Welcome, Lu Anne Cottrill | Procurement | Budgeting | Accounts Receivable | Accounts Payable

Solicitation Response(SR) | Dept: 0506 | ID: ESR09212000000002572 | Ver.: 1 | Function: New | Phase: Final | ▼ | Modified by batch , 10/07/2020

Header 📎 1

List View

| General Information | Contact | Default Values | Discount | Document Information | Clarification Request |

Procurement Folder: 751672

Procurement Type: Central Contract - Fixed Amt

Vendor ID: VS0000010822 ⬆

Legal Name: ESO SOLUTIONS INC

Alias/DBA:

Total Bid: $1,300,000.00

Response Date: 10/06/2020 📅

Response Time: 16:43

Responded By User ID: ajohnson103 ⬆

First Name: Accounts

Last Name: Payable

Email: accountspayable@esosc

Phone: 8667669471

SO Doc Code: CRFQ

SO Dept: 0506

SO Doc ID: BPH2100000003

Published Date: 10/2/20

Close Date: 10/7/20

Close Time: 13:30

Status: Closed

Solicitation Description: EMERGENCY MEDICAL SERVICES DATA SYSTEM

Total of Header Attachments: 1

Total of All Attachments: 1

	Department of Administration	**State of West Virginia**
	Purchasing Division	**Solicitation Response**
	2019 Washington Street East	
	Post Office Box 50130	
	Charleston, WV 25305-0130	

Proc Folder:	751672
Solicitation Description:	EMERGENCY MEDICAL SERVICES DATA SYSTEM
Proc Type:	Central Contract - Fixed Amt

Solicitation Closes	**Solicitation Response**	**Version**
2020-10-07 13:30	SR 0506 ESR09212000000002572	1

VENDOR
VS0000010822
ESO SOLUTIONS INC

Solicitation Number:	CRFQ 0506 BPH2100000003

Total Bid:	1300000	**Response Date:**	2020-10-06	**Response Time:**	16:43:35

Comments: ESO does not offer discounts for early payment.

FOR INFORMATION CONTACT THE BUYER
Crystal G Hustead
(304) 558-2402
crystal.g.hustead@wv.gov

Vendor
Signature X   **FEIN#**   **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Emergency Medical Services Data System - YEAR ONE				325000.00

Comm Code	Manufacturer	Specification	Model #
80101500			

Commodity Line Comments:

Extended Description:

Maintain and Manage WV EMS DATA System - Year 1

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Emergency Medical Services Data System - YEAR TWO				325000.00

Comm Code	Manufacturer	Specification	Model #
80101500			

Commodity Line Comments:

Extended Description:

Maintain and Manage WV EMS DATA System - Year 2

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Emergency Medical Services Data System - YEAR THREE				325000.00

Comm Code	Manufacturer	Specification	Model #
80101500			

Commodity Line Comments:

Extended Description:

Maintain and Manage WV EMS DATA System - Year 3

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Emergency Medical Services Data System - YEAR FOUR				325000.00

Comm Code	Manufacturer	Specification	Model #
80101500			

Commodity Line Comments:

Extended Description:

Maintain and Manage WV EMS DATA System - Year 4

STATE OF WEST VIRGINIA
EMERGENCY MEDICAL
SERVICES DATA SYSTEM

REQUEST FOR QUOTE

Solicitation Number
CRFQ 0506 BPH2100000003

Prepared by ESO Solutions, Inc.
Vendor Code: VS0000010822
October 7, 2020

October 7, 2020

Crystal G Hustead
Procurement Officer
Department of Administration, Purchasing Division
State of West Virginia
2019 Washington Street, East
Charleston, WV 25305

Ms. Hustead,

In response to your request for proposal, ESO has included supporting documentation for the solicitation CRFQ 0506 BPH2100000003 Emergency Medical Services Data System.

At our core, we are a very mission-driven organization. Since our founding in 2004, our manta has been to improve community health and safety through the power of data. We've built a comprehensive, interconnected product ecosystem with robust analytical capabilities to provide the full picture across the healthcare and public safety continuum. This is important in order to improve patient care, improve provider and responder well-being, gain operational efficiencies, and reduce cost.

We have rallied around the belief that data is what drives change within the healthcare setting. However, data cannot simply be collected for the sake of collecting data. You need a mechanism for capturing, analyzing and translating that data into real world insight, all the while ensuring the data is standardized so that everyone has the same yardstick with which to measure success.

In mid-2019, we assumed operational control of the former EMSPIC, the long-time provider of West Virginia's EMS repository and state applications. These applications were hosted on aged hardware and in need of updating. After a thorough assessment, ESO embarked on a six-month project to transition the infrastructure to Azure. In November, the repository and applications will be complete, bringing West Virginia into in a secure, scalable data center.   West Virginia OEMS and agencies will also benefit from a modern, easy to use reporting system for EMS data, making performance measure and improvement a snap.

While West Virginia removed the research requirements from the RPF, ESO looks forward to building on the rich history of award-winning projects. ESO's research team can carry the ball at West Virginia's direction, exploring topics that will advance care for the State and improve outcomes for providers and patients.

We look forward to supporting West Virginia EMS operations and data insights in the future and working together to grow the products as well as the industry's understanding of EMS in West Virginia.

Sincerely,

Allen Johnson, Chief Product Officer
11500 Alterra Parkway, #100
Austin, Texas 78758
866.766.9471
Allen.Johnson@eso.com

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About ESO

WHY ESO?

ESO provides the industry's most reliable, user-friendly and innovative software and applications that are designed to meet the changing needs of fire departments, EMS agencies, hospitals and regulatory bodies across the nation. We have a clear strategy to help our customers create better responses by leveraging the power of data to drive change organizationally and effect outcomes within communities.

ESO works with thousands of EMS agencies, fire departments, and hospitals to improve community health and safety through the power of data. Our EMS customers leverage our full product portfolio to capture essential data in the prehospital setting that can be quickly and easily transferred to a hospital emergency department to ensure accurate and timely care to improve patient outcomes. Fire departments use our ESO Fire Suite to be equipped with knowledge and insights about a particular property before responding to a fire. This helps to ensure firefighter safety and minimizes damage, risk and exposure to dangerous chemicals and other hazards. Hospitals use our first-of-its-class Health Data Exchange for closed-loop, bi-directional information sharing with EMS agencies in their community to improve overall patient health.

Data without analysis is simply a collection of information with no purpose. At the core of ESO's product portfolio is a powerful analytics tool that comes standard with the platform and allows all of our customers to identify key trends and patterns in their community that will improve response times, patient outcomes, responder safety, community safety, and more. We want to give you the precious and vast data that a single solution can provide, offer insights from a uniquely rich and prolific dataset, and most importantly use all of this data to protect our provider and the communities they serve. Our State Repository includes this powerful analytics tool that helps regulators make decisions and remain informed about the everchanging systems they oversee.

WHAT PROBLEM ARE YOU SOLVING?

The CEO of a company called Mixpanel has said: "Most of the world will make decisions by either guessing or using their gut. They will be either lucky or wrong." For EMS agencies, fire departments, and hospitals, lucky or wrong is not an option when it comes to patient health and community safety. ESO was founded on the premise that the smarter use of data to provide clinical and operational insights will improve community health and safety by helping agencies and departments get access to the information they need in real time as well as helping organizations identify gaps in training, documentation, procedures and more. State regulators need information to help guide process and reform changes that can only occur if they have access to powerful tools to make their job easier.

When ESO was founded in 2004, many departments and agencies were using paper solutions to capture critical patient information in the prehospital setting (for example, when an ambulance showed up at a car crash). A paper solution proposes multiple problems, including lack of security regarding important patient information, no ability to perform analytics and discover trends, no ability to share information quickly and easily with a hospital emergency department, and high likelihood that notes could get lost, smudged or destroyed. This had an impact on positive patient results.

WHY IS ESO BEST SUITED TO SOLVE THIS PROBLEM?

There is always competition. And companies will come and go with point solutions they believe will solve an industry problem – but many of these companies don't fully understand the nuances of our industry. We engage our customers as a partner – as part of the industry – not a vendor. We have deep relationships, which are absolutely critical in this industry, and a longstanding history of

success with our customers. We are innovators that understand where the industry is going in the next 5-10 years and help our customers get there are part of an evolutionary process, not a disruptive process.

Our customer retention rate is north of 97%. We are the largest software provider to EMS agencies and fire departments. We have proven success in implementing agencies large and small, urban and rural, and across federal, regional, local and state governments, as well as hospitals, volunteer departments, and private agencies. We have significant investment resources to ensure our stability and longevity. We have the industry wherewithal and expertise to understand how subtle technology or policy changes can have significant impact on our customers, and we freely share our knowledge with the industry to help organizations succeed – because, at the end of the day, that's what helps improve community health and safety.

The ESO Team

ESO's CEO, executive staff, management team, account managers, implementation specialists and certified software trainers have extensive experience in the fire and prehospital environment. ESO currently has over 350 employees and is continuing to grow. Our executive staff, healthcare product and development teams, marketing, implementation and support reside at our headquarters in Austin, Texas. Des Moines, Iowa is home for our ESO Fire software staff. Regional account representatives typically live in the region in which they work. We have a small group of support and engineering employees that work remotely across the United States.

Our team members have served as EMT's, fire chiefs, paramedics, led hospital emergency services, and relate quickly and easily to all of our clients. With a high client retention rate, we know that our people make the difference. We are well known in the industry for our character, integrity, reputation, and judgment. While we have grown substantially as a company since 2004, we have never been more laser-focused on our mission to improve community health and safety through the power of data. Our employees live, breathe and see the results of this every day. We approach our work as if the lives of our own families and friends depend on the results. Because a lot of the time… they do.

Chris Dillie, Chief Executive Officer
Chris was the cofounder of ESO and has been with the company since its 2004 inception, first as Vice President of Marketing and Sales and now as President and CEO, a position he has held since 2009. He brought 13 years of EMS experience and a solid business background to ESO, having served in roles ranging from EMS manager to founder of a real estate company that bought, sold and managed properties. Chris designed the first several versions of the ESO EHR software, and his vision continues to be the driving force behind the development of new products to meet the changing demands of the healthcare market.

Allen Johnson, Chief Product Officer
Allen brings to ESO 30 years of EMS experience as a paramedic, educator and administrator. He most recently served as the Executive Director for Emergency Services for the HCA Gulf Coast Division where he worked closely with local EMS agencies and hospital service lines to integrate continuity of care and improve service delivery and outcomes. Prior to his work at HCA, Allen led the Montgomery County Hospital District as Chief Executive Officer and has served on numerous boards including the Southeast Texas Regional Advisory Council, and the Wartburg Theological Seminary. Allen holds a BS in Psychology and a Master of Public Administration from Texas A&M University.

Brandon Martinez, Vice President; Chief Software Architect
Brandon has more than eight years of experience building distributed applications across multiple industries. He is responsible for managing the design and development of ESO Solutions' diverse

portfolio of SaaS products while spearheading internal research and development initiatives. Prior to joining ESO, he developed and deployed high-volume, transactional messaging applications for Dell Inc.'s global warehouse management system and authored interfaces for relaying the execution of fixed income security trades to various back-end applications at JP Morgan Chase & Co.

Chris Montera, Director of State and Federal Business
Chris has been dedicated to service of his community with more than 32 years of experience in Paramedic Services, Public Health, and the Fire Service. He has received numerous awards for his service and was named one of the top 10 EMS Innovators of the Year in 2010. He was formerly the Chief Executive Officer at Eagle County Health Service District. He holds a Master's in Health Leadership which is a degree that emphasizes population health, healthcare innovation and transformation. He also holds a BS in Business Management and an Associate's in Paramedicine. Chris was instrumental in creating the first rural Community Paramedic program in the United States in 2009.

ESO Product Offerings

As depicted in the diagram below, ESO offers an integrated suite of software products for EMS agencies, fire departments, and hospitals that are transforming the way responders collect, share, report, and analyze critical information to improve community health and safety.

EMS State & Regional Tools:

ESO State and Regional Tools empower state and regional EMS office to improve operations, identify trends, surface insights and access real-time EMS data to drive a stronger continuum of care for the communities they serve.

ESO EMS Repository: ESO's EMS Repository provides a centralized location for all ePCRS within a defined region (such as a state or county). It is designed to store data from both ESO and other NEMSIS compliant ePCR vendors. This empowers regional/state EMS authorities to improve operations, identify trends, surface insights and access real-time data to drive a stronger continuum of care for the communities they serve. The EMS Repository includes extensive reporting and indexing tools for data quality, analysis, incident investigation, auditing, and single record location services. Further, the platform allows additional interface capabilities for data sharing, including hospital data sharing, health information exchanges, registries, and external reporting systems.

ESO Regulatory Suite: The ESO Regulatory Tools enable the practical application, approval, and management of licensing for agencies, vehicles, personnel and education programs. Optional modules include the hospital preparedness and system resilience planning, offline vehicle inspections, Narcan utilization tracking for law enforcement and first responders, and a behavioral health patient transfer center. All of the components of the regulatory suite are available to users on any device with a compatible modern web browser and internet connectivity to ESO's cloud hosted infrastructure.

ESO Agency Licensing: ESO Agency Licensing offers efficient credentialing and monitoring of agencies in a state through a lightweight, tiered method of organizing information critical to state office oversight. Responsibilities and customized workflows for license approval, inspection, authority to operate, or revocation can be shared or spread across this organizational structure for example at the State Office, EMS Region, EMS System, or the individual agency. Each of these entities has their own profile to manage their demographic information including personnel, vehicles, locations, coverage areas, and specialized services. This data is available for external interfaces to avoid dual entry such as NEMSIS demographics files, ODMAPs, and external reporting systems.

ESO Personnel Licensing: ESO Personnel Licensing provides a one-stop shop for providers to apply for, manage and renew EMS licensure within a state or region. Field providers are able to review contact information, demographics, credentials obtained, share courses and exams completed, current jobs and downloadable copies of active licenses. Furthermore, this module provides state offices with the means to manage legal recognition, disciplinary actions, and both automated and manual criminal background check results. A fully automated interface is also provided for National Registry certification to aid participating states in recredentialing personnel.

ESO Vehicle Permitting & Inspections: ESO Vehicle Permitting and Inspections supports the issuing of permits and recording of inspections for vehicles attached to agencies. This allows the application to capture the entire process so that state offices can better organize their inspection efforts to improve both EMS technician and patient safety. This module includes an optional offline inspection application available on iOS for iPhones and iPads.

ESO Education Program Credentialing: ESO Education Program Credentialing provides the credentialing and inspection of institutions providing EMS education, as well as course information management and state exam management (if applicable) allow the state to efficiently and effectively exercise appropriate oversight over EMS education efforts in the state. Each educational institution has its own profile that contains information about its location, the levels and types of courses

taught, personnel including instructors and administrators, credentials and inspections, and links to courses offered. Education institution personnel with the appropriate security rights can enter course information such as an instructor list and location, as well as mark courses as ready for approval by state personnel.

ESO Patient Health Preparedness and Response: The ESO Patient Health Preparedness and Response system provides daily information to hospitals, EMS systems, and state disaster management personnel with the goal of improving the ability of EMS to respond in the event of a disaster or terrorist event. Hospitals state-wide provide daily information pertaining to hospital bed availability, specialty care availability, and closed services with the expected time those services are anticipated to resume normal operations. During an emergency activation, this information is utilized by EMS to triage patients to the nearest facility that can best meet their needs.

ESO Patient Transfer Management: ESO Patient Transfer Management aids facilities in the placement and tracking of individuals between Behavioral Health facilities in order to reduce patient wait times, increase efficiency and reduce transfer distance. The system provides advanced, criteria-based search features to find appropriate placement of individuals, referral features that allow for secure and private transfer of individual information, and notification features that allow facility personnel to be alerted at each step of the placement process.

ESO Narcan Utilization Tracker: The ESO Narcan Utilization Tracker documents the administration of Naloxone by Law Enforcement Officer and Fire personnel. The tracker identifies the individual administering the drug, documents information related to the opioid incident, and the demographics of the overdose victim. Upon submission, the tracker links the information to the ePCR generated by the EMS transporting units. Furthermore, the system provides an inventory management component through a separate entry point for local dispensing pharmacies. An electronic receipt of drug administration is submitted to the pharmacy in order to resupply the Law Enforcement or Fire personnel of the life-saving drug. A suite of reports are readily available regarding naloxone administration counts, demographic data, geographical data, and outcomes.

ESO Analytics: ESO Analytics makes complex data accessible for all with one-click reporting for clinical, operational and core measures. The application is designed to assist EMS leaders with identifying and monitoring operational and clinical trends. ESO Analytics integrates State Application, State Repository, EHR, Fire Incidents and HDE. Analytics includes extensive filters and allows users to create a highly configurable report that includes many data elements collected. The reports help a state to compare their data to other known indices such as the ESO Index and built in measures.

Additional ESO Products:

ESO EHR: ESO EHR makes it easy to produce quality EMS clinical documentation through a flexible workflow and user-friendly features. EHR is NEMSIS v 3.3.4 and v 3.4 compliant and submits electronic patient care data to the state on behalf of our customers.

ESO Personnel Management: ESO Personnel Management conveniently records and stores personnel information, training courses, education history, immunizations and more within a single application.

ESO Quality Management: ESO Quality Management provides a process to evaluate and elevate clinical and operational performance to a higher standard.

ESO Quick Speak: ESO Quick Speak enables EMS field providers to communicate with non-English speaking patients.

ESO Health Data Exchange (HDE): ESO Health Data Exchange (HDE) enables secure data sharing between EMS and hospitals along the continuum of care. HDE gives EMS the power to increase efficiency, advance quality and improve patient care.

ESO Patient Tracker: ESO Patient Tracker provides early awareness for incoming patients to hospital facilities, access to the EMS patient care report and the ability to perform side-by-side comparisons of care provided by EMS and hospitals.

ESO Alerting: ESO Alerting delivers a configurable application for EMS and hospital administrators to communicate during time sensitive emergencies securely and efficiently.

ESO Asset Management: ESO Asset Management delivers robust workflow tools including granular notifications, assignments and asset tracking to keep departments in-tune with their equipment, gear and other key assets.

ESO Checklists: ESO Checklists provides easy-to-use digital checklists to capture current condition of vehicles, equipment, places and people.

ESO Scheduling: ESO Scheduling combines automated employee scheduling, time and attendance, overtime control, request management and messaging into one easy to use tool.

NarcBox: NarcBox is an integrated hardware and cloud-software narcotic security, storage and tracking system designed specifically for the EMS and Fire industries.

EMS1 and FireRescue1 Academy: Offered through a partnership with Lexipol, EMS1 and FireRescue1 Academy is a comprehensive learning management system (LMS) that combines online learning content, online record keeping, and certification management. The combined solution is comprised of EMS and compliance courses, innovative LMS, and tools to create and track assignments, credentials, ISO and SOPs.

Evolution & Growth

In 2004, an entrepreneurial paramedic and a software developer started a software company. They believed that if "field data collection" was improved in a way that supported the prehospital workflows, the dataset could be used to drive quality management at a local, regional, and state level and resource research that could change the industry. Today, we live the mission – to improve community health and safety through the power of data.

In 2018, we entered the state repository market with the implementation of ESO EMS Repository in North Dakota. That implementation went extremely well and the partnership with North Dakota has expanded to include innovation projects in partnership with the American Heart Association to support stroke care in the state, as well as the Center for Rural Health to study and publish rural EMS performance measures.

In early 2019, ESO took over the applications and repositories of the former University of North Carolina EMS Performance Improvement Center. ESO inherited 20 years of repository and State application experience, as well as crucial staff that successfully built and administered the program that helped shape EMS care in South Carolina, North Carolina, and West Virginia. With this

assumption, ESO brought the ESO Regulatory Suite of products into its growing portfolio. These products include a hospital preparedness program, Narcan utilization tracking system, behavioral health transfer center, and complete license management for EMS agencies, personnel, vehicles, and education programs.

Immediately following the assumption of the applications, ESO began a deep dive into the products to determine the stability and scalability of each. Significant issues were identified that required financial and time investment to correct. The equipment in the data center was reaching the end of useful life and had limited capacity for growth. Daily node failure and unscheduled reboots were common. Users reported frustration with the highly complex reporting system that resulting in a barrier to the data, often requiring ESO data specialists to provide routine reports. ESO developed an aggressive plan to migrate the applications and data to our Azure environment. Although slowed by COVID, that migration is nearing completion. The State and agencies will have open access to their repository data and performance measures using ESO Analytics and AdHoc reporting.

The future for the repository and State applications is one of integration and interoperability. The roadmap contains numerous opportunities to gain efficiency and improve workflows. For example, agency and state staff will benefit from data mapping and process integration between the agency, Personnel Management tools and the state provider licensing application. When a local admin adds a new employee, the state database should be updated to reflect that change. Likewise, if the state takes action to suspend a certification, the agency should be notified and the ESO Scheduling app should block the employee from the schedule.

Another area of integration is the linkage of EMS data to the hospital outcome. Through ESO Health Data Exchange, EMS agencies and hospitals share data. The state has the option to include this linked data in the EMS repository, creating a new avenue for State office research.

Research

ESO's industry experience and expertise goes beyond the technical capability that other companies provide. ESO has gathered a team of leading EMS clinical and quality leaders to put the mission into motion. Led by Dr. Brent Myers and Allen Johnson, the team is focused on the core task of delivering products that support users of the data to manage their operations, local and statewide, while supporting the evolution of evidence-based medicine.

Agencies and states enjoy access to ESO's research and performance improvement staff including Dr. Scott Bourn, Senior Quality Consultant, and our quality and research scientists Dr. Remle Crowe and Dr. Tony Fernandez. We provide consultation and services to our State and regional customers to assist them in executing meaningful quality projects and use their data to study and publish award winning research.

ESO is supported by steering committees including our Research Leadership Group, Quality Steering Committee, and the Education Strategy Team. These groups are comprised of leaders from across the country from various disciplines that provide thought leadership to ESO and help drive fulfillment of our mission.

ESO is relentless in its pursuit of improving community health and safety through the power of data. As part of ESO, West Virginia has the option and is welcome to participate in any of the many nationwide studies and research projects underway at ESO. ESO provides unique opportunities for clinical personnel to attend, author, and publish research to change our industry through our bi-annual clinical research forums. ESO's research and performance improvement team will far exceed expectations.

Although noted that the RFQ is not currently seeking research requirements as it has in previous years, we look forward to continuing to collaborate with West Virginia in this area. Together we have brought West Virginia into the forefront of EMS nationally with award-winning research such as in 2019 with "An Assessment of the Relationship between the Total Prehospital Naloxone Dose Administered and EMS Transport in West Virginia" as well as in 2018 with "An Investigation of Prehospital Scene Times in West Virginia". Our team is committed to jointly continue a history of award-winning projects that help improve the provider safety and patient outcomes.

For reference, below is research our team has participated in during the past 5 years.

Peer-reviewed Manuscripts:

- Zègre-Hemsey JK, Patel MD, Fernandez AR, Pelter MM, Brice J, Rosamond W. A Statewide Assessment of Prehospital Electrocardiography Approaches of Acquisition and Interpretation for ST-Elevation Myocardial Infarction Based on Emergency Medical Services Characteristics. Prehosp Emerg Care. 2019 Oct 31:1-7.
- Patel MD, Honvoh G, Fernandez AR, Cadena R, Kelly ER, McDaniel P, Brice JH. Availability of Hospital Resources and Specialty Services for Stroke Care in North Carolina. South Med J. 2019 Jun;112(6):331-337.
- Brice JH, Cyr JM, Hnat AT, Wei TL, Principe S, Thead SE, Delbridge TR, Winslow JE, Studnek JR, Fernandez AR, Forrest EE. Assessment of Key Health and Wellness Indicators Among North Carolina Emergency Medical Service Providers. Prehosp Emerg Care. 23(2):179-186, Mar-Apr 2019. doi: 10.1080/10903127.2018.1489017
- Cristiano LM, Hiestand B, Caldwell JW, Gower WA, Fernandez AR, Gilbert K, Winslow JE. Prehospital Administration of Epinephrine in Pediatric Anaphylaxis - A Statewide Perspective. Prehosp Emerg Care. 2018 Jul-Aug;22(4):452-456. doi: 0.1080/10903127.2017.1399184. Epub 2018 Jan 16.
- Brice JH, Shofer FS, Cowden C, Lerner EB, Psioda M, Arasaratanum M, Mann NC, Fernandez AR, Waller A, Moss C, Main M. Field Triage of Injured Patients in North Carolina. Prehospital Emergency Care. Prehosp Emerg Care. 2017 Sep-Oct;21(5):591-604. doi: 10.1080/10903127.2017.1308606. Epub 2017 Apr 19.
- Evans CS, Platts-Mills TF, Fernandez AR, Grover JM, Cabanas JG, Patel MD, Vilke GM, Brice JH. Repeated Emergency Medical Services Use by Older Adults: Analysis of a Comprehensive Statewide Database. Ann Emerg Med. 2017 May 27. pii: S0196-0644(17)30354-2. doi: 10.1016/j.annemergmed.2017.03.058.
- Jasti J, Fernandez AR, Schmidt TA, Lerner, EB. EMS Provider Attitudes and Perceptions of Enrolling Patients without Consent in Prehospital Emergency Research. Prehosp Emerg Care. 2016 Jan-Feb; 20(1):22-7.
- Winslow JE, Fernandez AR, Swanson D, Williams JG, Mitchell T, Nicks BA, Askew KL, Alson RL, Nelson DR, Stopyra JP, Zalkin J, Kearns RD, March JA. North Carolina College of Emergency Physicians' Guidance Document on Emergency Medical Services. N C Med J. 2015 Sep-Oct;76(4):256-62.
- Moss C, Cowden CS, Atterton LM, Arasaratnam MH, Fernandez AR, Evarts JS, Barrier B, Lerner EB, Mann NC, Lohmeier C, Shofer FS, Brice JH. Accuracy of EMS Trauma Transport Destination Plans in North Carolina. Prehosp Emerg Care. 2015 January-March;19(1):53-60.

Peer-Reviewed Research Abstracts:

- Fernandez, AR., Myers, B., Crowe, RP., Bourn, S., Mills, M. A Descriptive Assessment of Prehospital Ketamine Administration Using a Statewide Data Repository. Presentation at the Prehospital Care Research Forum International Scientific Symposium at EMS World Expo 2020.
- Mills, M., Crowe, R.P., Myers, B., Wilson, J.K., Kaye, S.P., Fernandez, A.R. An Assessment of the Relationship between the Total Prehospital Naloxone Dose Administered and EMS Transport in West Virginia. The 2019 National Association of State EMS Officials Annual Meeting. 2019. Awarded 1st Place Research Abstract. Salt Lake City, UT.
- Alier, A., Kaye, S.P., Crowe, R.P., Myers, B., Wronski, R.A., Wilson, J.K., Fernandez, A.R. An Assessment of EMS Longevity and the Current EMS Workforce in South Carolina. The 2019 National Association of State EMS Officials Annual Meeting. 2019. Salt Lake City, UT.
- Wilson, J.K., Crowe, R.P., Myers, B., Ezzell, Zalkin, J., Nelson, R.D., Winslow, J., Fernandez, A.R. North Carolina EMS Providers' Experiences and Attitudes Regarding Workplace Violence and Safety. The 2019 National Association of State EMS Officials Annual Meeting. 2019. Salt Lake City, UT.
- Crowe R, Cash RE, Rivard MK, Fernandez AR, Wronski RA, Panchal AR. Work-Related Burnout Is Associated With Higher Odds of Turnover Intention, Sickness Absence, and Injury in EMS. 2018. Oral presentation by the Prehospital Care Research Forum and presented at the annual EMS World Expo. Retrieve from: https://www.emsworld.com/article/221363/research-driving-practice-2018-pcrf-abstracts
- Wronski RA, Harrison C, Alier A, Kaye SP, Wilson JK, Fernandez AR. An Assessment of the Use of Spine Immobilization by EMS Professionals in South Carolina. 2018. Poster presentation by the Prehospital Care Research Forum and presented at the annual EMS World Expo. Retrieve from: https://www.emsworld.com/article/221363/research-driving-practice-2018-pcrf-abstracts
- Allen P, Likens R, Harrison C, Kaye SP, Fernandez AR. A Retrospective Analysis of the Impact of EMD on Cardiac Arrest in North Carolina in 2017. 2018. Poster presentation by the Prehospital Care Research Forum and presented at the annual EMS World Expo. Retrieve from: https://www.emsworld.com/article/221363/research-driving-practice-2018-pcrf-abstracts
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- Nix R, Harrison C, Wronski RA, Grimes V, Kaye SP, Wilson JK, Fernandez AR. Evaluating Hybrid EMT Courses in South Carolina. 2018. Poster presentation by the Prehospital Care Research Forum and presented at the annual meeting of the National Association of EMS Educators. Retrieve from: https://www.emsworld.com/article/221363/research-driving-practice-2018-pcrf-abstracts
- Fernandez AR, Ezzell D, Poche K, Harrison C, Wilson JK, Winslow J. Describing Senior Fall Patients in North Carolina who Refuse Transport. 2018. The 2018 National Association of State EMS Officials Annual Meeting. Awarded 3rd Place Research Abstract.
- Wronski RA, Grimes V, Alier A, Harrison C, Kaye SP, Wilson JK, Fernandez AR. Evaluating Interfacility Transports and Medical Transports in South Carolina. 2018. The 2018 National Association of State EMS Officials Annual Meeting.
- Alier A, Wronski RA, Grimes V, Harrison C, Wilson JK, Kaye SP, Barrier B, Nix R,

Fernandez AR. A Description of Naloxone Administration by Law Enforcement Officers in South Carolina. 2018. The 2018 National Association of State EMS Officials, Annual Meeting. Awarded 1st Place Research Abstract.

- Harrison C, Mills M. Raynes M, Kaye SP, Wilson JK, Fernandez AR. Evaluation of Prehospital Patient Care Performance among Advanced Life Support Providers in West Virginia. 2018. The 2018 National Association of State EMS Officials Annual Meeting.
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	Mandatory Requirements		
Item	Requirement		Comments
4.1: Architecture			
4.1.1.1	The vendor must provide a web-based system that can run on all standard web browsers and operates within all types and speeds of internet connections.	☑	
4.1.1.2	The vendor must provide a system that can run on any type of mobile device (e.g., laptop, tablet, smartphone).	☑	
4.1.1.3	The vendor must host system hardware, software and all data.	☑	
4.1.1.4	The vendor must perform the initial system setup to include agency setup, agency rosters, facilities, geographical information using Federal Information Processing Standards (FIPS) codes for West Virginia and contiguous states, and variable tables using variables approved and supplied in an agreed-upon format.	☑	
4.1.1.5	The vendor must provide a full set of comprehensive, accurate, and up- to-date technical documentation.	☑	
4.1.1.6	The vendor must provide a system that can allow for a minimum of fifty (50) simultaneous connected users without degradation of performance.	☑	
4.1.1.7	The vendor must provide a system that ensures all sensitive information be transmitted securely, using industry standard encryption, and disables insecure cyphers, algorithms, and protocols.	☑	
4.1.1.8	The vendor must provide a user ID field that uses the current system's user IDs and begins with the next logical sequential number. Example: WVXXXXXX (WV followed by a minimum of six (6) digits).	☑	
4.1.1.9	The vendor must provide a system with capability to upload all current system user data from the existing data system.	☑	
4.1.1.10	The vendor must provide an application architecture that allows for changes to data validation to be made by the West Virginia Office of Emergency Medical Services (OEMS) as needed (not requiring vendor intervention to complete/implement).	☑	Currently the software architecture requires vendor intervention to update changes to the data validation. Enabling the state to do this directly is in the

			roadmap for 2021. ESO is committed to making this feature available to West Virginia at no additional cost.
4.1.1.11	The vendor must provide application architecture that allows for configurable business rules including data validation.	☑	Currently the software architecture requires vendor intervention to update business rules, including data validation. In 2021, ESO will be offering greater configuration capabilities for designated state-level roles.
4.1.1.12	The vendor must provide a system that allows new users to create an account with restricted access. Account creation will require email validation and acceptance of system security and usage agreements. New accounts will be created by issuing a unique User ID (per 4.1.1.8) and require a unique email address.	☑	
4.1.1.13	The vendor must provide a system that has application or upgrade procedures designed to have minimal impact on system availability.	☑	
4.1.2: Certification			
4.1.2.1	The vendor must be responsible for daily processing of the National Registry test scores and post those test results in the credentialing profile of the individuals.	☑	The current feed with the National Registry imports and displays information regarding a providers' credential. This import feed can be expanded to include test results.
4.1.2.2	The vendor must develop a cooperative agreement to interface with the National Registry (NREMT) regarding certifications and education.	☑	
4.1.2.3	The vendor must provide a system that allows designated security roles to edit recertification dates.	☑	
4.1.2.4	The vendor must provide a system that allows West Virginia-certified EMS instructors, regardless of job role, to teach any class at or below their current certification level.	☑	
4.1.2.5	The vendor must provide a system that automatically generates recertification dates based upon configurable business rules.	☑	
4.1.2.6	The vendor must provide a system that captures and displays Advanced Life Support (ALS), Basic Life Support (BLS) and Unrestricted Hours for courses on personnel profiles.	☑	While this information is not displayed currently, ESO will work with the State Office of EMS to meet this requirement.

4.1.2.7	The vendor must provide a system with the ability to allow designated security roles to batch print certification cards and certificates.	☑	
4.1.2.8	The vendor must provide a system with the ability to allow designated security roles to print certificates for initial in-state certifications both as a batch and individually.	☑	
4.1.2.9	The vendor must provide the WV DHHR unit responsible for certification access to licensing data for all agencies.	☑	
4.1.2.10	The vendor must provide the OEMS unit responsible for certification access to licensing data for all educational institutions.	☑	
4.1.2.11	The vendor must provide the WV DHHR unit responsible for certification access to licensing data for all educators.	☑	
4.1.2.12	The vendor must provide a system that allows designated security roles to view certification history.	☑	
4.1.2.13	The vendor must provide a system that documents which users granted approval of certifications and, based on designated security roles, allows viewing of granting users for each approval.	☑	
4.1.2.14	The vendor must provide a system that allows designated security roles to manually change certification dates.	☑	
4.1.2.15	The vendor must provide a system that allows for options for certification cards and certification card distribution depending on legislative rules and technologies available.	☑	
4.1.2.16	The vendor must provide a system that allows designated security roles to block individuals from receiving certifications. The system will then block certification until designated security roles remove the block.	☑	
4.1.2.17	Vendor must provide a system that captures and displays the following certification information for individuals		
4.1.2.17.1	Status of the account (pending, active, inactive)	☑	
4.1.2.17.2	Title	☑	
4.1.2.17.3	Suffix	☑	
4.1.2.17.4	First Name	☑	

4.1.2.17.5	Middle Name	☑	
4.1.2.17.6	Last Name	☑	
4.1.2.17.7	Nick Name(s)	☑	
4.1.2.17.8	SSN (but only display the last four)	☑	
4.1.2.17.9	Race	☑	
4.1.2.17.10	Gender	☑	
4.1.2.17.11	Date of Birth	☑	
4.1.2.17.12	Email Address	☑	
4.1.2.17.13	Affiliation Status	☑	
4.1.2.17.14	Mailing Address	☑	
4.1.2.17.14.1	Street Address/P.O. Box Number	☑	
4.1.2.17.14.2	City	☑	
4.1.2.17.14.3	County	☑	
4.1.2.17.14.4	State	☑	
4.1.2.17.14.5	Zip code	☑	
4.1.2.17.15	Current Job data (Employer Name, Employer Type, Job Type, Start Date)	☑	
4.1.2.17.16	Certification Information both current and historical	☑	

4.1.2.17.16.1	Current certification level	☑	
4.1.2.17.16.2	Date Certified	☑	
4.1.2.17.16.3	Date Recertified	☑	
4.1.2.17.16.4	Expiration Date	☑	
4.1.2.17.16.5	Certification Status (Active or expired)	☑	
4.1.2.17.16.6	Certification type (Initial recertification, Supplementary, and Continuing education)	☑	
4.1.2.17.17	Phone Numbers, including home, mobile, work, emergency, fax and pager.	☑	
4.1.12.17.18	Background Check data viewable only by designated security role (Payment Received, Initiated Date, Submission Date, Completion Date, Status, Comments) according to CHS Standards	☑	
4.1.2.18	The vendor must provide a system that shows certification status on the agency roster.	☑	
4.1.12.19	The vendor must provide a system that notifies individuals when they are 30, 60, and 90 days out from certification expiration.	☑	
4.1.2.20	The vendor must provide a system that tracks certification history when a new certification is created or changed.	☑	
4.1.2.21	The vendor must provide a system that includes a drop-down option for the user's status with the following options:		
4.1.2.21.1	Active	☑	
4.1.2.21.2	Certified	☑	
4.1.2.21.3	Suspended	☑	
4.1.2.21.4	Expired	☑	
4.1.2.21.5	Revoked	☑	
4.1.2.21.6	Restricted Practice	☑	

4.1.3: Licensure			
4.1.3.1	The vendor must provide a system that allows each agency to be assigned a single system-generated unique identifier.	☑	
4.1.3.2	The vendor must provide a system that captures and displays items including but not limited to:		
4.1.3.2.1	Mailing Address	☑	
4.1.3.2.2	City	☑	
4.1.3.2.3	County	☑	
4.1.3.2.4	Agency Name	☑	
4.1.3.2.5	Agency Doing Business As	☑	
4.1.3.2.6	Agency License Issue Date	☑	
4.1.3.2.7	Agency Number	☑	
4.1.3.2.8	Billing Status	☑	
4.1.3.2.9	Dispatch Center Fax	☑	
4.1.3.2.10	Dispatch Center Phone	☑	
4.1.3.2.11	Email	☑	
4.1.3.2.12	Emergency Medical Dispatch Vendor	☑	
4.1.3.2.13	Emergency Number	☑	
4.1.3.2.14	Expiration Date	☑	
4.1.3.2.15	Fax Number	☑	
4.1.3.2.16	Inspection Date	☑	

4.1.3.2.17	Inspector	☑	
4.1.3.2.18	National Registry Exam(s) List	☑	
4.1.3.2.19	Organization Status	☑	
4.1.3.2.20	Organization Type	☑	
4.1.3.2.21	Other Services	☑	
4.1.3.2.22	Website	☑	
4.1.3.2.23	Zip	☑	
4.1.3.2.24	State	☑	
4.1.3.2.25	State Exam(s)	☑	ESO is actively working to provide an endorsement drop-down that will be displayed on the certifications table on the personnel profile. Selections will include None, Mobile Critical Care Paramedic, Mobile Critical Care Nurse, C3IFT, C2IFT, Community Paramedicine – EMT, Primary Care Technician (PCT), Community Paramedic Technician (CPT) and Community Paramedic Clinicians (CPC). This will be made available as part of the product offering.
4.1.3.2.26	Status	☑	
4.1.3.2.27	Service Level(s)	☑	
4.1.3.2.28	Phone Number	☑	
4.1.3.2.29	Physical Address	☑	

4.1.3.3	The vendor must provide a system that tracks all EMS agency vehicles.	☑	
4.1.3.3.1	The vendor must provide a system that tracks all vehicle identification numbers.	☑	
4.1.3.3.2	The vendor must provide a system that tracks all vehicle license plate numbers.	☑	
4.1.3.3.3	The vendor must provide a system that tracks all vehicle models.	☑	
4.1.3.3.4	The vendor must provide a system that tracks all vehicle unit names.	☑	
4.1.3.3.5	The vendor must provide a system that tracks all vehicle permit numbers.	☑	
4.1.3.3.6	The vendor must provide a system that tracks permit expiration dates.	☑	
4.1.3.3.7	The vendor must provide a system that tracks vehicle permit types.	☑	
4.1.3.3.8	The vendor must provide a system that tracks vehicle permit levels.	☑	
4.1.3.3.9	The vendor must provide a system that tracks vehicle permit status.	☑	
4.1.3.3.10	The vendor must provide a system that tracks the most recent EMS vehicle inspection date.	☑	
4.1.4: Education			
4.1.4.1	The vendor must provide a system such that the instructor or designated security roles are able to input/view items including, but not limited to:		
1	Course Level	☑	
2	Course Registration Code	☑	
3	Course Status	☑	
4	Course Type	☑	

5	Course Description	☑	
6	Course Start Date	☑	
7	Course End Date	☑	
8	Course Start Time	☑	
9	Course End Time	☑	
10	Course Size	☑	
11	Classes Offered	☑	
12	Comments	☑	
13	Comments Field	☑	
14	Contact Information	☑	
15	County	☑	
16	Course Instructors (Instructor Name, Instructor Number, Instructor Type - including but not limited to Advanced Life Support, Basic Life Support, Critical Care Transport), Guest Instructor Name)	☑	
4.1.4.1.1	The Course data must include data elements – including but not limited to:		
1	Current Instructor Certification(s) with the following data on each certification: Level, Certification, Issue Date, Recertification Date, Expiration Date, License Status.	☑	
2	Date	☑	
3	Cutoff Date	☑	
4	Delivery Type	☑	

5	Demographic Information	☑	
6	Location	☑	
7	Maximum Students	☑	
8	Personnel Roster	☑	
9	Exam Code	☑	
10	Exam Format	☑	
11	Exam Level	☑	
12	Exam Location	☑	
13	Exam Type	☑	
14	Institution Number	☑	
15	Institution Category	☑	
16	Institution Credentials	☑	
17	Institution Name	☑	
18	Institution Number	☑	
19	Institution Type	☑	
20	Instructor	☑	
21	Most Recent Certification (Level, Expiration, Date, Status)	☑	
22	Name	☑	

23	Region	☑	
24	SSN	☑	
25	State ID	☑	
26	Status (Completed, Passed, Failed, Withdrew Passing, Withdrew Failing, or Never Attended).	☑	
27	Student Name	☑	
4.1.4.2	The vendor must provide a system that allows instructors to add students to the course roster.	☑	
4.1.4.3	The vendor must provide a system that allows designated security roles to access, export, and/or print a master list of approved classes.	☑	While this feature is not currently available, ESO will work with the State Office of EMS to meet this requirement
4.1.4.4	The vendor must provide a system that includes data fields for out of state education and/or certification information.	☑	
4.1.4.5	The vendor must provide a system that shows statistics on initial course information, course progress, and course completion percentage.	☑	
4.1.4.6	The vendor must provide a system that allows designated security roles to access, update, and edit class information.	☑	
4.1.4.7	The vendor must provide a system that allows designated security roles to add instructor first and last names, contact information, state identification number, certification level, entity type, and job type.	☑	
4.1.4.8	The vendor must provide a system that allows course instructors to enter pass, fail, and withdrawal for the students taking their course(s).	☑	
4.1.4.9	The vendor must provide a system that allows users to search all available courses by course type, course format, course date range, and course region/county.	☑	
4.1.4.10	The vendor must provide a system that allows searches for Educational Institutions by Number, Name, Type, Category, Instructor, Course, Region, County, and Status.	☑	

4.1.4.11	The vendor must provide a system that has a picklist of pre-approved courses.	☑	While this feature is not currently available, ESO will work with the State Office of EMS to meet this requirement
4.1.4.12	The vendor must provide a system that allows designated security roles to add to the pre-approved list.	☑	While this feature is not currently available, ESO will work with the State Office of EMS to meet this requirement
4.1.4.13	The vendor must provide a system that can track credentials and instructor cards for WV EMS educators.	☑	
4.1.4.13.1	The EMS Educator fields must include but not be limited to:		
1	The person's unique instructor number	☑	
2	Associated Medical Command Region	☑	
3	Associated Region	☑	
4	Personnel Certification Length	☑	
5	Primary Dispatch Transmit Frequency	☑	
6	Primary Service	☑	
7	Service Level	☑	
8	Standard	☑	
9	Status	☑	
10	Demographics (Gender, Race, Ethnicity, Status)	☑	
11	Continuous Tone-Coded Squelch System Transmit Receive Frequency	☑	
12	Allow ability to use data from external feeds when building Reporting.	☑	
13	Allow editing and updating of saved specifications	☑	

14	Allow entry of multiple parameters for any report field (such as a date range)	☑	
15	Allow inclusion of any field in the database	☑	
16	Allow running of Reporting using the software, without any additional desktop requirements	☑	
17	Allow saving of report specifications to be re-used	☑	
18	Create custom Reporting	☑	
19	Save and share custom/ad-hoc report definitions	☑	
20	Utilize, filter, and sort on any data element captured	☑	
21	Course Code	☑	
22	Course End Date	☑	
23	Class Start Date	☑	
24	Class Start Time	☑	
4.1.4.14	The vendor must provide a system that has the ability to generate an education institute and instructor report on individual certification expirations, application due dates, and updated lists of eligible instructors.	☑	
4.1.4.15	The vendor must provide a system with search options to search for specific instructors on instructor last name, institution, course name, license level, approval level, region, or county.	☑	
4.1.4.16	The vendor must provide a system with the ability to allow designated security roles to add and delete courses.	☑	
4.1.4.17	The vendor must provide a system with the ability to have multiple course instructors listed.	☑	
4.1.4.18	The vendor must provide a system that links with West Virginia's current testing Scantron system to import test scores.	☑	The solution currently provides a linkage with Scantron to import test scores onto the user profiles nightly.

			This same functionality can be implemented within the State of West Virginia.
4.1.4.18.1	The vendor must import test scores from the State within 24 business hours of receipt of the scored exams.	☑	The solution currently provides a linkage with Scantron to import test scores onto the user profiles nightly. This same functionality can be implemented within the State of West Virginia.
4.1.4.19	The vendor must provide a system that allows designated security roles to add instructors by name.	☑	
4.1.4.20	The vendor must provide a system that allows designated security roles to see who approved courses and include options for courses to be edited or canceled.	☑	
4.1.4.21	The vendor must provide a system that includes online registration to classes.	☑	
4.1.4.21.1	The online registration portal must allow instructors to pull Excel spreadsheets with class rosters.	☑	
4.1.5: Exporting Data			
4.1.5.1	The vendor must provide a system that allows data to be exported in various file formats including but not limited to: .pdf, .docx, .xlsx and .csv data files	☑	
4.1.5.2	The vendor must provide a system that can generate a report of any errors encountered in the export process.	☑	
4.1.5.3	The vendor must provide a system that can generate and send notifications to designated security roles when system errors occur in the export process.	☑	
4.1.5.4	The vendor must provide a system with an integrated export tool that allows designated security roles the ability to build exports.	☑	
4.1.5.5	The vendor must provide a system with the ability to send/replicate data to external data warehouses or other repositories for indexing and reporting purposes in various formats, including HL7.	☑	
4.1.6: Functionality			
4.1.6.1	The vendor must provide a system that allows West Virginia MIS staff full access to the system and the data.	☑	

4.1.6.1.1	The vendor must provide a system that allows for automated reporting capabilities.	☑	
4.1.6.1.2	The vendor must provide a system that allows the State to programmatically test system accessibility.	☑	
4.1.6.2	The vendor must provide a system that is configurable to account for any changes to statutory or administrative code or regulatory requirements.	☑	
4.1.6.3	The vendor must provide a system that allows users to save and edit a partially entered record (i.e., no data are lost if user is interrupted and must leave system and return before record is complete) and enter any missing data at a later time.	☑	
4.1.6.4	The vendor must provide a system that displays the date and time of most recent record update and identify who provided the update.	☑	
4.1.6.1.5	The vendor must provide a system that allows designated security roles the ability to merge records identified as duplicate; business rules may automate the merging process but still allow users to approve record merges.	☑	Merging duplicate records (typically caused by the input of incorrect SSNs by the end-user) are currently merged by the ESO support team. ESO will consider enabling this feature for additional security levels at the state office for individuals who are not credentialed across state lines.
4.1.6.1.6	The vendor must provide a system that allows designated security roles to restore records to the state prior to most recent data change.	☑	
4.1.6.1.7	The vendor must provide a system that allows designated security roles to configure data standards for mandated agencies and must be able to score those agencies relative to those standards.	☑	Currently the system requires vendor intervention to make configurations to the data quality scoring calculations. Enabling system configurations at the state end-user level to the data standards is on the roadmap for 2021. ESO is committed to making this feature available to West Virginia at no additional cost.
4.1.6.1.8	The vendor must provide a system that assigns a system-generated unique identifier for a record upon its creation.	☑	

4.1.6.1.9	The vendor must provide a system that auto-populates applicable fields logically (e.g., age in years given birth date).	☑	
4.1.6.1.10	The vendor must provide a system that auto-populates the county field based on address and zip code.	☑	
4.1.6.1.11	The vendor must provide a system that can facilitate the search for a previously submitted individual record.	☑	
4.1.6.1.12	The vendor must provide a system that can query by specific certification levels (e.g., paramedics) for targeted communication.	☑	
4.1.6.1.13	The vendor must provide a system that has fuzzy search functionality.	☑	
4.1.6.1.14	The vendor must provide a system that is accessible 24/7/365 with at least 99.999% availability, not including planned maintenance and/or outages.	☑	ESO guarantees system accessibility 24/7/365 with at least 99.99% availability (excluding planned maintenance)
4.1.6.1.15	The vendor must provide a system that negates applicable fields ("grayed-out" or not shown) logically (i.e., no EMS transport data if patient refused, no trauma O.R. data if no operations performed, etc.) with appropriate default codes entered automatically into the record.	☑	
4.1.6.1.16	The vendor must provide a system that has save and cancel functionality on all input screens with an "Are you sure?" popup if there will be a data loss.	☑	
4.1.6.1.17	The vendor must provide a system with an automated worktlow that prompts electronic patient care records (ePCRs) and other reports through the necessary steps for report confirmation and completion (quality assurance group, medical directors, etc.).	☑	
4.1.6.1.18	The vendor must provide a system with change tracking, showing previous versioning and the previous value of any changed records, along with who made any changes and when they made changes.	☑	
4.1.6.1.19	The vendor must provide a system with drop-down and/or pick-list selections for multi-choice fields.	☑	
4.1.6.1.20	The vendor must provide a system with the ability for designated security roles to generate notification systems based upon defined criteria.	☑	

4.1.6.1.21	The vendor must provide a system with the ability to create maps based on system data or at a minimum, the ability to export a report with geotags.	☑	ESO currently has the ability to export raw data and port to mapping software. ESO is currently building this feature for users and will make it available for the State Application users at the same time.
4.1.6.1.22	The vendor must provide a system with the ability to flag potential duplicate records, and based on business rules, the system must have the ability to de-duplicate records.	☑	
4.1.6.1.23	The vendor must provide a system with. the ability to support user errors during password reset, and which allows the system to authenticate users through online security questions, by email, or by phone.	☑	
4.1.6.1.24	The vendor must provide a system with the ability to run reports without impacting online system response time.	☑	
4.1.6.1.25	The vendor must provide a system with the capability to run queries related to errors and warnings pertaining to submitted records.	☑	
4.1.6.1.26	The vendor must provide a system with the ability to broadcast messages to all entities on a front page, as well as separate electronic notification (e-mail, text message, etc.).	☑	
4.1.6.1.27	The vendor must provide a system that verifies the user's email address at least annually, and upon change to email address.	☑	ESO will work with the State Office of EMS to provide the functionality within the system.
4.1.6.1.28	The vendor must provide a system that has the ability for the user to update the email address.	☑	
4.1.6.1.29	The vendor must provide a system that generates a paper patient care record summary.	☑	
4.1.7: Incoming Data			
4.1.7.1	The vendor must provide a system that allows designated security roles to pull up previously entered records and update information.	☑	
4.1.7.2	The vendor must provide a system that generates error messages for duplicate record entry.	☑	
4.1.7.3	The vendor must provide a system that generates reject and error messages for incomplete records.	☑	

4.1.7.4	The vendor must provide a system that prevents patient care records from being deleted by users once entered.	☑	
4.1.7.5	The vendor must provide a system that receives National Emergency Medical Services Information System (NEMSIS) data from other EMS systems via standard data exchanges, such as XML, text, HL7, and JSON interfaces.	☑	
4.1.7.6	The vendor must provide a system that rejects submission of and provides an error message when a report is completed illogically (e.g., future date of birth, date of birth 150 years ago, pregnant male).	☑	
4.1.7.7	The vendor must provide a system that sends file transfer notification and validation receipts electronically to the data submitter and the data owner as applicable and includes the specific record rejected, reason for rejection, and specific error type and definition.	☑	
4.1.7.8	The vendor must provide a system that can securely exchange HL7 data with approved entities.	☑	
4.1.7.9	The vendor must provide a system that allows individual records with errors to be rejected from a batch while all error-free records in the batch are accepted.	☑	
4.1.7.10	The vendor must provide a system that allows submission of batch data files.	☑	
4.1.7.11	The vendor must provide a system that identifies and tracks users (by name, date, submitting entity, etc.) for each record submitted.	☑	
4.1.7.12	The vendor must provide a system that identifies and tracks users (by name, date, submitting entity, etc.) for each revised record.	☑	
4.1.7.13	The vendor must provide a system that rejects incomplete records and generates an error message for the missing fields.	☑	
4.1.7.14	The vendor must provide a system that generates a message immediately to confirm successful file transfer with count of total records transferred, number of records accepted, and number of records rejected for errors.	☑	
4.1.8: Interface			
4.1.8.1	The vendor must provide a system that allows users to submit EMS run data through a web-based data entry tool, or through a file import process.	☑	

4.1.8.2	The vendor must provide a system that communicates with other state systems.	☑	
4.1.8.3	The vendor should provide a system that communicates with the state police system for background checks.	☑	While the system currently supports the ability for the WV state office staff to manually enter background check information, the system does interface with other state court systems to support the automation of background checks "hits" via a nightly feed. ESO welcomes discussions with the state police system and the WVOEMS to establish automation as applicable.
4.1.8.4	The vendor must provide a system that has the ability to connect to other local or state systems or data sources such as the West Virginia Health Information Network, hospital electronic health records, vital statistics, crash statistics, and census statistics.	☑	
4.1.8.5	The vendor must provide a system that communicates with current registries (including but not limited to trauma, stroke, cancer) as well as future registries (including but not limited to bum, child, sepsis, Narcan).	☑	
4.1.8.6	The vendor must work with EMS agencies to approve the EMS run data transfer format and verify data quality.	☑	
4.1.8.7	The vendor should provide a system that tracks background checks through West Virginia Clearance for Access: Registry & Employment Screening (WVCARES).	☑	While the system currently supports the ability for the WV state office staff to manually enter background check information, the system does interface with other state systems to support the automation of background check "hits" via a nightly feed. ESO welcomes discussions with the WV CARES and the WVOEMS to facilitate the tracking of background checks for WV EMS personnel.
4.1.8.7.1	The vendor should comply with additional requirements for access to WVCARES.	☑	ESO is committed to complying with all access requirements to WV CARES.
4.1.9 Legal			

4.1.9.1	All data is the property of the State of West Virginia.	☑	
4.1.9.2	The vendor must obtain written consent from the State of West Virginia before using data for research or other purposes.	☑	
4.1.9.3	The vendor must comply with all federal, state, and Agency security and privacy policies and procedures found on the WV Office of Technology site (http://www.technology.wv.gov/Pages/default.aspx) and the National Institute of Standards and Technology (http://www.nist.gov).	☑	
4.1.9.4	The vendor must follow all federal, state, and Agency policies, procedures, and guidelines related to breach notification found on the WV Office of Technology (http://www.technology.wv.gov/Pages/default.aspx), and the National Institute of Standards and Technology (http://www.nist.gov).	☑	
4.1.9.5	The vendor must make any amendment(s) to protected health information in a designated record set as directed or agreed to by the Agency, if necessary, pursuant to 45 CFR 164.526 or take other measures as necessary to satisfy the Agency's obligations under 45 CFR 164.526.	☑	
4.1.9.6	The vendor must make available protected health information in a designated record set (file or report, format to be presented) to the Agency as necessary to satisfy the Agency's obligations under 45 CFR 164.524.	☑	
4.1.9.7	The vendor must make its internal practices and records available to the Agency for purposes of determining compliance with Federal, State, and Agency policies and procedures, if necessary.	☑	
4.1.9.8	The vendor must transfer all or requested parts of the data to any contractors of the State or to the State directly in a format of the State's choosing if/when the vendor ceases to be able to provide hosting services, upon contract termination, or the State chooses to host the application on State servers, or upon demand.	☑	
4.1.9.9	The vendor must, in accordance with 45 CFR 164.502(eXl)(ii) and 164.308(b)(2) if applicable, ensure that any subcontractors that create, receive, maintain, or transmit protected health information on behalf of the vendor agree to the same restrictions, conditions,	☑	

	and requirements that apply to the vendor with respect to such information.		
4.1.9.10	The vendor must, to the extent the vendor is able to carry out one or more of the Agency's obligation(s) under Subpart E of 45 CFR Part 164, comply with the requirements of Subpart E that apply to the Agency in the performance of such obligation(s).	☑	
4.1.9.11	Vendor must provide a copy of all applicable software terms with bid submission for review and approval by the State of West Virginia.	☑	
4.1.10 Electronic Patient Care Record			
4.1.10.1	The vendor must provide a system that has advanced vital signs documentation including BP, HR, Resp., MAP, SpO2, Capnometry and auto-calculation of Glasgow Coma Scale, Revised Trauma Score, and Pediatric Trauma Score.	☑	
4.1.10.2	The vendor must be NEMSIS compliant.	☑	
4.1.10.3	The vendor must support the most recent version of NEMSIS.	☑	
4.1.10.4	The vendor must provide a list of mandatory data elements (as available on the NEMSIS website) that also incorporate West Virginia-specific fields.	☑	
4.1.10.5	The vendor must provide a system with data warehouse functionality.	☑	
4.1.10.6	The vendor must provide a system that migrates and crosswalks the current NEMSIS V2 data system so that reports can be run using the most recent NEMSIS version.	☑	
4.1.11 Plans			
4.1.11.1	The vendor must maintain a Risk and Issue Log.	☑	
4.1.11.2	The vendor must provide a 24/7/365 support and maintenance plan for host system maintenance and support service, upgrades, consultations, technical support, and includes but is not limited to: the ability to reset passwords, assist in issues inputting run sheets, and for emergency system help and/or instruction.	☑	ESO support is available Monday – Friday 7:00AM to 7:00PM CST by phone, email and chat. After hours support for severity 1 issues is available through our on-call team. Password reset is available to the end users via the primary login page. ESO offers on-

			demand training for users if they have issues and need quick technical support for password reset. ESO would be happy to provide a separate quote for 24/7/365 password reset live support.
4.1.11.3	The vendor must provide a Business Continuity Plan within 30 days of contract execution.	☑	
4.1.11.3.1	The Business Continuity Plan must include how data is restored, what backup measures are in place in case normal business operations cannot continue due to power outages/catastrophe, where the data is stored in such emergencies, and how data is safeguarded in normal and emergency situations.	☑	
4.1.11.4	The vendor must provide a Change Management Plan within 30 days of contract execution.	☑	
4.1.11.5	The vendor must provide a Project Management Plan for the implementation phase, which includes tasks, milestones and timelines, a Project Schedule, a Security, Privacy, and Confidentiality Plan within thirty (30) calendar days, a Cost M management Plan, a Quality Management Plan, a Resource Management Plan, and a Risk Management Plan.	☑	
4.1.11.6	The vendor must provide weekly status reports throughout implementation.	☑	
4.1.11.7	The vendor must provide a Stakeholder Engagement Plan within 30 days of contract execution.	☑	
4.1.11.8	The vendor must provide a Communication Plan within 30 days of contract execution.	☑	
4.1.11.9	The vendor must provide a Training Plan within 30 days of contract execution.	☑	
4.1.11.10	The vendor must follow the Project Management Body of Knowledge (PMBOK®).	☑	
4.1.12 Reporting			
4.1.12.1	The vendor must provide a system that allows designated security roles to download raw data for reporting and analysis purposes.	☑	
4.1.12.2	The vendor must provide a system that allows multiple data sources to be tied to a single query.	☑	

4.1.12.3	The vendor must provide a system that allows queries to be sorted by any field, with the ability to sort by multiple fields.	☑	
4.1.12.4	The vendor must provide a system that can store and retrieve queries, filters, populations, and other select criteria.	☑	
4.1.12.5	The vendor must provide a system that facilitates basic statistical analysis (i.e., mean, median, nth percentile, and standard deviation).	☑	
4.1.12.6	The vendor must provide multiple options for data visualization, including charting, graphing, and infographics, for all reports.	☑	
4.1.12.7	The vendor must provide a system that has data search capability for quality improvement reporting.	☑	
4.1.12.8	The vendor must provide a system that has dynamic and ad hoc reporting capabilities, and that allows reports to be saved and reused.	☑	
4.1.12.9	The vendor must provide a system with the ability to generate reports and statistics based upon configurable business rules.	☑	
4.1.12.10	The vendor must have the ability to generate hospital or agency reporting compliance reports by individual hospital or agency, trauma region, or statewide.	☑	
4.1.12.11	The vendor must provide a system that allows query results to be conditionally formatted (e.g., use red font if results are a negative number).	☑	
4.1.12.12	The vendor must provide a system that can plot Patient Care Record (PCR) trends over time for major events.	☑	
4.1.12.13	The vendor must provide a system that supports the development and sharing of reports and query solutions.	☑	
4.1.13 Security and Recovery			
4.1.13.1	The vendor must implement security patches in a timely manner (monthly at minimum) and address bug fixes in a timeframe negotiated with the Department.	☑	
4.1.13.2	The vendor must provide a disaster recovery site a minimum of 125 miles away from the production environment.	☑	As a SaaS offering hosted within the Azure cloud environment, ESO's platform infrastructure is geo-redundant across azure zones.
4.1.13.3	The vendor must provide a system that allows designated security roles to configure rules and data validation.	☑	

4.1.13.4	The vendor must provide a system that allows designated security roles to create, modify, and disable business rules.	☑	
4.1.13.5	The vendor must provide a system that allows designated security roles to lock out an individual user or user group.	☑	
4.1.13.6	The vendor must provide a system that allows designated security roles to set general and client-based reminders.	☑	
4.1.13.7	The vendor must provide a system that allows designated security roles to tie alerts to user log-in at the program or individual level.	☑	The solution allows designated security roles the ability to receive email alerts regarding important notifications (such as upcoming certification expirations). ESO is happy to discuss additional system notifications as needed by the State.
4.1.13.8	The vendor must provide a system that allows individual facilities to access patient care records.	☑	
4.1.13.9	The vendor must provide a system that has backup, recovery, and restores capability in place at start-up.	☑	
4.1.13.10	The vendor must provide a system that		
4.1.13.10.1	Requires two-factor password authentication as approved by OEMS.	☑	ESO currently offers two-factor authentication for EHR and Analytics users. ESO is integrating two-factor password authentication within the State Application offerings in 2021.
4.1.13.10.2	Requires minimum password length and complexity per established National Institute of Standards and Technology (NIST) standards.	☑	
4.1.13.10.3	Automatically logs users out after a set period of nonactivity and includes a notification message of timeout.	☑	
4.1.13.10.4	Locks users out after a number of unsuccessful log-in attempts and sends a notification email to the user.	☑	ESO is committed to enabling this functionality in 2021.
4.1.13.11	The vendor must provide a system in which the State can implement a single sign-on solution using the same credentials as for the vendor's system.	☑	
4.1.13.12	The vendor must provide a system that has data encryption to protect the data in the database at rest and during data transmission.	☑	

4.1.13.13	The vendor must provide a system that includes role-based user management.	☑	
4.1.13.14	The vendor must provide a system that tracks user account activation and user activity for monitoring use and security purposes.	☑	
4.1.13.15	The vendor must provide application upgrades to protect sensitive data (Open Web Application Security Project standards).	☑	
4.1.14 Support and Training			
4.1.14.1	The vendor must complete all user training before the project go-live date.	☑	
4.1.14.2	The vendor must provide end-user documentation to include a full set of comprehensive, accurate, and up-to-date user manuals written in non-technical English. (Fifth grade reading level as measured by the Flesch-Kincaid Grade Level Test).	☑	ESO will ensure all user manuals are up-to-date and written in a user-friendly and non-technical manner.
4.1.14.3	The vendor must provide in-person training sessions for each of the seven trauma regions, as well as at least three in-person training sessions for OEMS staff.	☑	
4.1.14.4	The vendor must provide initial on-site support and training and train the-trainer sessions, including recording the support and training programs, and furnish OEMS copies of all materials used in the support and training programs in the requested format, including online support and training module(s).	☑	
4.1.14.5	The vendor must provide post-implementation support.	☑	
4.1.14.6	The vendor must support multiple methods of contact for submitting and resolving technical and end-user support requests.	☑	
4.1.14.7	The vendor must provide support and training (including manuals) for both administrators and general users	☑	ESO will ensure all users manuals are up-to-date and available online for both administrators and general users.

Proc Folder:	751672		**Reason for Modification:**
Doc Description:	EMERGENCY MEDICAL SERVICES DATA SYSTEM		ADDENDUM 1 ANSWERS TO VENDOR QUESTIONS
Proc Type:	Central Contract - Fixed Amt		

Date Issued	Solicitation Closes	Solicitation No	Version
2020-10-02	2020-10-07 13:30	CRFQ 0506 BPH2100000003	2

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON   WV   25305
US

VENDOR

Vendor Customer Code: VS0000010822

Vendor Name :   ESO Solutions, Inc.

Address :

Street :   11500 Alterra Pkwy, #100

City :   Austin

State :   Texas   **Country :**   USA   **Zip :** 78758

Principal Contact :   Allen Johnson

Vendor Contact Phone: (866) 766-9471   **Extension:**   1017

FOR INFORMATION CONTACT THE BUYER
Crystal G Hustead
(304) 558-2402
crystal.g.hustead@wv.gov

Vendor **Signature X**	*[signature]*	**FEIN#** 36-4566209	**DATE** 10/7/2020

All offers subject to all terms and conditions contained in this solicitation

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES (DHHR), BUREAU FOR PUBLIC HEALTH (BPH), IS SOLICITING BIDS TO ESTABLISH A CONTRACT FOR EMERGENCY MEDICAL SERVICES DATA SYSTEM PER THE ATTACHED DOCUMENTS.

QUESTIONS REGARDING THE SOLICITATION MUST BE SUBMITTED IN WRITING TO CRYSTAL.G.HUSTEAD@WV.GOV PRIOR TO THE QUESTION PERIOD DEADLINE CONTAINED IN THE INSTRUCTIONS TO VENDORS SUBMITTING BIDS

INVOICE TO	SHIP TO
HEALTH AND HUMAN RESOURCES BPH - OFFICE OF EMERGENCY MEDICAL SERVICES 350 CAPITOL ST, RM 425 CHARLESTON　　　　WV　25301-3714 US	HEALTH AND HUMAN RESOURCES BPH - OFFICE OF EMERGENCY MEDICAL SERVICES 350 CAPITOL ST, RM 425 CHARLESTON　　　　WV　25301-3714 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Emergency Medical Services Data System - YEAR ONE	1		$325,000	$325,000

Comm Code	Manufacturer	Specification	Model #
80101500			

Extended Description:
Maintain and Manage WV EMS DATA System - Year 1

INVOICE TO	SHIP TO
HEALTH AND HUMAN RESOURCES BPH - OFFICE OF EMERGENCY MEDICAL SERVICES 350 CAPITOL ST, RM 425 CHARLESTON　　　　WV　25301-3714 US	HEALTH AND HUMAN RESOURCES BPH - OFFICE OF EMERGENCY MEDICAL SERVICES 350 CAPITOL ST, RM 425 CHARLESTON　　　　WV　25301-3714 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Emergency Medical Services Data System - YEAR TWO	1		$325,000	$325,000

Comm Code	Manufacturer	Specification	Model #
80101500			

Extended Description:
Maintain and Manage WV EMS DATA System - Year 2

INVOICE TO			SHIP TO		
HEALTH AND HUMAN RESOURCES BPH - OFFICE OF EMERGENCY MEDICAL SERVICES 350 CAPITOL ST, RM 425 CHARLESTON WV 25301-3714 US			HEALTH AND HUMAN RESOURCES BPH - OFFICE OF EMERGENCY MEDICAL SERVICES 350 CAPITOL ST, RM 425 CHARLESTON WV 25301-3714 US		

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Emergency Medical Services Data System - YEAR THREE	1		$325,000	$325,000

Comm Code	Manufacturer	Specification	Model #
80101500			

Extended Description:
Maintain and Manage WV EMS DATA System - Year 3

INVOICE TO			SHIP TO		
HEALTH AND HUMAN RESOURCES BPH - OFFICE OF EMERGENCY MEDICAL SERVICES 350 CAPITOL ST, RM 425 CHARLESTON WV 25301-3714 US			HEALTH AND HUMAN RESOURCES BPH - OFFICE OF EMERGENCY MEDICAL SERVICES 350 CAPITOL ST, RM 425 CHARLESTON WV 25301-3714 US		

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Emergency Medical Services Data System - YEAR FOUR	1		$325,000	$325,000

Comm Code	Manufacturer	Specification	Model #
80101500			

Extended Description:
Maintain and Manage WV EMS DATA System - Year 4

SCHEDULE OF EVENTS

Line	Event	Event Date
1	VENDOR QUESTION DEADLINE	2020-09-23

SOLICITATION NUMBER: CRFQ BPH21000000003
Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as CRFQ BPH21000000003 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[ ] Modify bid opening date and time

[ ] Modify specifications of product or service being sought

[x] Attachment of vendor questions and responses

[ ] Attachment of pre-bid sign-in sheet

[ ] Correction of error

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.

2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CRFQ BPH21000000003

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)

[X] Addendum No. 1	[ ] Addendum No. 6
[ ] Addendum No. 2	[ ] Addendum No. 7
[ ] Addendum No. 3	[ ] Addendum No. 8
[ ] Addendum No. 4	[ ] Addendum No. 9
[ ] Addendum No. 5	[ ] 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.
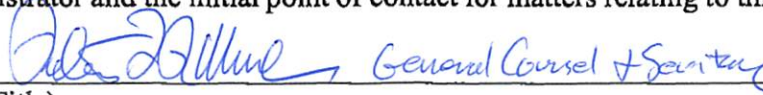
ESO Solutions, Inc.
_____
Company

_____
Authorized Signature

10/7/2020
_____
Date

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

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DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

[signature] General Counsel & Secretary
_____
(Name, Title)
       Robert Munden, General Counsel & Secretary
_____
(Printed Name and Title)
       11500 Alterra Pkwy #100, Austin, TX 78758
_____
(Address)
       Ph:(866) 766-9471 ext 1253 Fax: (512) 383-1826
_____
(Phone Number) / (Fax Number) Robert.Munden@eso.com
_____
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

ESO Solutions, Inc.
_____
(Company)
[signature]
_____
(Authorized Signature) (Representative Name, Title)

Chris Dillie, CEO
_____
(Printed Name and Title of Authorized Representative)

10/7/2020
_____
(Date)

Ph: (866) 766-9471 ext 1031 Fax: (512) 383-1826
_____
(Phone Number) (Fax Number)

Contract Manager

11.1 Contract Manager: During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract Manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract Manager and his or her contact information below:

Contact Manager: Chris Montera, Director of State and Federal Business

Telephone Number: (866) 766-9471

Fax Number: (512) 383-1826

Email Address: Chris.Montera@eso.com

Exceptions

Item 36. INDEMNIFICATION. The agreement should contain commercially reasonably limitations of liability (as to both type and magnitude). Our standard language is below, but we commonly tailor this to the specific risks and parameters of a project:

LIMITATION OF DAMAGES. NEITHER ESO NOR CUSTOMER SHALL BE LIABLE TO THE OTHER FOR ANY CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE OR INCIDENTAL DAMAGES, INCLUDING CLAIMS FOR DAMAGES FOR LOST PROFITS, GOODWILL, USE OF MONEY, INTERRUPTED OR IMPAIRED USE OF THE SERVICE, AVAILABILITY OF DATA, STOPPAGE OF WORK OR IMPAIRMENT OF OTHER ASSETS RELATING TO THIS AGREEMENT.

SPECIFIC LIABILITY. LIABILITY SHALL BE LIMITED AS FOLLOWS: (a) ESO'S OBLIGATIONS UNDER SECTION 11 SHALL BE LIMITED TO $500,000. (b) DAMAGES ARISING FROM A PARTY'S BREACH OF CONFIDENTIALITY OBLIGATIONS (INCLUDING A BREACH OF OBLIGATIONS REGARDING PROTECTED HEALTH INFORMATION), SHALL BE LIMITED TO $1,000,000. (c) DAMAGES ARISING FROM A PARTY'S WILLFUL MISCONDUCT OR CRIMINAL CONDUCT SHALL NOT BE LIMITED.

GENERAL LIABILITY. EXCEPT AS EXPRESSLY PROVIDED "SPECIFIC LIABILITY," ESO'S MAXIMUM AGGREGATE LIABILITY FOR ALL CLAIMS OF LIABILITY ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT SHALL NOT EXCEED THE FEES PAID BY (OR ON BEHALF OF) CUSTOMER WITHIN THE PRECEDING 12-MONTH PERIOD UNDER THE APPLICABLE ADDENDUM OR EXHIBIT GIVING RISE TO THE CLAIM.

THE FOREGOING LIMITATIONS, EXCLUSIONS, DISCLAIMERS SHALL APPLY REGARDLESS OF WHETHER THE CLAIM FOR SUCH DAMAGES IS BASED IN CONTRACT, WARRANTY, STRICT LIABILITY, NEGLIGENCE, TORT OR OTHERWISE. INSOFAR AS APPLICABLE LAW PROHIBITS ANY LIMITATION HEREIN, THE PARTIES AGREE THAT SUCH LIMITATION SHALL BE AUTOMATICALLY MODIFIED, BUT ONLY TO THE EXTENT SO AS TO MAKE THE LIMITATION PERMITTED TO THE FULLEST EXTENT POSSIBLE UNDER SUCH LAW. THE PARTIES AGREE THAT THE LIMITATIONS SET FORTH HEREIN ARE AGREED ALLOCATIONS OF RISK CONSTITUTING IN PART THE CONSIDERATION FOR ESO'S SOFTWARE AND SERVICES TO CUSTOMER, AND SUCH LIMITATIONS WILL APPLY NOTWITHSTANDING THE

FAILURE OF THE ESSENTIAL PURPOSES OF ANY LIMITED REMEDY AND EVEN IF A PARTY HAS BEEN
ADVISED OF THE POSSIBILITY OF SUCH LIABILITIES.
THIS SECTION SHALL SURVIVE EXPIRATION OR TERMINATION OF THE AGREEMENT.

Item 4.1.9.8: Data should be subject to vendor's reasonable agreement.

Clarifications:

Item 4.1.9.11: Our service/subscription terms are as follows; no license (other than as to access to
the service) is being granted.

LICENSE/SUBSCRIPTION TO SOFTWARE

1.1. Grant of Subscription. During the Term Customer may access and use the **[name of
services for which subscription is sought/cross reference to listing]** (the *"Services"*),
with the access and volume limitations set forth [thereon / _____] subject to
Customer's compliance with the Use Restrictions and other limitations contained in
this Agreement.

1.2. Use Restrictions. Except as provided in this Agreement or as otherwise authorized
by ESO, Customer has no right to, and shall not: (a) decompile, reverse engineer,
disassemble, print, copy or display the any software access to which is provided
through the Services (*"Software"*) or otherwise reduce such software to a human-
perceivable form in whole or in part; (b) publish, release, rent, lease, loan, sell,
distribute or transfer the Software to another person or entity; (c) reproduce the
Software for the use or benefit of anyone other than Customer; (d) alter, modify or
create derivative works based upon the Software or the Services either in whole or
in part; or (e) use or permit the use of the Services for commercial time-sharing
arrangements or providing service bureau, data processing, rental, or other services
to any third party.

1.3. Ownership. The rights granted under the provisions of this Agreement do not
constitute a sale of the Software or the Services. ESO retains all right, title, and
interest in and to the Software and the Services, including without limitation all
software used to provide the Software and the Services and all graphics, user
interfaces, logos and trademarks reproduced through the Software and the
Services, except to the limited extent set forth in this Agreement. This Agreement
does not grant Customer any intellectual property rights in the Software and the
Services or any of its components, except to the limited extent that this Agreement
specifically sets forth Customer's rights to access the Services during the Term.
Customer acknowledges that the Services and Software and their respective
components are protected by copyright and other laws.

2. **HOSTING, SLA & SUPPORT SERVICES**

2.1. Scheduled Downtime. ESO will endeavor to provide reasonable (72 hour) notice of
Scheduled Downtime to Customer's Users. Notice of Scheduled Downtime may be

provided from within the Software or via email. Scheduled Downtime shall never constitute a failure of performance or Outage by ESO. Notification timelines and the frequency of Scheduled Downtime are subject to the emergence of security concerns outside of ESO's control.

2.2. <u>Support and Updates</u>. During the Term, ESO shall provide to Customer the Support Services, in accordance with Exhibit [A], which is incorporated herein by reference.

3. **FEES**

3.1. <u>Fees</u>. In consideration of the rights granted hereunder, Customer agrees to pay ESO the fees for the Services as set forth _____ (collectively, *"Fees"*). The Fees are non-cancelable and non-refundable, except as expressly provided herein.

4. **TERM AND TERMINATION**

4.1. <u>Term</u>. The term of this Agreement (the *"Term"*) commences on the Effective Date and continues for a period of _____. Thereafter, the Term will renew for successive one-year periods unless written notice is provided at least 60 days prior to the anniversary of the Effective Date.

4.2. <u>Termination for Cause</u>. Either party may terminate this Agreement or any individual Addendum for the other party's uncured material breach or material default by providing written notice. The breaching party shall have 30 days from receipt to cure such material breach or material default to the reasonable satisfaction of the non-breaching party.

4.3. <u>Effect of Termination</u>.

4.3.1. If Customer terminates this Agreement or any Addendum as a result of ESO's material breach, then to the extent Customer prepaid any Fees, ESO shall refund to Customer those prepaid Fees on a pro-rata basis from the date Customer actually ceases use of the Software.

4.3.2. Upon termination of this Agreement or any Addendum, Customer shall cease all use of the Software and delete, destroy or return all copies of the Documentation and Licensed Software in its possession or control, except as required by law. Customer shall remain obligated to pay appropriate Fees at ESO's then-current rates if Customer continues to use or access Software after the termination or expiration of this Agreement. If Customer's Agreement includes a multi-year discount plan with diminishing discounts, and Customer terminates the Agreement prior to the completion of the discount plan, Customer shall promptly pay ESO's invoice recouping such discounts for a maximum of two years prior to the date of termination.

4.3.3. Termination of this Agreement is without prejudice to any other right or remedy and shall not release a party from any liability.

5. **DISCLAIMER OF WARRANTIES.** EXCEPT AS OTHERWISE PROVIDED IN _____, ESO DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, SUITABILITY, TITLE, NON-INFRINGEMENT, OR ANY IMPLIED WARRANTY ARISING FROM STATUTE, COURSE OF DEALING, COURSE OF PERFORMANCE, OR USAGE OF TRADE. CUSTOMER ACCEPTS THE SERVICES "AS-IS" AND "AS AVAILABLE."

Exhibit [A]

SUPPORT SERVICES ADDENDUM

1. **DEFINITIONS.** Capitalized terms not defined below shall have the same meaning as in the General Terms & Conditions.

    1.1. "Enhancement" means a modification, addition or new release of the Software that when added to the Software, materially changes its utility, efficiency, functional capability or application.

    1.2. "E-mail Support" means ability to make requests for technical support assistance by e-mail at any time concerning the use of the then-current release of Software.

    1.3. "Error" means an error in the Software, which significantly degrades performance of such Software as compared to ESO's then-published Documentation.

    1.4. "Error Correction" means the use of reasonable commercial efforts to correct Errors.

    1.5. "Fix" means the repair or replacement of object code for the Software or Documentation to remedy an Error.

    1.6. "Initial Response" means the first contact by a Support Representative after the incident has been logged and a ticket generated. This may include an automated email response depending on when the incident is first communicated.

    1.7. "Management Escalation" means, if the initial Workaround or Fix does not resolve the Error, notification of management that such Error(s) have been reported and of steps being taken to correct such Error(s).

    1.8. "Severity 1 Error" means an Error which renders the Software completely inoperative (*e.g.*, a User cannot access the Software due to unscheduled downtime or an Outage).

    1.9. "Severity 2 Error" means an Error in which Software is still operable; however, one or more significant features or functionality are unavailable (*e.g.*, a User cannot access a core component of the Software).

    1.1. "Severity 3 Error" means any other error that does not prevent a User from accessing a significant feature of the Software (*e.g.*, User is experiencing latency in reports).

1.2. "Severity 4 Error" means any error related to Documentation or a Customer Enhancement request.

1.3. "Status Update" means if the initial Workaround or Fix cannot resolve the Error, notification of the Customer regarding the progress of the Workaround or Fix.

1.4. "Online Support" means information available through ESO's website (www.eso.com), including frequently asked questions and bug reporting via Live Chat.

1.5. "Support Representative" shall be ESO employee(s) or agent(s) designated to receive Error notifications from Customer, which Customer's Administrator has been unable to resolve.

1.6. "Update" means an update or revision to Software, typically for Error Correction.

1.7. "Upgrade" means a new version or release of Software or a particular component of Software, which improves the functionality or which adds functional capabilities to the Software and is not included in an Update. Upgrades may include Enhancements.

1.8. "Workaround" means a change in the procedures followed or data supplied by Customer to avoid an Error without substantially impairing Customer's use of the Software.

2. **SUPPORT SERVICES.**

2.1. Customer will provide at least one administrative employee (the "Administrator" or "Administrators") who will handle all requests for first-level support from Customer's employees with respect to the Software. Such support is intended to be the "front line" for support and information about the Software to Customer's Users. ESO will provide training, documentation, and materials to the Administrator to enable the Administrator to provide technical support to Customer's Users. The Administrator will notify a Support Representative of any Errors that the Administrator cannot resolve and assist ESO in information gathering.

2.2. ESO will provide Support Services consisting of (a) Error Correction(s); Enhancements, Updates and Upgrades that ESO, in its discretion, makes generally available to its customers without additional charge; and (c) E-mail Support, telephone support, and Online Support. ESO may use multiple forms of communication for purposes of submitting periodic status reports to Customer, including but not limited to, messages in the Software, messages appearing upon login to the Software or other means of broadcasting Status Update(s) to multiple customers affected by the same Error, such as a customer portal.

2.3. ESO's support desk will be staffed with competent technical consultants who are trained in and thoroughly familiar with the Software and with Customer's applicable

configuration. Telephone support and all communications will be delivered in intelligible English.

2.4. Normal business hours for ESO's support desk are Monday through Friday 7:00 am to 7:00 pm CT. Customer will receive a call back from a Support Representative after-hours for a Severity 1 Error.

3. **ERROR PRIORITY LEVELS.** Customer will report all Errors to ESO via e-mail (support@eso.com) or by telephone (866-766-9471, option #3). ESO shall exercise commercially reasonable efforts to correct any Error reported by Customer in accordance with the priority level reasonably assigned to such Error by ESO.

3.1. Severity 1 Error. ESO shall (i) commence Error Correction promptly; (ii) provide an Initial Response within four hours; (iii) initiate Management Escalation promptly; and (iv) provide Customer with a Status Update within four hours if ESO cannot resolve the Error within four hours.

3.2. Severity 2 Error. ESO shall (i) commence Error Correction promptly; (ii) provide an Initial Response within eight hours; (iii) initiate Management Escalation within 48 hours if unresolved; and (iv) provide Customer with a Status Update within forty-eight hours if ESO cannot resolve the Error within forty-eight hours.

3.3. Severity 3 Error. ESO shall (i) commence Error Correction promptly; (ii) provide an Initial Response within three business days; and (iii) provide Customer with a Status Update within seven calendar days if ESO cannot resolve the Error within seven calendar days.

3.4. Severity 4 Error. ESO shall (i) provide an Initial Response within seven calendar days.

4. **CONSULTING SERVICES.** If ESO reasonably believes that a problem reported by Customer is not due to an Error in the Software, ESO will so notify Customer. At that time, Customer may request ESO to proceed with a root cause analysis at Customer's expense as set forth herein or in a separate SOW. If ESO agrees to perform the investigation on behalf of Customer, then ESO's then-current and standard consulting rates will apply for all work performed in connection with such analysis, plus reasonable related expenses incurred. For the avoidance of doubt, Consulting Services will include customized report writing by ESO on behalf of Customer.

5. **EXCLUSIONS.**

5.1. ESO shall have no obligation to perform Error Corrections or otherwise provide support for: (i) Customer's repairs, maintenance or modifications to the Software (if permitted); (ii) Customer's misapplication or unauthorized use of the Software; (iii) altered or damaged Software not caused by ESO; (iv) any third-party software; (v) hardware issues; (vi) Customer's breach of the Agreement; and (vii) any other causes beyond the ESO's reasonable control.

5.2. ESO shall have no liability for any changes in Customer's hardware or software systems that may be necessary to use the Software due to a Workaround or Fix.

5.3. ESO is not required to perform any Error Correction unless ESO can replicate such Error on its own software and hardware or through remote access to Customer's software and hardware.

5.4. Customer is solely responsible for its selection of hardware, and ESO shall not be responsible the performance of such hardware even if ESO makes recommendations regarding the same.

6. **MISCELLANEOUS.** The parties acknowledge that from time-to-time ESO may update its support processes specifically addressed in this Exhibit and may do so by posting such updates to ESO's website or otherwise notifying Customer of such updates. Customer will accept updates to ESO's support procedures and any other terms in this Exhibit; provided however, that they do not materially decrease the level of Support Services that Customer will receive from ESO. THESE TERMS AND CONDITIONS DO NOT CONSTITUTE A PRODUCT WARRANTY. THIS EXHIBIT IS AN ADDITIONAL PART OF THE AGREEMENT AND DOES NOT CHANGE OR SUPERSEDE ANY TERM OF THE AGREEMENT EXCEPT TO THE EXTENT UNAMBIGUOUSLY CONTRARY THERETO.

West Virginia Ethics Commission

Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of $1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

"Business entity" means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation, but does not include publicly traded companies listed on a national or international stock exchange.

"Interested party" or *"Interested parties"* means:

(1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
(2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
(3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

"State agency" means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of W. Va. Code § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: ethics@wv.gov; website: www.ethics.wv.gov.

West Virginia Ethics Commission
Disclosure of Interested Parties to Contracts

(Required by *W. Va. Code* § 6D-1-2)

Name of Contracting Business Entity: ESO SOLUTIONS, INC. **Address:** 11500 Alterra Parkway, Suite 100

Austin, Texas 78758

Name of Authorized Agent: Chris Dillie **Address:** as above

Contract Number: CRFQ 0506 BPH2100000003 **Contract Description:** State of West Virginia Emergency Medical Service Data System

Governmental agency awarding contract: Health & Human Resources

☐ **Check here if this is a Supplemental Disclosure**

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below *(attach additional pages if necessary)*:

1. **Subcontractors or other entities performing work or service under the Contract**
   ☒ Check here if none, otherwise list entity/individual names below.

2. **Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)**
   ☐ Check here if none, otherwise list entity/individual names below.

   Accel-KKR Growth Capital Partners II, LP

3. **Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)**
   ☒ Check here if none, otherwise list entity/individual names below.
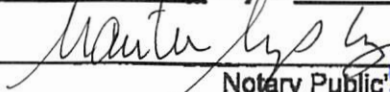
Signature: _____ Date Signed: October 5, 2020 _____

Notary Verification

State of ____TEXAS_____, County of ____TRAVIS_____.

I, _____Chris Dillie_____, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this ___5th___ day of ___October____, 2020.

_____
Notary Public's Signature
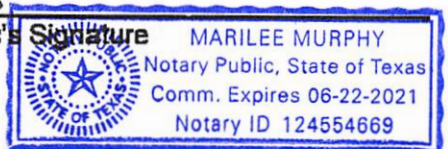
To be completed by State Agency:
Date Received by State Agency: _____
Date submitted to Ethics Commission: _____
Governmental agency submitting Disclosure: _____

Revised June 8, 2018

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STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, 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: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

> **EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. 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.

> **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.

> **"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

> **"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 exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: ESO SOLUTIONS, INC.

Authorized Signature: _(signature)_ Date: October 5, 2020

State of TEXAS

County of TRAVIS , to-wit:

Taken, subscribed, and sworn to before me this 5th day of October , 20 20 .

My Commission expires June 22 , 20 21 .

AFFIX SEAL HERE NOTARY PUBLIC _(signature)_

Purchasing Affidavit (Revised 01/19/2018)