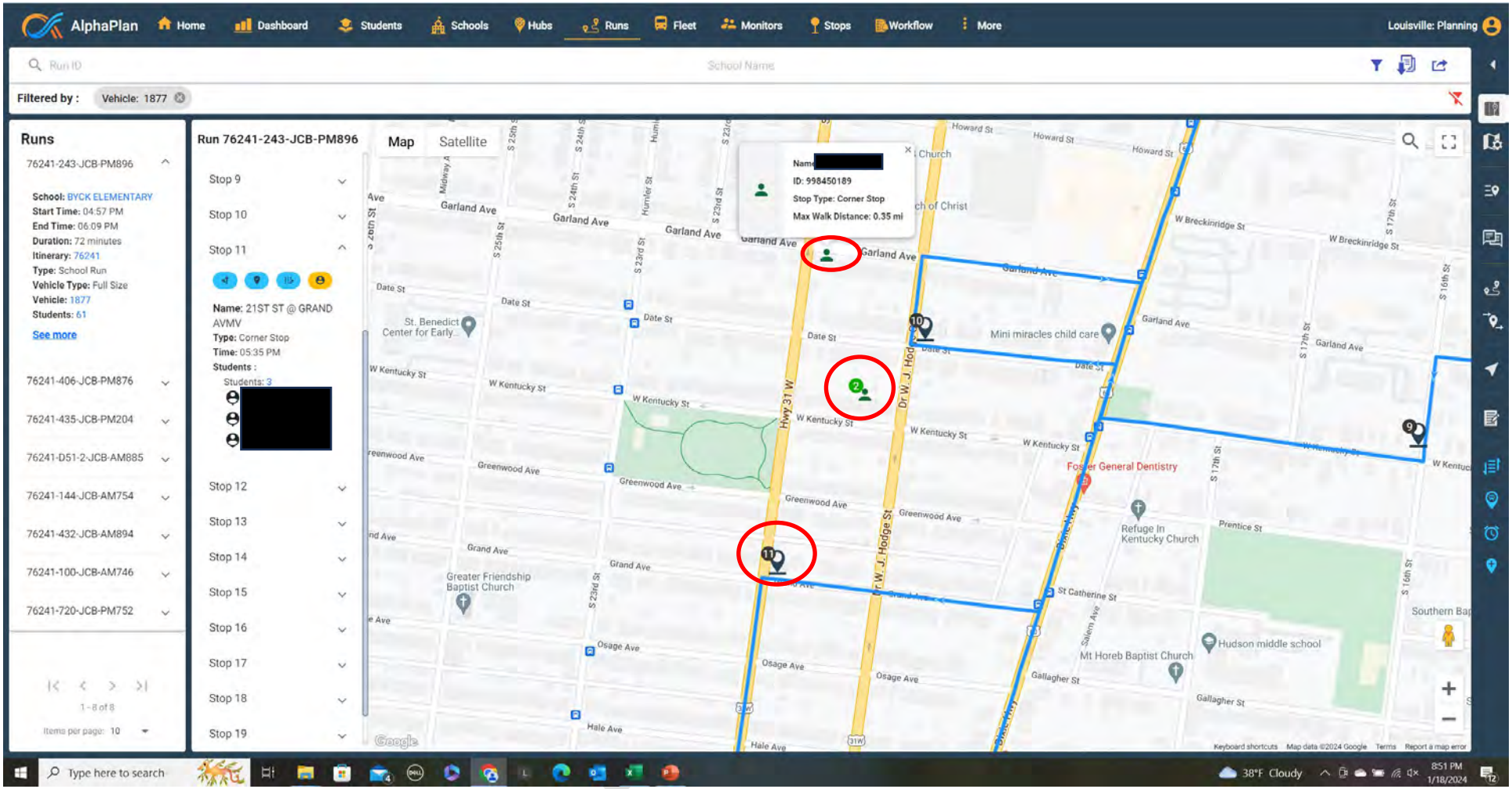
These students are assigned to a stop in a neighborhood that is not connected to theirs. The students must leave their neighborhood, walk down a multi lane road (Shelbyville Rd) with a 45 MPH speed limit, and enter the neighborhood with the bus stop.



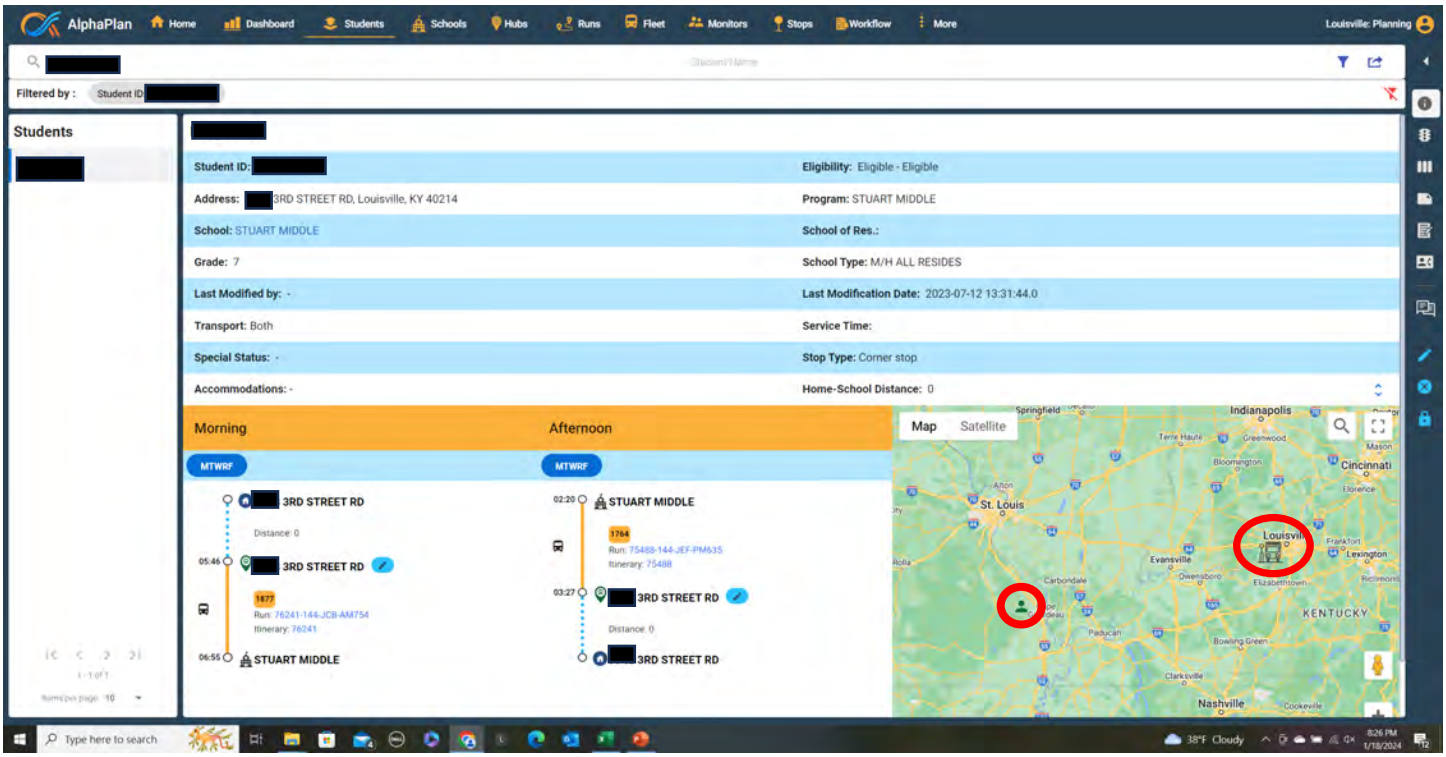
This student's neighborhood is not connected to the neighborhood with the bus stop. This student must walk one mile down Shelbyville Rd, past several strip malls and their parking lots. Some portions of Shelbyville Rd do not have sidewalks, and the speed limit is 45 MPH. The student must pass a significant ditch and some cross streets do not have crosswalks.

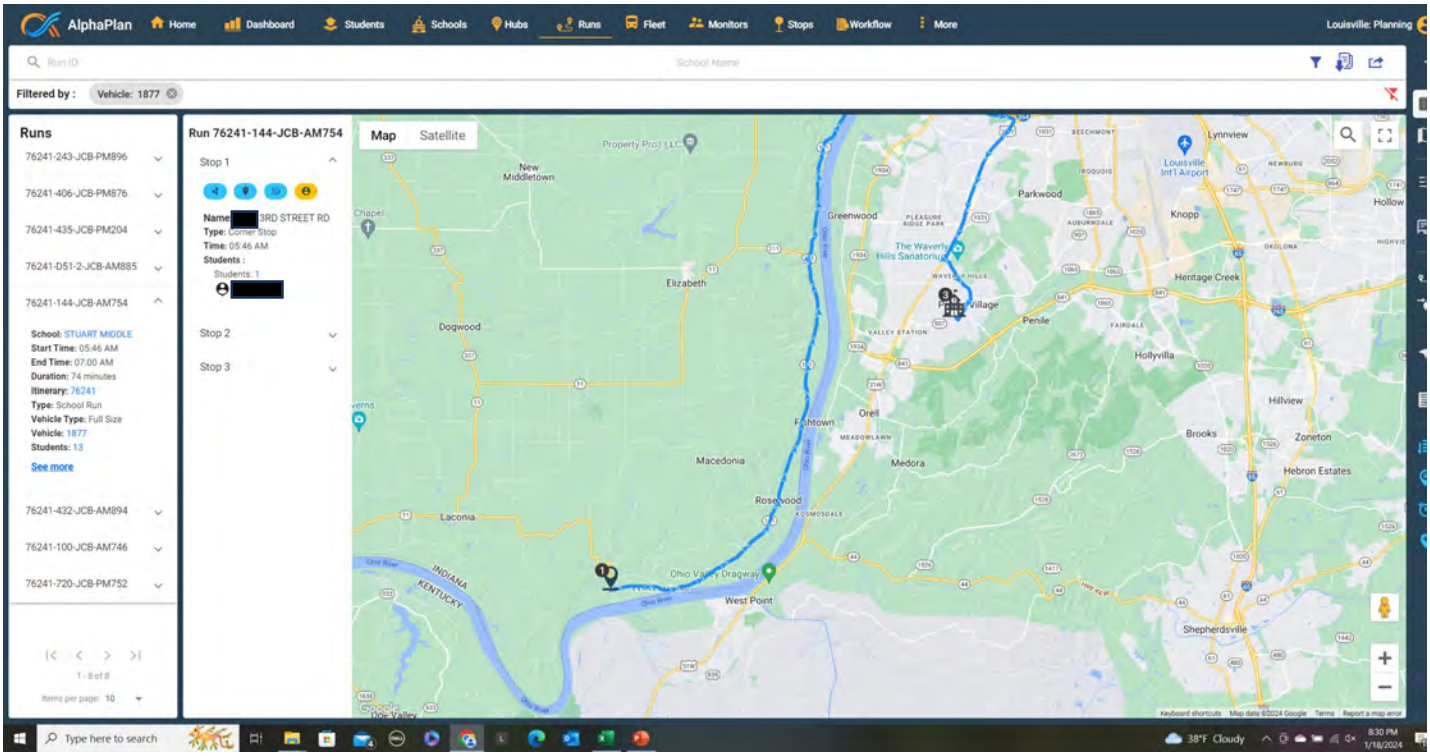


The shortest path is often used by students when walking to their bus stop location. In this case, the student would typically walk down Lower Hunters Trace, most of which does not have a sidewalk. There are ditches along the road, several sharp curves, and a speed limit of 35 MPH. For the student to know that the intention was for them to walk through the neighborhoods to get to the stop on Terry Rd, this information would have to be given to the family.

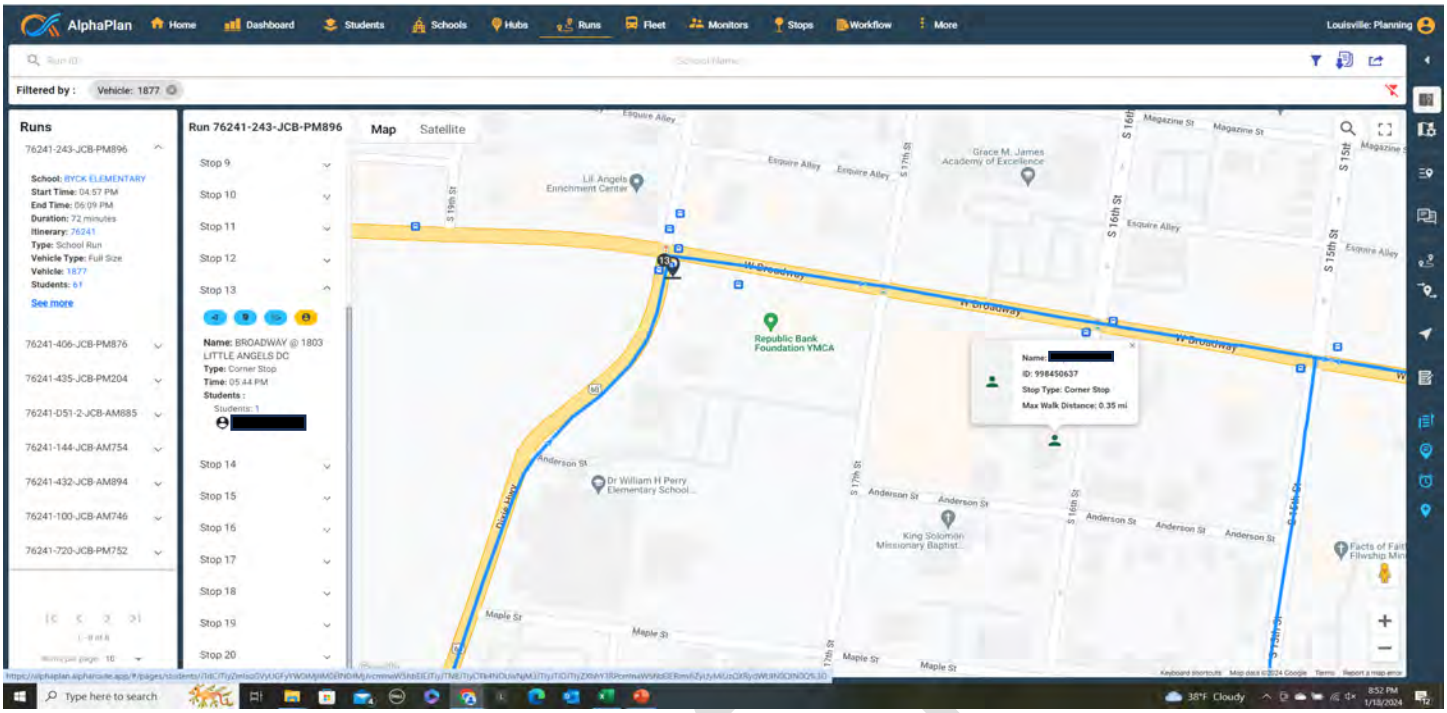


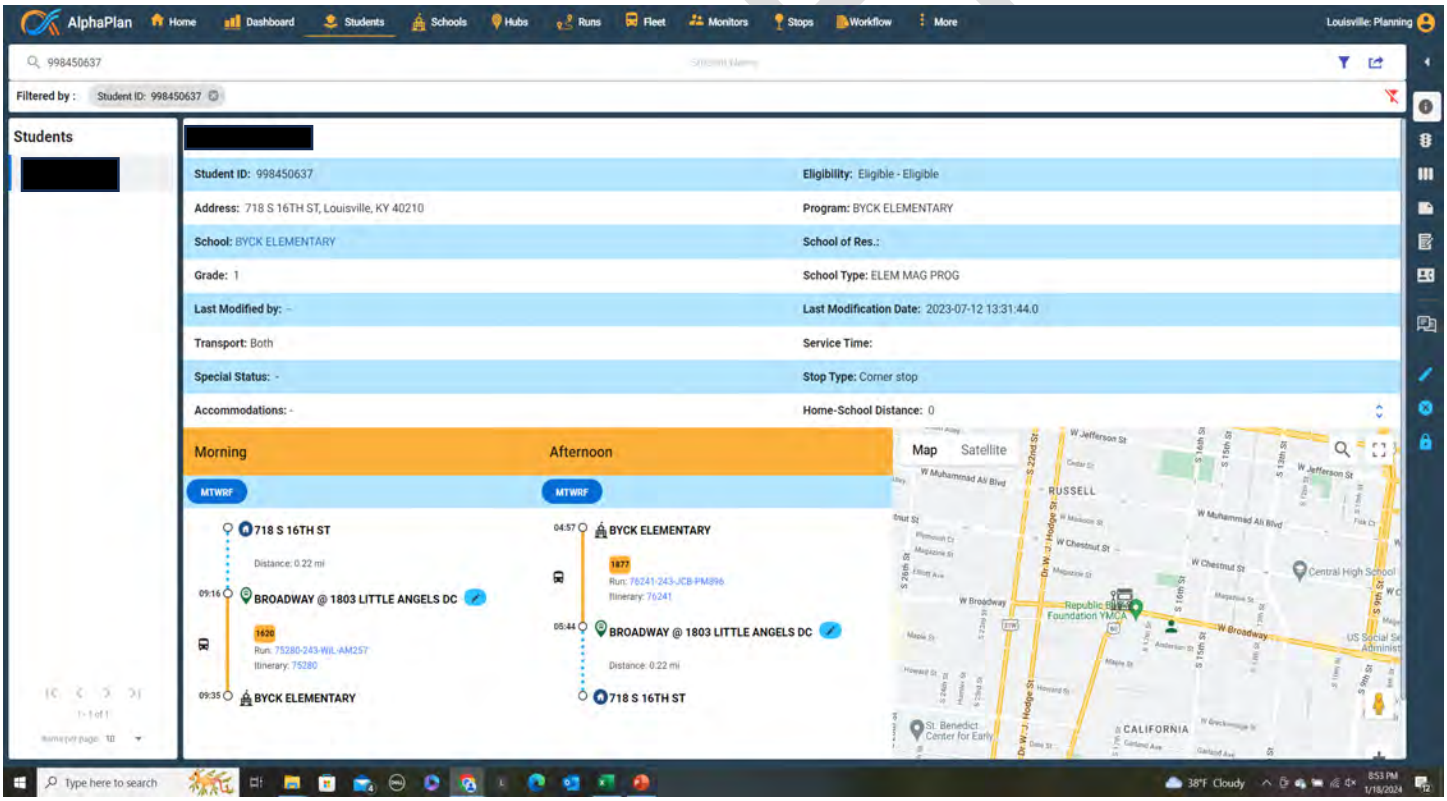
These 3 students were assigned to stop 11 when stop 10 is closer.



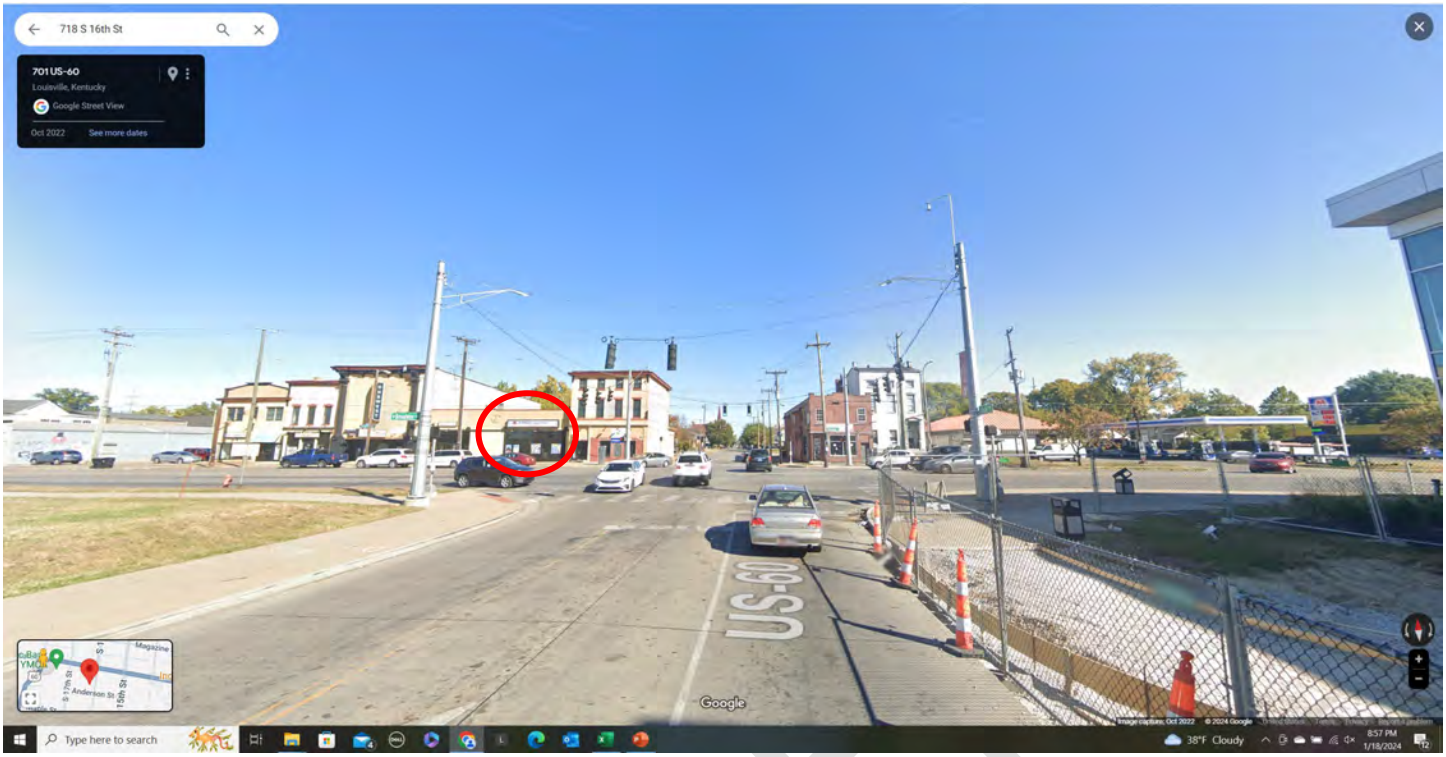


This student is shown as being in Indiana. AlphaRoute's system did not resolve the address correctly. Why is this address assigned to a bus?

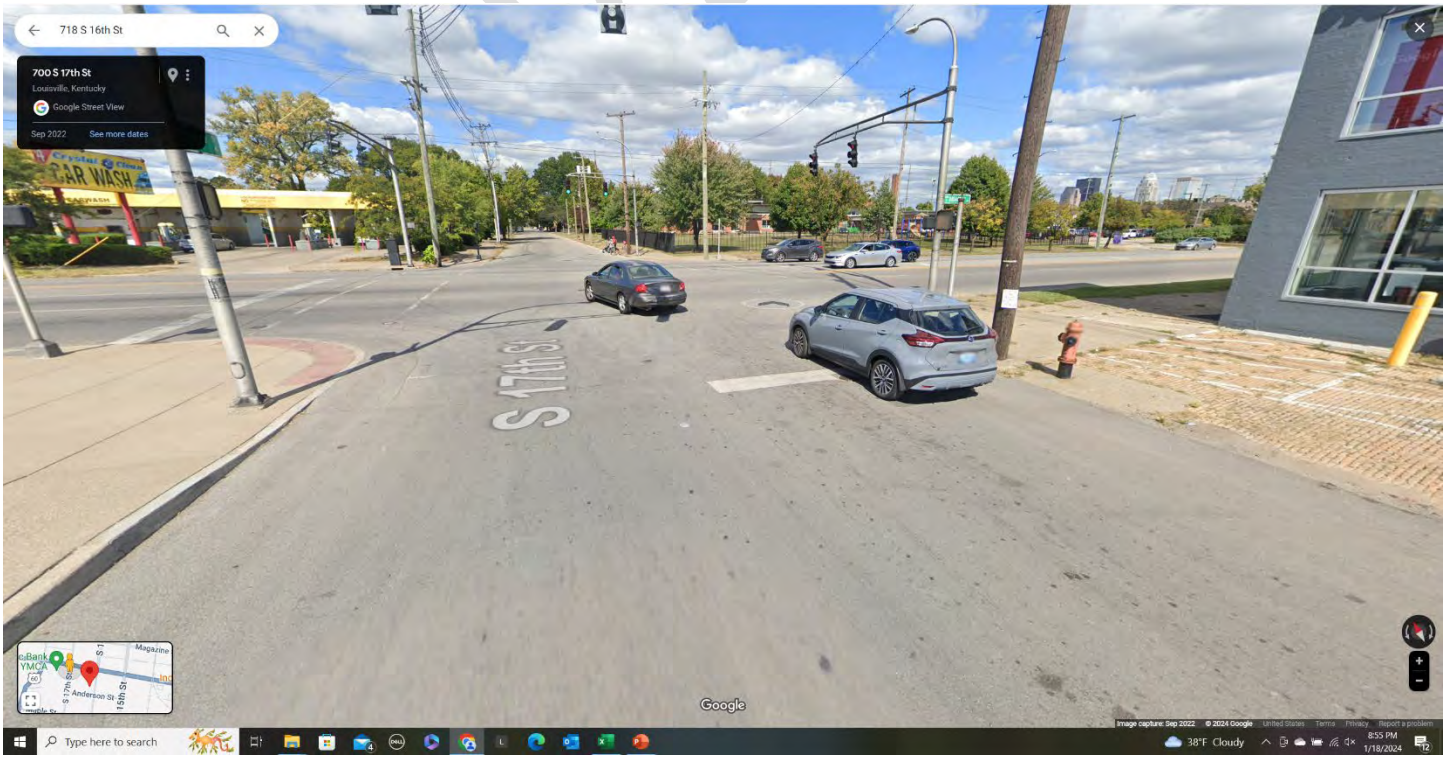




These two screenshots show where AlphaRoute assigned this student, who is a 1st grade student, as well as the name of the stop, which is “BROADWAY @ 1803 LITTLE ANGELS DC (DAYCARE)”. This student must cross Broadway, which is a 5-lane road, and also S 17th St, which is a lighted intersection with no crosswalk on the side of the road on which the student lives, to get to and from the bus stop. Pictures of the area are on page D-11.



Additionally, the daycare is located dangerously close to the intersection to have the bus stop at this location. Bus stops at or very near traffic lights should be avoided due to the conflict between a green traffic light and the requirement to stop for a stopped bus.



Appendix E
Sample AR Route Sheet

JCPS JEFFERSON COUNTY PUBLIC SCHOOLS

Drivers, please notify dispatch when running late.

Vehicle: 1281
Route: 75864
Run: 75864-200-WIL-AM530
School: DUPONT MANUAL HIGH

SA: -
Run Days: All Days
Riders: 22

1 WALNUT RIDGE TL @ WINDHAM PK 5:55 AM

Students		
[redacted]	Phone	DOB	SA
		-	-
		-	-
		-	-
		-	-
		-	-
		-	-

↑	Head toward Wilcotte Ct on Windham Pkwy.	0.74 mi
↱	Turn right onto Greenmere Blvd.	0.13 mi
↰	Turn left onto US Highway 42 (US-42).	0.17 mi
↑	Continue on US-42.	0.08 mi
↰	Turn left onto Sutherland Farm Rd.	0.65 mi
↱	Turn right onto Innisbrook Dr.	0.19 mi
	Arrive at Innisbrook Dr. Your destination is on the right.	0 mi

2 THREE SPRINGS CT @ INNISBROOK DR 6:03 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

↑	Head toward Bent Pine Ct on Innisbrook Dr.	0.19 mi
↰	Turn left onto Sutherland Farm Rd.	0.65 mi
↰	Turn left onto US-42.	0.03 mi
↑	Continue on US Highway 42 (US-42).	0.17 mi

Vehicle: 1281 **Run:** 75864-200-WIL-AM530

Route: 75864 **School:** DUPONT MANUAL HIGH

↱	Turn right onto Covered Bridge Rd (KY-329).	0.45 mi
	Arrive at Covered Bridge Rd (KY-329). Your destination is on the right.	0 mi

3 COVERED BRIDGE RD @ COVERED COVE WY 6:12 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

↑	Head toward Covered Cove Way on Covered Bridge Rd (KY-329).	0.38 mi
↱	Turn right onto Westover Dr.	1.04 mi
↰	Turn left onto Harrods View Cir.	0.18 mi
	Arrive at Harrods View Cir. Your destination is on the right.	0 mi

4 HARRODS VIEW CL @ HARRODS VIEW CL 6:18 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
				-	-

↑	Head south on Harrods View Cir.	0.2 mi
↰	Turn left onto Harrods View Cir.	0.05 mi
↱	Turn right onto Harrods View Cir.	0.38 mi
↰	Turn left onto Westover Dr.	0.2 mi
↰	Turn left onto Gunston Ln.	0.09 mi
↱	Turn right onto Montero Dr.	0.28 mi
↰	Turn left onto Deep Creek Dr.	0.07 mi
↱	Turn right onto Foxcroft Rd.	0.22 mi
↰	Turn left onto Tallwood Rd.	0.32 mi
	Arrive at Tallwood Rd. Your destination is on the right.	0 mi

Vehicle: 1281 **Run:** 75864-200-WIL-AM530

Route: 75864 **School:** DUPONT MANUAL HIGH

5 GUNPOWDER LN @ TALLWOOD RD 6:26 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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Head south on Tallwood Rd.	0.01 mi
Turn right onto Gunpowder Ln.	0.63 mi
Turn right onto Fox Harbor Rd.	0.26 mi
Turn left onto US Highway 42 (US-42).	0.33 mi
Continue on US Highway 42 (US-42).	0.31 mi
Continue on US-42.	0.88 mi
Turn left onto Wolf Pen Branch Rd.	0.36 mi
Turn right onto Barbour Ln.	0.91 mi
Turn right onto Beechspring Farm Blvd.	0.24 mi
Take the 1st exit from roundabout onto Creekton Dr.	0.16 mi
Arrive at Creekton Dr. Your destination is on the right.	0 mi

6 GRAF SPRINGS DR @ CREEKTON DR 6:37 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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Head northwest on Creekton Dr.	0.01 mi

Vehicle: 1281 **Run:** 75864-200-WIL-AM530

Route: 75864 **School:** DUPONT MANUAL HIGH

↰	Turn left onto Graf Springs Dr.	0.05 mi
↰	Turn left onto Hampton Creek Dr.	0.26 mi
↱	Turn right onto Graf Springs Dr.	0.16 mi
↱	Turn right onto Creekton Dr.	0.15 mi
	Take the 3rd exit from roundabout onto Beechspring Farm Blvd.	0.31 mi
↱	Turn right onto Barbour Ln.	1.05 mi
↱	Turn right onto Brownsboro Rd (KY-22).	1.2 mi
↰	Turn left onto Brownsboro Rd (KY-22).	0.89 mi
↱	Turn right onto Brownsboro Rd (KY-22).	0.07 mi
↰	Turn left onto Brownsboro Rd (US-42 S).	0.08 mi
↱	Turn right and take ramp onto I-264 E (Watterson Expy) toward I-71.	0.56 mi
	Take left exit 23B toward Louisville onto I-71 S.	5.93 mi
	Take the exit toward Nashville onto I-65 S.	3.13 mi
↱	Take exit 134 toward KY-61 S/Arthur St.	0.06 mi
↑	Continue on Arthur St (KY-61 S).	0.09 mi
↱	Turn right onto E Lee St.	0.32 mi
	Arrive at E Lee St. Your destination is on the left.	0 mi

School 120 W LEE ST **7:03 AM**

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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Vehicle: 1281
Route: 75864

Run: 75864-200-WIL-AM530
School: DUPONT MANUAL HIGH

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JCPS JEFFERSON COUNTY PUBLIC SCHOOLS

Drivers, please notify dispatch when running late.

Vehicle: 1281
Route: 75864
Run: 75864-057-WIL-AM539
School: FAIRDALE HIGH

SA: -
Run Days: All Days
Riders: 66

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1 900 SCHOLAR HOUSE DC @ 1ST ST 7:13 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

↑	Head north on S 1st St.	0.27 mi
↱	Turn right onto W St Catherine St.	0.27 mi
↰	Turn left onto S 4th St.	0.8 mi
	Arrive at S 4th St. Your destination is on the right.	0 mi

2 4TH ST S @ HILL ST E 7:17 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

↑	Head west on W Hill St.	0.09 mi
↰	Turn left onto S 5th St.	0.06 mi
↰	Turn left onto Kensington Ct.	0.09 mi
↰	Turn left onto S 4th St.	0.06 mi
	Arrive at S 4th St. Your destination is on the right.	0 mi

3 4TH ST S @ HILL ST E 7:19 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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11/9/2023 4:37:15 PM

Vehicle: 1281 **Run:** 75864-057-WIL-AM539

Route: 75864 **School:** FAIRDALE HIGH

↑	Head north on W Hill St.	0.82 mi
↰	Turn left onto S 13th St.	0.1 mi
	Arrive at S 13th St. Your destination is on the right.	0 mi

4 BRASHEAR DR @ 13TH ST 7:22 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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Vehicle: 1281 **Run:** 75864-057-WIL-AM539
Route: 75864 **School:** FAIRDALE HIGH

↑	Head south on S 13th St.	0.25 mi
	Arrive at S 13th St. Your destination is on the right.	0 mi

5 13TH ST @ PATTON CT TOO MANY 7:26 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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↑	Head toward Patton Ct on S 13th St.	0.14 mi
↰	Turn left onto Algonquin Pkwy (KY-2054).	0.07 mi
↱	Turn right onto 7th St Rd (KY-1931).	0.9 mi
↰	Turn left onto Arcade Ave.	0.4 mi
↱	Turn right onto Weyler Ave.	0.19 mi
↰	Turn left onto Schneiter Ave.	0.1 mi
	Arrive at Schneiter Ave. Your destination is on the right.	0 mi

6 PAUL AV @ SCHNEITER AV 7:31 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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Vehicle: 1281 **Run:** 75864-057-WIL-AM539

Route: 75864 **School:** FAIRDALE HIGH

[redacted]				-	-
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↑	Head southeast on Schneiter Ave.	0.01 mi
↱	Turn right onto Paul Ave.	0.09 mi
↰	Turn left onto Lester Ave.	0.09 mi
↰	Turn left onto Clara Ave.	0.21 mi
↱	Turn right onto Taylor Blvd (US-60-ALT).	0.23 mi
↑	Continue on Taylor Blvd (KY-1865).	1.85 mi
↑	Continue on New Cut Rd (KY-1865).	1.69 mi
↱	Turn right onto 3rd Street Rd (KY-907).	3.04 mi
↰	Turn left onto Lamborne Blvd.	0.27 mi
↑	Continue on Lamborne Blvd.	0.02 mi
↗	Turn slightly right onto Scarborough Ave.	0.34 mi
	Arrive at Scarborough Ave. Your destination is on the right.	0 mi

7 PARLIAMENT CT @ SCARBOROUGH AV 7:48 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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↑	Head toward Parliament Ct on Scarborough Ave.	0.18 mi
↱	Turn right onto Lamborne Blvd.	0.19 mi
↱	Turn right onto Greyling Dr.	0.43 mi

Vehicle: 1281 **Run:** 75864-057-WIL-AM539
Route: 75864 **School:** FAIRDALE HIGH

↱	Turn right onto Blevins Gap Rd (KY-1865).	0.75 mi
↱	Turn right onto Watsonville Rd.	0.23 mi
↰	Turn left onto Watsonville Rd.	0.1 mi
	Arrive at Watsonville Rd. Your destination is on the left.	0 mi

8 [redacted] WATSONVILLE RD 7:59 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

↑	Head southeast on Watsonville Rd.	0.1 mi
↱	Turn right onto Watsonville Rd.	0.23 mi
↱	Turn right onto Blevins Gap Rd (KY-1865).	0.97 mi
↱	Turn right onto Stonestreet Rd.	0.47 mi
	Take ramp onto KY-841 E (Gene Snyder Fwy) toward I-65/I-265.	4.36 mi
↱	Take exit 8 toward KY-1020/National TNPK/Fairdale.	0.25 mi
↱	Turn right onto National Tpke (KY-1020).	0.29 mi
↱	Turn right onto Fairdale Rd.	0.15 mi
↱	Turn right.	0.07 mi
↰	Turn left.	0.03 mi
	Arrive at your destination on the right.	0 mi

School 1001 FAIRDALE RD 8:12 AM

Students			
[redacted]	Phone	DOB	SA
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Vehicle: 1281 **Run:** 75864-057-WIL-AM539

Route: 75864 **School:** FAIRDALE HIGH

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Vehicle: 1281 **Run:** 75864-057-WIL-AM539

Route: 75864 **School:** FAIRDALE HIGH

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JCPS JEFFERSON COUNTY PUBLIC SCHOOLS

Drivers, please notify dispatch when running late.

Vehicle: 1281
Route: 75864
Run: 75864-325-WIL-AM048
School: JACOB ELEMENTARY

SA: -
Run Days: All Days
Riders: 66

1 MINORS LN @ 8219 HOLIDAY TP 8:27 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
				-	-

↑	Head north on Transglobal Dr.	0.31 mi
↱	Turn right onto Air Commerce Dr.	0.42 mi
↱	Turn right onto Outer Loop (KY-1065).	0.82 mi
	Take ramp onto I-65 N toward Louisville.	6.63 mi
↗	Take exit 133B toward US-60-ALT/Eastern Parkway/University Blvd.	0.14 mi
↱	Turn right onto University Blvd.	0.04 mi
↰	Turn left onto University Blvd.	0.02 mi
↰	Turn left onto Crittenden Dr.	0.19 mi
	Turn slightly left onto Bradley Ave.	0.03 mi
↱	Turn right onto E Barbee Ave.	0.23 mi
	Arrive at E Barbee Ave. Your destination is on the right.	0 mi

2 S PRESTON ST @ E BARBEE AV 8:38 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

↑	Head toward Lynn St on S Preston St (KY-61).	0.36 mi
↱	Turn right onto Eastern Pkwy (US-60-ALT).	1.15 mi

Vehicle: 1281 **Run:** 75864-325-WIL-AM048
Route: 75864 **School:** JACOB ELEMENTARY

↰	Turn left onto S 3rd St (US-60-ALT).	0.25 mi
↱	Turn right onto Winkler Ave (US-60-ALT).	0.09 mi
	Arrive at Winkler Ave (US-60-ALT). Your destination is on the right.	0 mi

3 WINKLER AV @ 4TH ST 8:43 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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↑	Head north on S 4th St.	0.18 mi
↱	Turn right onto Iowa Ave.	0.17 mi
	Arrive at Iowa Ave. Your destination is on the right.	0 mi

4 S 6TH ST @ IOWA AV 8:45 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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↑	Head toward S 6th St on Iowa Ave.	0.01 mi
↱	Turn right onto S 6th St.	0.18 mi
↰	Turn left onto Winkler Ave (US-60-ALT).	0.06 mi
↱	Turn right onto Algonquin Pkwy (KY-2054).	0.79 mi
↰	Turn left onto 7th St Rd (KY-1931).	0.03 mi
↱	Turn right onto Bernheim Ln.	0.37 mi
↱	Turn right onto Wingfield Ave.	0.12 mi

Vehicle: 1281 **Run:** 75864-325-WIL-AM048
Route: 75864 **School:** JACOB ELEMENTARY

Arrive at Wingfield Ave. Your destination is on the right. 0 mi

5 ALGONQUIN PK S @ WINGFIELD AV(SAFETY) 8:50 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

Head toward Algonquin Pkwy on Wingfield Ave. 0.01 mi

Turn left onto Algonquin Pkwy (KY-2054). 0.47 mi

Turn left onto Dixie Hwy (US-60-BR). 1.25 mi

Turn right onto Ralph Ave. 0.65 mi

Continue on Tucker Ave. 0.11 mi

Continue on Ralph Ave. 0.24 mi

Arrive at Ralph Ave. Your destination is on the right. 0 mi

6 2609 MV @ RALPH AV 8:56 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

Head toward Wessel Rd on Ralph Ave. 0.55 mi

Turn right onto Cane Run Rd (KY-1934 N). 1.13 mi

Turn left onto Bells Ln (KY-2056). 0.1 mi

Arrive at Bells Ln (KY-2056). Your destination is on the right. 0 mi

7 BELLS LN @ 35TH ST 9:00 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

Head west on Bells Ln (KY-2056). 0.01 mi

Turn right onto S 35th St. 0.24 mi

Vehicle: 1281 **Run:** 75864-325-WIL-AM048
Route: 75864 **School:** JACOB ELEMENTARY

↱	Turn right onto Algonquin Pkwy (KY-2054).	0.27 mi
↰	Turn left onto Wilson Ave (KY-1934).	0.54 mi
↱	Turn right onto W Hill St.	0.26 mi
↱	Turn right onto Cypress St.	0.08 mi
↱	Turn right onto W Gaulbert Ave.	0.06 mi
	Arrive at W Gaulbert Ave. Your destination is on the right.	0 mi

8 OLIVE ST @ GAULBERT AV 9:04 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
				-	-

↑	Head toward Olive St on W Gaulbert Ave.	0.01 mi
↱	Turn right onto Olive St.	0.08 mi
↱	Turn right onto W Hill St.	0.26 mi
↱	Turn right onto S 23rd St.	0.13 mi
↰	Turn left onto W Lee St.	0.12 mi
	Arrive at W Lee St. Your destination is on the right.	0 mi

9 LEE ST @ 22ND ST E 9:07 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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↑	Head toward S 22nd St on W Lee St.	0.01 mi
↰	Turn left onto S 22nd St (US-31W).	0.64 mi
↱	Turn right onto Dumesnil St (US-31W N).	0.07 mi
	Keep right onto Dumesnil St.	0.1 mi

Vehicle: 1281 **Run:** 75864-325-WIL-AM048
Route: 75864 **School:** JACOB ELEMENTARY

Arrive at Dumesnil St. Your destination is on the right. 0 mi

10 DIXIE HY (DC) @ DUMESNIL ST 9:10 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

Head toward Dixie Hwy on Dumesnil St. 0.32 mi

Turn left onto S 16th St. 0.06 mi

Turn right onto W Oak St. 0.15 mi

Arrive at W Oak St. Your destination is on the right. 0 mi

11 15TH ST S @ OAK ST 9:13 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

Head toward Dumesnil St on S 15th St. 0.61 mi

Turn left onto W Hill St (US-60-TRUCK). 0.18 mi

Turn right onto S 13th St. 0.1 mi

Arrive at S 13th St. Your destination is on the right. 0 mi

12 BRASHEAR DR @ 13TH ST 9:15 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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Head south on S 13th St. 0.38 mi

Vehicle: 1281 **Run:** 75864-325-WIL-AM048

Route: 75864 **School:** JACOB ELEMENTARY

↰	Turn left onto Algonquin Pkwy (KY-2054).	0.4 mi
↱	Turn right onto Lindbergh Dr.	0.12 mi
	Arrive at Lindbergh Dr. Your destination is on the right.	0 mi

13 LINDBERGH DR @ LINCOLN AV 9:19 AM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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↑	Head toward Lincoln Ave on Lindbergh Dr.	0.01 mi
↰	Turn left onto Lincoln Ave.	0.44 mi
↱	Turn right onto Taylor Blvd (US-60-ALT).	0.79 mi
↱	Turn right onto Taylor Blvd.	0.07 mi
↱	Turn right onto Oleanda Ave.	0.22 mi
	Arrive at Oleanda Ave. Your destination is on the right.	0 mi

14 OLEANDA AV @ WEYLER AV(SAFETY) 9:25 AM

Students					
			Phone	DOB	SA
[redacted]				-	-
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Vehicle: 1281 **Run:** 75864-325-WIL-AM048
Route: 75864 **School:** JACOB ELEMENTARY

[redacted]				-	-
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↑	Head toward Weyler Ave on Oleanda Ave.	0.01 mi
↱	Turn right onto Weyler Ave.	0.12 mi
↰	Turn left onto Arcade Ave.	0.12 mi
	Arrive at Arcade Ave. Your destination is on the right.	0 mi

15 UTAH AV @ ARCADE AV 9:27 AM

Students					
Name	ID	Address	Phone	DOB	SA
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↑	Head toward Utah Ave on Arcade Ave.	0.28 mi
↰	Turn left onto 7th St Rd (KY-1931).	1.12 mi
↑	Continue on Manslick Rd (KY-1931).	0.39 mi
↰	Turn left onto March Blvd.	0.2 mi
↑	Continue on Nichols View Ct.	0.04 mi
↱	Turn right.	0.13 mi
	Arrive at your destination on the right.	0 mi

Vehicle: 1281
Route: 75864

Run: 75864-325-WIL-AM048
School: JACOB ELEMENTARY

School 3701 E WHEATMORE DR

9:35 AM

Students			
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Vehicle: 1281 **Run:** 75864-325-WIL-AM048

Route: 75864 **School:** JACOB ELEMENTARY

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JCPS JEFFERSON COUNTY PUBLIC SCHOOLS

Drivers, please notify dispatch when running late.

Vehicle: 1281
Route: 75864
Run: 75864-225-WIL-PM372
School: BLOOM ELEMENTARY

SA: -
Run Days: All Days
Riders: 64

School 1627 LUCIA AV 2:20 PM

Students					
Name	**ID**	**Address**	**Phone**	**DOB**	**SA**
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Vehicle: 1281
Route: 75864

Run: 75864-225-WIL-PM372
School: BLOOM ELEMENTARY

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Head toward Baxter Ave on Lucia Ave.	0.08 mi
Turn left onto Baxter Ave (KY-1703).	0.24 mi
Arrive at Baxter Ave (KY-1703). Your destination is on the right.	0 mi

Vehicle: 1281
Route: 75864

Run: 75864-225-WIL-PM372
School: BLOOM ELEMENTARY

2 ROSEWOOD AV @ BAXTER AV 2:26 PM

Students

Name	ID	Address	Phone	DOB	SA
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↑ Head toward Rosewood Ave on Baxter Ave (KY-1703). 0.07 mi

↰ Turn left onto Windsor Pl. 0.11 mi

↰ Turn left onto Mossrose Ave. 0.09 mi

↰ Turn left onto Rosewood Ave. 0.11 mi

Arrive at Rosewood Ave. Your destination is on the right. 0 mi

3 ROSEWOOD AV @ BAXTER AV 2:28 PM

Students

Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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↑ Head north on Baxter Ave (KY-1703). 0.55 mi

↑ Continue on Newburg Rd (KY-1703). 1.43 mi

Arrive at Newburg Rd (KY-1703). Your destination is on the right. 0 mi

4 NEWBURG RD @ SYLVAN WY 2:34 PM

Vehicle: 1281 **Run:** 75864-225-WIL-PM372
Route: 75864 **School:** BLOOM ELEMENTARY

Students	Phone	DOB	SA
[redacted]		-	-
		-	-
		-	-
		-	-

Head toward Sylvan Way on Newburg Rd (KY-1703). 0.41 mi

Arrive at Newburg Rd (KY-1703). Your destination is on the right. 0 mi

5 DUNBARTON WYNDE @ NEWBURG RD 2:35 PM

Students	Phone	DOB	SA
[redacted]		-	-

Head south on Newburg Rd (KY-1703). 0.01 mi

Turn left onto Dunbarton Wynde. 0.06 mi

Turn right onto Sutherland Dr. 0.38 mi

Arrive at Sutherland Dr. Your destination is on the right. 0 mi

6 FRASER DR @ SUTHERLAND DR 2:38 PM

Students	Phone	DOB	SA
[redacted]		-	-
		-	-
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Head toward Fraser Dr on Sutherland Dr. 0.01 mi

Turn left onto Fraser Dr. 0.08 mi

Vehicle: 1281 **Run:** 75864-225-WIL-PM372
Route: 75864 **School:** BLOOM ELEMENTARY

↱	Turn right onto Fordyce Ln.	0.22 mi
↰	Turn left onto Dundee Rd.	0.08 mi
↱	Turn right onto Valley Vista Rd.	0.24 mi
	Arrive at Valley Vista Rd.	0 mi

7 VALLEY VISTA RD @ FLEMING RD 2:42 PM

Students	Phone	DOB	SA
[redacted]		-	-
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↑	Head southeast on Valley Vista Rd.	0.05 mi
↱	Turn right onto Ashwood Dr.	0.06 mi
↱	Turn slightly right onto Ashwood Dr.	0.24 mi
	Arrive at Ashwood Dr. Your destination is on the right.	0 mi

8 TREVILION WY @ ASHWOOD DR 2:44 PM

Students	Phone	DOB	SA
[redacted]		-	-
		-	-
		-	-
		-	-

↑	Head toward Trevilian Way on Ashwood Dr.	0.01 mi

Vehicle: 1281 **Run:** 75864-225-WIL-PM372

Route: 75864 **School:** BLOOM ELEMENTARY

↰	Turn left onto Trevilian Way.	0.37 mi
	Arrive at Trevilian Way. Your destination is on the right.	0 mi

9 TYCOON WY @ TREVILIAN WY 2:47 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
				-	-
				-	-

↑	Head toward Ridgefield Rd on Trevilian Way.	0.32 mi
	Take the 1st exit from Trevilian Way roundabout onto Trevilian Way.	0.34 mi
↱	Turn right onto Poplar Level Rd (KY-864 N).	0.65 mi
↰	Turn left onto Hess Ln.	0.97 mi
↰	Turn left onto Preston Hwy (KY-61).	0.8 mi
↰	Turn left onto Belmar Dr.	0.08 mi
	Arrive at Belmar Dr. Your destination is on the right.	0 mi

10 BELMAR DR @ FAYETTE AV 2:53 PM

Students					
[redacted]			Phone	DOB	SA
				-	-
				-	-

↑	Head toward Fayette Ave on Belmar Dr.	0.01 mi
↱	Turn right onto Fayette Ave.	0.07 mi
↱	Turn right onto Short St.	0.09 mi
↰	Turn left onto Preston Hwy (KY-61).	0.44 mi
	Take ramp onto I-264 E (Watterson Expy).	2.24 mi
↱	Take exit 15 toward KY-1703/Newburg Rd.	0.29 mi
↰	Turn left onto Newburg Rd (KY-1703 N).	0.22 mi

Vehicle: 1281 **Run:** 75864-225-WIL-PM372
Route: 75864 **School:** BLOOM ELEMENTARY

↱	Turn right onto Gardiner Ln.	0.51 mi
	Arrive at Gardiner Ln. Your destination is on the right.	0 mi

11 SUNNY LN @ GARDINER LN 3:00 PM

Students			
[redacted]	Phone	DOB	SA
		-	-
		-	-

↑	Head toward Sunny Ln on Gardiner Ln.	0.7 mi
↱	Turn right onto Bardstown Rd (US-150).	0.11 mi
	Take left ramp onto I-264 E (Watterson Expy) toward Watterson Expressway.	1.01 mi
↰	Take exit 17A toward KY-155 S/Taylorsville Rd. onto KY-155 E (Taylorsville Rd).	0.81 mi
↱	Turn right onto Maywood Pl.	0.33 mi
↱	Turn right onto Stanton Blvd.	0.11 mi
	Arrive at Stanton Blvd. Your destination is on the right.	0 mi

12 ELLIS WY @ STANTON BV 3:07 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

↑	Head toward Ellis Way on Stanton Blvd.	0.13 mi
↱	Turn right onto Furman Blvd.	0.5 mi
↱	Turn right onto Taylorsville Rd (KY-155 E).	0.86 mi
	Turn sharp left onto Breckenridge Ln (KY-1932).	0.94 mi
↑	Continue on Breckenridge Ln (KY-1932 N).	0.94 mi
	Arrive at Breckenridge Ln (KY-1932). Your destination is on the right.	0 mi

13 BRECKENRIDGE LN @ WINCHESTER RD 3:14 PM

Vehicle: 1281 **Run:** 75864-225-WIL-PM372
Route: 75864 **School:** BLOOM ELEMENTARY

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

	Head toward Winchester Pl on Winchester Rd.	0.59 mi
	Turn right onto S Hubbards Ln.	0.49 mi
	Turn left onto Bowling Blvd.	0.64 mi
	Turn right onto Sherburn Ln.	0.21 mi
	Turn right onto Sherburn Ln.	0.11 mi
	Turn right onto Mallgate Pl.	0.06 mi
	Arrive at Mallgate Pl. Your destination is on the right.	0 mi

14 BRIGHTWOOD PL CLUBHOUSE @ MALLGATE PL 3:21 PM

Students			
[redacted]	Phone	DOB	SA
		-	-
		-	-
		-	-
		-	-

Drivers, please notify dispatch when running late.

Vehicle: 1281
Route: 75864
Run: 75864-051-WIL-PM970
School: WAGGENER HIGH

SA: -
Run Days: All Days
Riders: 64

School 330 S HUBBARDS LN **3:28 PM**

Students			
[redacted]	Phone	DOB	SA
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Vehicle: 1281 **Run:** 75864-051-WIL-PM970
Route: 75864 **School:** WAGGENER HIGH

↱	Turn right onto Westport Rd (KY-1447).	2.12 mi
↱	Turn right onto Ormsby Ln.	0.19 mi
	Arrive at Ormsby Ln. Your destination is on the right.	0 mi

2 ORMSBY LN @ EAGLE CREEK DR 3:41 PM

Students	Phone	DOB	SA
[redacted]		-	-
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↑	Head southeast on Ormsby Ln.	0.01 mi
↰	Turn left onto Eagle Creek Dr.	0.08 mi
↰	Turn left onto Eagle Nest Way.	0.23 mi
↱	Turn right onto Westport Rd (KY-1447).	2.05 mi
↑	Continue on Westport Rd (KY-1447).	0.47 mi
	Arrive at Westport Rd (KY-1447). Your destination is on the right.	0 mi

3 STONEBRIDGE RD @ WESTPORT RD 3:48 PM

Students	Phone	DOB	SA
[redacted]		-	-
		-	-

↑	Head toward Stonebridge Rd on Westport Rd (KY-1447).	0.37 mi
↰	Turn left onto Springhurst Blvd.	1.2 mi
↰	Turn left onto White Blossom Blvd.	0.5 mi

Vehicle: 1281 **Run:** 75864-051-WIL-PM970

Route: 75864 **School:** WAGGENER HIGH

Arrive at White Blossom Blvd. Your destination is on the right. 0 mi

4 SPRING VALLEY WY @ WHITE BLOSSOM BV 3:54 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

Head toward Spring Valley Way on White Blossom Blvd. 0.46 mi

Turn left onto N Hurstbourne Pkwy (KY-1747 S). 0.92 mi

Turn right onto Westport Rd (KY-1447). 1.44 mi

Arrive at Westport Rd (KY-1447). Your destination is on the right. 0 mi

5 WESTPORT RD @ JAPONICA WY N 4:00 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

Head north on Westport Rd (KY-1447). 1.76 mi

Take ramp onto I-264 E (Watterson Expy). 1.78 mi

Take left exit 23B toward Louisville onto I-71 S. 5.33 mi

Take exit 1A toward St. Louis onto I-64 W. 3.49 mi

Take exit 3 toward US-150 E/22nd Street. 0.31 mi

Continue on N 22nd St (US-150) toward Hospital. 0.12 mi

Turn right onto Portland Ave (US-150 W). 1.09 mi

Continue on Northwestern Pkwy (US-150 W). 0.4 mi

Continue on Northwestern Pkwy. 0.59 mi

Arrive at Northwestern Pkwy. Your destination is on the right. 0 mi

6 NORTHWESTERN PK @ BANK ST 4:18 PM

Students					
Name	ID	Address	Phone	DOB	SA

Vehicle: 1281 **Run:** 75864-051-WIL-PM970
Route: 75864 **School:** WAGGENER HIGH

[redacted]		-	-
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↑	Head toward N 44th St on Bank St.	1.53 mi
↱	Turn right onto N 26th St.	0.44 mi
↱	Turn right onto Duncan St.	0.19 mi
	Arrive at Duncan St. Your destination is on the right.	0 mi

7 DUNCAN ST @ 28TH ST 4:24 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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↑	Head west on Duncan St.	0.01 mi
↰	Turn left onto N 28th St.	0.27 mi
↱	Turn right onto W Market St.	0.78 mi
↰	Turn left onto S 38th St.	0.21 mi
	Arrive at S 38th St. Your destination is on the right.	0 mi

8 38TH STCC @ LARKWOOD AV 4:29 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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				-	-

Vehicle: 1281 **Run:** 75864-051-WIL-PM970

Route: 75864 **School:** WAGGENER HIGH

[redacted]			-	-
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↑	Head toward Larkwood Ave on S 38th St.	0.09 mi
↱	Turn right onto W Muhammad Ali Blvd.	0.07 mi
↰	Turn left onto Amy Ave.	0.15 mi
↰	Turn left onto W River Park Dr.	0.14 mi
	Arrive at W River Park Dr. Your destination is on the right.	0 mi

9 36TH ST @ RIVER PARK DR 4:33 PM

Students			
[redacted]	Phone	DOB	SA
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Vehicle: 1281 **Run:** 75864-051-WIL-PM970

Route: 75864 **School:** WAGGENER HIGH

[redacted]			-	-
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↑	Head toward S 35th St on W River Park Dr.	0.57 mi
↑	Continue on W Chestnut St.	0.18 mi
↱	Turn right onto S 28th St.	1.15 mi
↰	Turn left onto Dumesnil St.	0.15 mi
↱	Turn right onto Cypress St.	0.43 mi
↰	Turn left onto W Hill St.	0.33 mi
↱	Turn right onto S 22nd St (US-31W).	0.19 mi
	Arrive at S 22nd St (US-31W). Your destination is on the right.	0 mi

10 BURWELL AV W @ 22ND ST N 4:42 PM

Students			
[redacted]	Phone	DOB	SA
		-	-
		-	-

JCPS JEFFERSON COUNTY PUBLIC SCHOOLS

Drivers, please notify dispatch when running late.

Vehicle: 1281
Route: 75864
Run: 75864-182-WIL-PM515
School: WHEATLEY ELEMENTARY

SA: -
Run Days: All Days
Riders: 57

School 1107 S 17TH ST **4:47 PM**

Students					
Name	**ID**	**Address**	**Phone**	**DOB**	**SA**
[redacted]				-	-
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Vehicle: 1281 **Run:** 75864-182-WIL-PM515
Route: 75864 **School:** WHEATLEY ELEMENTARY ELEM

[redacted]			
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↑	Head toward W St Catherine St on S 17th St.	0.03 mi
↰	Turn left onto W St Catherine St.	0.12 mi
↰	Turn left onto Dixie Hwy (US-60-BR).	0.4 mi
↱	Turn right onto Wilson Ave (KY-1934).	0.54 mi
↱	Turn right onto Woodland Ave.	0.25 mi
↱	Turn right onto Catalpa St.	0.09 mi
↰	Turn left.	0.03 mi
	Arrive at your destination on the left.	0 mi

School 1312 CATALPA ST 4:54 PM

Students			
[redacted]	Phone	DOB	SA
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↑	Head toward Catalpa St.	0.03 mi
↰	Turn left onto Catalpa St.	0.1 mi
↱	Turn right onto Dumesnil St.	0.06 mi
↰	Turn left onto S 28th St.	0.48 mi
↰	Turn left onto W Kentucky St.	0.02 mi

Vehicle: 1281
Route: 75864

Run: 75864-182-WIL-PM515
School: WHEATLEY ELEMENTARY ELEM

	Turn slightly right.	0.05 mi
	Arrive at your destination on the right.	0 mi

School 2817 W KENTUCKY ST — 4:59 PM

Students	Phone	DOB	SA
[redacted]		-	-
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	Head toward W Kentucky St.	0.06 mi
	Turn sharp left onto W Kentucky St.	0.12 mi
	Turn left onto S 28th St.	0.68 mi
	Turn right onto W Chestnut St.	0.17 mi
	Arrive at W Chestnut St. Your destination is on the right.	0 mi

4 26TH ST @ CHESTNUT ST — 5:04 PM

Students	Phone	DOB	SA
[redacted]		-	-
		-	-
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		-	-
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		-	-

Vehicle: 1281 **Run:** 75864-182-WIL-PM515
Route: 75864 **School:** WHEATLEY ELEMENTARY ELEM

[redacted]		-	-

Head toward S 26th St on W Chestnut St. 0.01 mi

Turn left onto S 26th St. 0.15 mi

Turn left onto W Muhammad Ali Blvd. 0.07 mi

Arrive at W Muhammad Ali Blvd. Your destination is on the right. 0 mi

5 27TH STMV @ MUHAMMAD ALI BV 5:06 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
				-	-
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				-	-

Head toward S 27th St on W Muhammad Ali Blvd. 0.28 mi

Turn left onto S 30th St. 0.08 mi

Turn right onto W Madison St. 0.23 mi

Arrive at Vermont Ave. Your destination is on the right. 0 mi

6 VERMONT AV @ 32ND ST 5:09 PM

Students			
[redacted]	Phone	DOB	SA
		-	-

Head toward S 32nd St on Vermont Ave. 0.01 mi

Turn right onto S 32nd St. 0.08 mi

Turn left onto W Muhammad Ali Blvd. 0.41 mi

Turn right onto S 38th St. 0.07 mi

Arrive at S 38th St. Your destination is on the right. 0 mi

7 38TH STCC @ LARKWOOD AV 5:11 PM

Students					
Name	ID	Address	Phone	DOB	SA

Vehicle: 1281 **Run:** 75864-182-WIL-PM515

Route: 75864 **School:** WHEATLEY ELEMENTARY ELEM

[redacted]		-	-
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↑ Head toward Larkwood Ave on S 38th St. 0.23 mi

↱ Turn right onto W Market St. 1.93 mi

Arrive at W Market St (US-31W). Your destination is on the right. 0 mi

8 16TH ST S @ MARKET ST 5:18 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
				-	-

↑ Head toward S 16th St on W Market St (US-31W). 0.55 mi

↱ Turn right onto S 10th St. 0.09 mi

Arrive at S 10th St. Your destination is on the right. 0 mi

9 10TH ST N @ JEFFERSON ST 5:21 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
				-	-
				-	-
				-	-

↑ Head toward W Jefferson St on S 10th St. 0.06 mi

Arrive at S 10th St. Your destination is on the right. 0 mi

10 WILBERFORCE ST @ 10TH ST 5:22 PM

Students					
Name	ID	Address	Phone	DOB	SA

Vehicle: 1281 **Run:** 75864-182-WIL-PM515

Route: 75864 **School:** WHEATLEY ELEMENTARY ELEM

[redacted]		-	-
		-	-
		-	-

↑	Head toward Liberty Ct on S 10th St.	0.14 mi
↱	Turn right onto W Muhammad Ali Blvd.	0.54 mi
↰	Turn left onto S 16th St.	0.07 mi
	Arrive at S 16th St. Your destination is on the right.	0 mi

11 S 16TH ST E @ W MADISON ST 5:25 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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↑	Head toward W Madison St on S 16th St.	0.08 mi
↰	Turn left onto W Chestnut St.	0.53 mi
	Arrive at W Chestnut St. Your destination is on the right.	0 mi

12 10TH ST @ CHESTNUT ST 5:28 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-
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↑	Head toward S 10th St on W Chestnut St.	0.01 mi

Vehicle: 1281 **Run:** 75864-182-WIL-PM515
Route: 75864 **School:** WHEATLEY ELEMENTARY ELEM

Turn left onto Place Jaune. 0.01 mi

Arrive at Place Jaune. Your destination is on the left. 0 mi

13 10TH ST @ CHESTNUT ST 5:33 PM

Students	Phone	DOB	SA
[redacted]		-	-
		-	-
		-	-
		-	-

Head toward W Chestnut St on Place Jaune. 0.01 mi

Turn left onto W Chestnut St. 0.02 mi

Arrive at W Chestnut St. Your destination is on the left. 0 mi

14 930 W CHESTNUT ST 5:34 PM

Students	Phone	DOB	SA
[redacted]		-	-
		-	-
		-	-
		-	-

Head east on W Chestnut St. 0.07 mi

Turn left onto S Roy Wilkins Ave. 0.46 mi

Take ramp onto I-64 E. 2.43 mi

Take exit 7 toward Story Ave onto US-42 W (Story Ave). 0.24 mi

Turn left onto N Spring St. 0.19 mi

Turn left onto Mellwood Ave (US-42 E). 0.43 mi

Turn right onto Brownsboro Rd (US-42). 0.46 mi

Arrive at Brownsboro Rd (US-42). Your destination is on the right. 0 mi

15 CORAL AV @ BROWNSBORO RD 5:43 PM

Vehicle: 1281 **Run:** 75864-182-WIL-PM515
Route: 75864 **School:** WHEATLEY ELEMENTARY ELEM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

Head toward Coral Ave on Brownsboro Rd (US-42). 0.6 mi

Arrive at Brownsboro Rd (US-42). Your destination is on the right. 0 mi

16 BROWNSBORO RD @ N HITE AV 5:45 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-

Head toward Ridgedale Rd on N Hite Ave. 0.2 mi

Turn slightly right onto N Hite Ave. 0.18 mi

Turn left onto Frankfort Ave (US-60-TRUCK). 1.3 mi

Turn left onto Fenley Ave. 0.08 mi

Arrive at Fenley Ave. Your destination is on the right. 0 mi

17 107 SEMINARY VILLAGE @ FENLEY AV 5:50 PM

Students					
Name	ID	Address	Phone	DOB	SA
[redacted]				-	-