

State of West Virginia RFI for School Bus Routing and Cost Savings



Kerry Somerville
Director of Business Development

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WV PURCHASING
DIVISION

US Computing Inc.
3026 Assembly St Ste 103
Martinsburg, WV 26101
304-262-8301

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July 11, 2012

To Whom It May Concern:

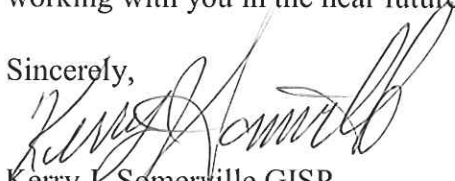
On behalf of our entire team, I would like to thank you for this opportunity to respond to your RFI for School Transportation Route Optimization. As we will describe in our detailed response, our company is different from our competitors. Our approach to routing is bold and cutting edge. The advantage that we have is that our solution is proven as effective and has been instrumental in reducing transportation costs throughout the world. U.S. Computing along with our ESRI Partner have the knowledge and experience to provide the state with the information they need. A few of our key differences are:

1. **Partnership with ESRI.** U.S. Computing is an authorized business partner with ESRI. We are the only company to offer an ArcGIS based solution routing solution that uses ESRI technology for the transportation of students. This is a benefit to you as most commercial, federal, state and county agencies use esri software as their mapping solution. This means we will be able to use any current ArcGIS data from any government agency in its current format. We will not have to convert data for use in our solution.
2. **We are 100% Web Based.** There is literally no software that will be installed on any workstation. Users can access the site (using secure username and password) with simply a Web Browser. This means transportation information and the powerful optimization routines could be available to any district in the state by simply opening a browser, logging in and routing their vehicles. The server for hosting the web site may be located at the state offices or the solution can be fully hosted by U.S. Computing.
3. **Easy to Use Workflow.** Our solution, Web Compass, is powerful, yet easy to use. Building an optimized run is as simple as selecting the stops and vehicle(s) you would like to use and hitting "route" The application will take in to consideration the parameters the user has set and create an optimized, logical, route. We have also created "industry first" solutions such as a complete revision history of a run. TAR (Transportation Action Request) module provides workflow automation for other departments (such as Special Needs) and send in transportation requests in a controlled manner. Users have the ability to view the status of their request online.

4. **Tiering.** While other companies have created tiering programs, ours is unique because it shows each part of a drivers work day. We are using esri based optimization to insure that time and distance between runs works Tiering also produces driver directions that even include the deadhead between runs. Time and distance are calculated between each run allowing for optimization of a vehicles full daily schedule. We understand that routes are different from day to day and have implemented a unique calendar view to show your routing plan *for a specific day*. This is highly effective for special needs routing and temporary routes.

As you can see, our solution is different and is designed specifically for the school market. We have the tools and expertise to help the state with any size of optimization problem. Once again, thank you for this opportunity to respond to your RFI. We are looking forward to working with you in the near future.

Sincerely,



Kerry J. Somerville GISP
U.S. Computing Inc.
Director of Business Development
2026 Assembly Street
Columbia, SC 29201
Cell - (909) 246-8607
Kerrys@uscomputinginc.com

Introduction

U.S. Computing is pleased to submit this RFI for bus routing. We have both the expertise in school based routing, and partner with the largest GIS/mapping software company in the world. We are confident that we can provide the best solution available. In addition to our knowledge and expertise in transportation of school age students we also have extensive experience in customization of software. The partnering of our companies to serve this RFI can lead to efficiency and optimization of school transportation at a level that has been unattainable in the past.

US Computing Company Background

US Computing, Inc. (USCI) is headquartered in Columbia, South Carolina and is a minority owned, incorporated business entity. Our company specializes in the development of software products and delivery of associated professional services. It has been offering its products and services for over 10 years. The company focuses on meeting the needs of School Districts, Local and State Government Agencies. Our company has a wide variety of experience in developing and deploying software products for K-12 School Districts specifically GIS Software systems for Transportation Planning and Routing.

U.S. Computing is an authorized ESRI Business Partner and Reseller. Our company specializes in development of GIS based products geared toward K-12 Transportation Management and general School District planning, using widely popular ESRI technologies.



Having worked very closely with K-12 Transportation departments of various profiles and sizes, USCI personnel have a solid understanding of the day to day needs of K-12 Transportation offices and student transportation routing. Compass Transportation and Routing software is a U.S. Computing, Inc. product designed for K-12 Transportation and Routing operations and intended to make the use of GIS simple and accessible to transportation personnel.

U.S. Computing Inc. understands that the relationship between GIS technology and the rest of the IT infrastructure is crucial, therefore Web Compass has been built with ArcGIS Server and Sequel Server in order to support possible integration with virtually all commonly accepted standards. For your school district, this means compatibility and interoperability support with other major enterprise GIS and Database systems in use in related organizations (e.g. by State Agencies and local County or City Planning and GIS Departments). Compatibilities with open standards and data format gives your district the ability to leverage existing data sources such Street, Road and Address data from other agencies and resources within your own district.

Employee Qualifications

Kerry Somerville GISP-Director of Business Development



Kerry Somerville has 25 years of experience working with transportation directors all across the country in a consulting, GIS and software design. Mr. Somerville fully understands all aspects of school transportation. He has driven the bus, trained drivers, been a transportation manager and also spent 3 years as a product Manager with ESRI the world's largest GIS Software Company. He has worked with transportation software and is able to create, design and implement GIS systems and software.

Kerry lives in Gilbert, AZ and has a wife and seven children: Brigette, Aubrey, Carianne, Devery, Andrew, Matthew, and Mercedes

Mike Heller-Manager, Sales and Support



Mike specializes in working with public organizations. His specialty is in analyzing an organization's current situation and proposing and implementing a solution that helps to reduce costs and increase efficiency.

With over six years in GIS technology, Michael has experience in ArcGIS, Network Analyst, ArcIMS, ArcWeb Services, and Arc SDE. Michael has designed and implemented GIS training courses as well as supported hundreds of GIS users.

Michael holds a Bachelor of Science degree in Criminal Justice from Utah Valley University and has a wife and three children: Olivia, Jackson, and Joseph.

School Bus Optimization

Web Compass is a 100% web based routing solution that is changing the way that that routers across the country are completing their daily tasks.

Clark County School District (Las Vegas), Nevada has been using Compass for over a year now and has realized significant savings. Below is a quote explaining the reason that they chose to go with our solution:

“The software package that transportation was using to route school buses was put in place over ten years ago and was no longer to produce the desired results. We, as well as everyone else, are in the middle of a financial crisis and as such need flexible routing software that lends itself to easily creating and testing scenarios with corresponding cost analysis. We needed this software to be totally web-based and easy to use. We were looking for routing software that would be totally compatible with the ESRI software and we wanted a vendor that had strong ties to ESRI. We found that the only routing software company that could meet all of our demands was US Computing’s Web Compass software program.”

Ted Carrasco, Clark County School District Transportation/GIS

Optimization

Web Compass has the same routing engine that is used by large organizations such as FedEx and is used extensively by the U.S. Government. It has the ability to use street speeds, historical traffic and even real time traffic feeds when considering routes. We can also use data that has been collected by GPS devices on vehicles so that we can calculate times based on actual driven routes. Time at the stops is controlled by user entered data and can be controlled by student type or need. For example, a kindergarten student may take longer to load than a high school student. Additionally wheelchair students take longer than non-wheelchair students.

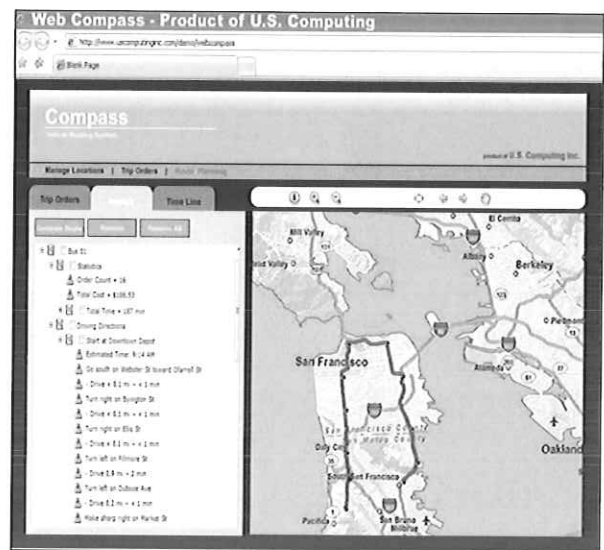
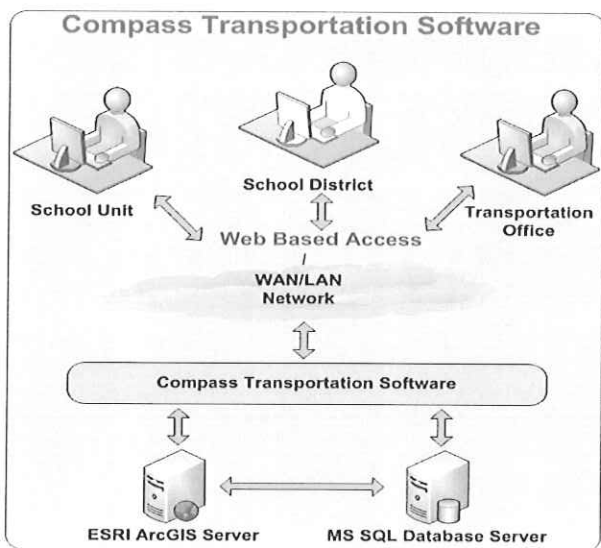
Web Compass also gives the user plenty of options for defining the route. These are easy to implement strategies in our solution that usually involves one or two clicks of the mouse. For example:

- Control of when to utilize U-turns by vehicle
- Meet Schedule vs. Reduce Mileage
- Drop Riders Together vs. Low Ride Time
- Barriers

Key Characteristics of the Web Compass Solution

- Presents powerful GIS and Database functionality through an easy to use **Web Browser** user **interface** that is tailored to the day to day business context of daily student transportation.
- Uses **open industry standard** Microsoft SQL Server **Database** for data storage. DOES NOT use proprietary or closed database format.

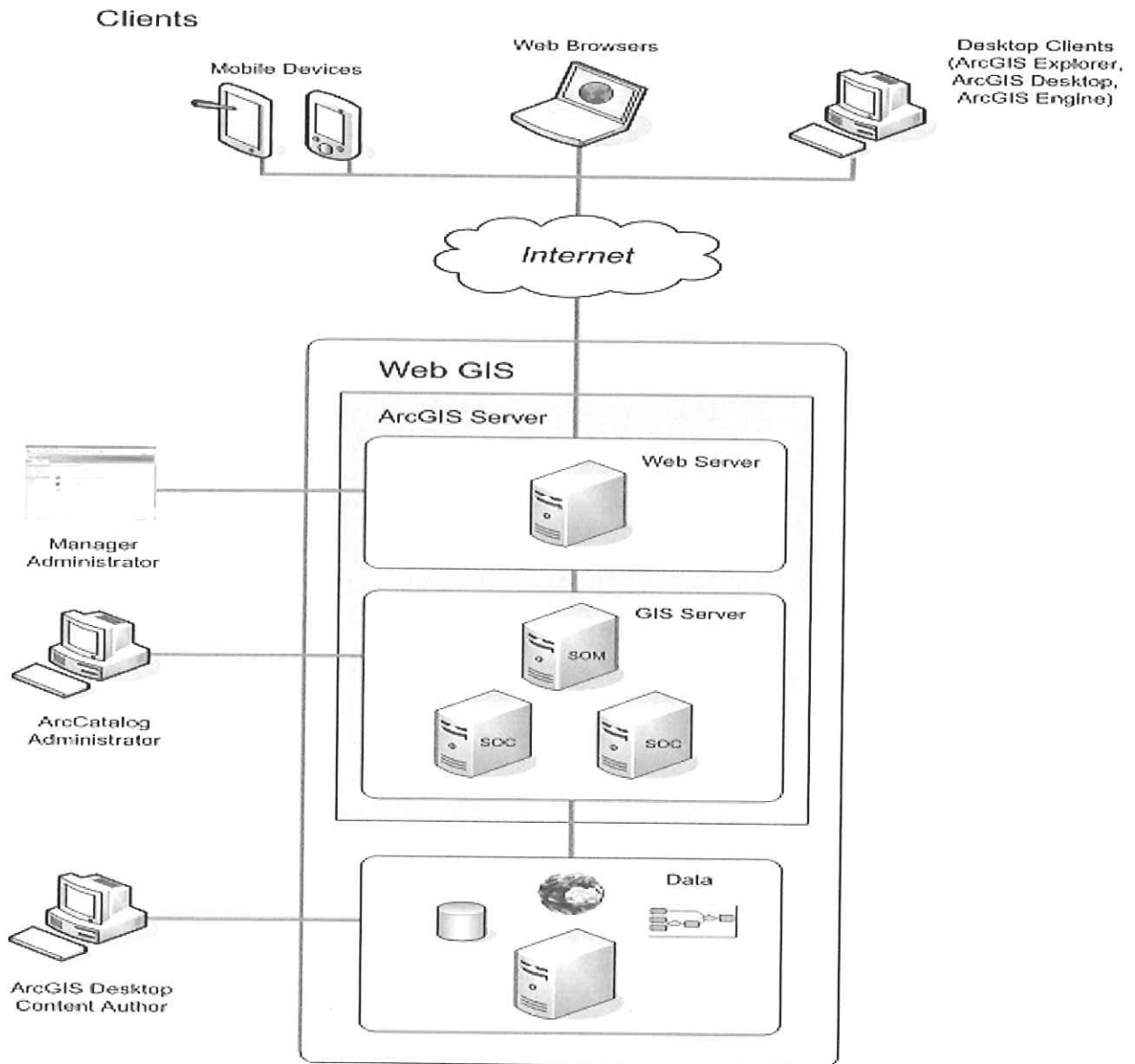
- Uses **open industry standard GIS Data** format compatible with other GIS data already in use at the district in **ESRI format** such as Shapefiles, Geodatabases and ArcSDE.
- **DOES NOT** require installation of “heavy” **desktop client** software on individual user computer.
- **ALL features** and functionality are **available through the Web User Interface**. (Unlike other third party products, software capabilities are not split up between a limited function Web client and an advanced desktop client.)
- Company has the ability to create view only rights for users. They will not be able to edit the data.



Our Web Compass Routing solution is 100% Web Based and is built using ESRI ArcGIS Server technology and can operate as a self-hosted model within the data center at City Schools. Below is a breakdown of how our system works. ArcGIS is installed on your district server's along with our Web Compass Routing system. Users then access the application through a web browser, mobile device, or ArcGIS desktop (ArcView), if desired.

System Architecture

The ArcGIS Server System Architecture



Mapping Of County School System

As was stated in the introduction U.S. Computing is an esri™ business partner and the Compass school bus routing software is fully compatible and in fact built on esri™ technology. Esri™ is the world's largest mapping software company. The state of West Virginia uses esri™ technology as well and information can be found at the state level about data that is available statewide at the website <http://www.gis.wv.gov/steering/stateagencies/Pages/default.aspx> additionally the state department offers several GIS training opportunities such at the West Virginia GIS technical training center <http://wvgis.wvu.edu/training/training.php> We are confident that the data for mapping of county school systems is either currently available or can be easily created from data that already exists within the state. U.S. Computing is the only company that can use this data without any conversion in a fully web based environment.

Special Needs Routing

The web Compass system has been designed from its inception with special needs routing in mind. Web Compass does not need another module or different software but rather special needs routing is incorporated directly into the software design. Every stop can be attributed with the needs of the child at that stop, wheelchairs, aids, restraint systems, or virtually any need a child has can be an attribute of that child's stop. In the same manner vehicles can also be attributed with the equipment or personnel available. Optimization routines automatically take in all of these needs and match the child's needs with the vehicle that can accommodate them. This is all done using the optimization routines that create the most efficient route possible. Web Compass is unique in its approach by considering each stop as an individual entity with its own attributes such as time windows for both pick up and drop off locations as well as max ride time, individual load times (it takes longer to load a wheel chair than a student that is ambulatory) and other considerations. The unique approach that considers each stop individually gives web Compass a very powerful optimization engine.

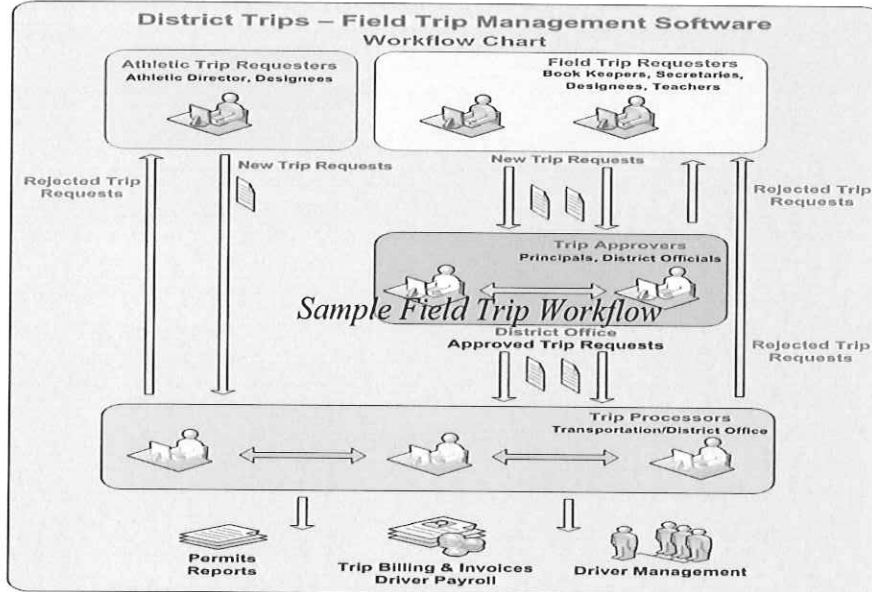
Field Trip Scheduling and Payroll

- 100% Web Based: You do not need to install software at every school site in the district. Everything is accessed through a web browser
- User defined approval path: Approval paths can be designated by administration and is not limited to a standard approval path.
- Email Notification: Notifications are automatically sent to the designated approver:
 - When a trip is submitted by a teacher, email is sent to the principal or who is next in line to approve
 - When a trip is approved by a principal, email is sent to transportation department for approval
 - When transportation approves the trip, email is sent back to teacher letting them know that the trip has been approved
 - In addition, you are not limited to this approval process, we can add additional approval paths if needed
- User has the ability to create and manage all types of school field trips. User can create reoccurring trips (for athletics, for example) or link multiple buses to the same trip.

Simple dropdown for requestor to select desired program or activity

- Driver/Bus Assignment: Ability to assign drivers and busses based upon the availability of the asset.

- Detailed Reports: Detailed reports that include cost totals, breakdown by account code, program, and school.



School Bus Operator Payroll

U.S. Computing does not currently have a school bus operator payroll system; however we have a long history of writing software for state agencies and other entities that meet the needs of their particular circumstances. We are confident that we can meet the needs of the state in this regard.

School Bus GPS

USCI has a proven track record for integration of GPS data and information into systems. We believe strongly that you should be able to use the equipment and data you have invested in to not only improve your day to day operations but improve the quality of you're planning as well. An example of this is the work that we have done at Clark County School district where we are using the actual street speed data that is coming from their GPS system and applying it to the street network. This means that when routes are created for planning they are using the real travel speed of the bus and not the posted speed, or a speed that was guessed at.

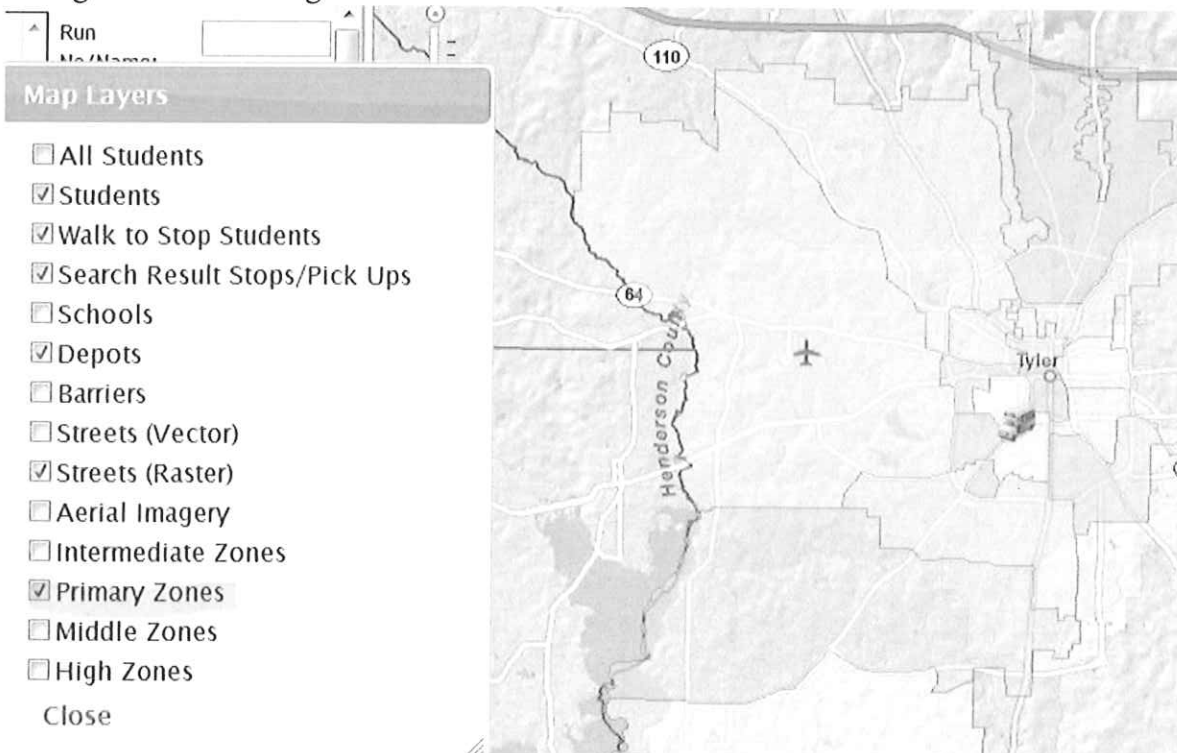
Additionally we compare the planned route against the actual driven route so that differences can be identified and action can be taken to improve the route. All of this is done in the Web Compass interface using the same maps, screens and views as the routing system. There is no need for additional programs, screens or moving between programs to access what you need. USCI has worked with many different GPS hardware providers and we can provide the integration services to whatever system the district selects.

County Schools Boundary Planning

Web Compass presents school attendance boundaries (zones) for visual inspection against an electronic road map background of the school districts. Authorized users have access to a variety of functionalities essential for redistricting, such as (but not limited to):

1. Determining the number of students (filtered by grade, school, lunch status, ridership status etc.) residing in a user drawn geographic area.
2. Determining the number of students (filtered by grade, school, lunch status, ridership status etc.) residing in a specific school zone.
3. Changing the zone boundaries of schools.
4. Taking a part or all of an existing school zone and reassigning that area to a different school.
5. Adding a new school and defining attendance boundaries for that school.

Once redistricting has been done Web Compass detects changes in destination schools for students (while taking into account distance based eligibility) and reassess rider counts for each school. This information is then used to automatically produce updated routes based on the zones arising from redistricting.



Screenshot of Primary Zones displayed

Additional Software Available

In addition to the software information provided here U.S. Computing has other software products that not only provide valuable information but can add to the overall cost savings that can be realized by the district.

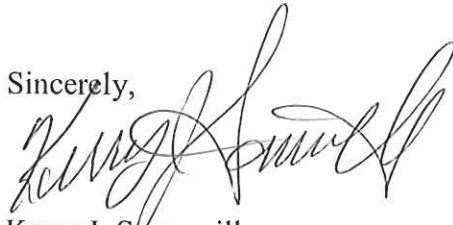
Fleet Management – tracks maintenance, work orders and inventory of bus maintenance

EZ- Fee – tracks parent pay for school districts

School Locator – A public access portal that allows parents, realtors or others to look up an address and determine what school boundary that address is in. This takes the burden of thousands of phone calls from transportation creating savings in time and personnel.

Thank you again for the opportunity to respond to this RFI we believe U.S. Computing along with our staff and personnel are uniquely qualified to provide an analysis of West Virginia's school bus system and identify realizable cost savings to the district.

Sincerely,



Kerry J. Somerville
Director of business Development
U.S. Computing
2026 Assembly St.
Columbia, South Carolina 29201
Cell - (909) 246-8607
kerrys@uscomputinginc.com

CERTIFICATION AND SIGNATURE PAGE

By signing below, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

U.S. Computing Inc.

(Company)

Kerry Somerville Dir. of Business Dev.

(Representative Name, Title)

909-246-8607

(Contact Phone/Fax Number)

11 July 2012

(Date)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: EDD377015

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

U.S. Computing Inc.
 Company
Kerry Samwell
 Authorized Signature
11 July 2012
 Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: U.S. Computing INC.

Authorized Signature: [Signature] Date: 11 July 2012

State of Nevada

County of Clark, to-wit:

Taken, subscribed, and sworn to before me this 11th day of July, 2012

My Commission expires 28.2014, 20 .

AFFIX SEAL HERE

NOTARY PUBLIC

[Signature]

