



**State of West Virginia
Department of Administration
Purchasing Division**

NOTICE

Due to the size of this bid, it was impractical to scan every page for online viewing. We have made an attempt to scan and publish all pertinent bid information. However, it is important to note that some pages were necessarily omitted.

If you would like to review the bid in its entirety, please contact the buyer. Thank you.



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

**Request for
 Quotation**

RFQ NUMBER
 639000024

PAGE
 1

ADDRESS: CORRESPONDENCE TO ATTENTION OF
 MICHAEL AUSTIN
 304-558-2402

RFQ COPY
 TYPE NAME/ADDRESS HERE
 VENDOR
 Loyola Enterprises Inc.
 2984 South Lynnhaven RD Suite 101
 Virginia Beach, VA. 23452

SUPPLIER
 DIVISION OF HIGHWAYS
 CHIEF OF INFORMATION SYSTEMS
 BUILDING 5
 1900 KANAWHA BOULEVARD, EAST
 CHARLESTON, WV
 25305-0430 304-558-0408

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
12/04/2008				

BID OPENING DATE: 12/23/2008

BID OPENING TIME: 01:30 P.M

Line	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1 EA			840-45	\$22,668.98	
	GPS POSITIONING SYSTEM WITH RECEIVER					
0002	1 EA			840-45	\$20,430.59	
	GPS POSITIONING SYSTEM CONSTANTLY OPERATING STATION					
	OPEN END CONTRACT					
	TO PROVIDE (GPS) GLOBAL POSITIONING SYSTEM WITH RECEIVER, ANTENNA, AND USER INTERFACE. DEVICE MUST USE MICROSOFT WINDOWS MOBILE 6 AND FULLY COMPATABLE WITH EXISTING TRIMBLE PATHFINDER OFFICE SOFTWARE CURRENTLY USED BY THE WEST VIRGINIA DIVISION OF HIGHWAYS AND GPS POSITIONING CONSTANTLY OPERATING REFERENCE STATIONS. PER THE ATTACHED SPECIFICATIONS.					
	THE MODEL/BRAND/SPECIFICATIONS NAMED HERIN ESTABLISH THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR OF ANY PARTICULAR BRAND OR VENDO. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE INFORMATION FOR ANY ALTERNATES MAY BE GROUNDS FOR REJECTION OF THE BID. THE STATE RESERVES THE RIGHT TO WAIVE MINOR IRREGULARITIES IN BIDS FOR SPECIFICATIONS IN ACCORDANCE WITH SECTION 148-1-4 (F) OF THE WEST VIRGINIA LEGISLATIVE RULES AND REGULATIONS.					

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Michael Austin</i>	TELEPHONE 7574986118	DATE 9 FEB 09
TITLE PRES.	FEIN 54-1574819	ADDRESS CHANGES TO BE NOTED ABOVE

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Title	RFQ West Virginia DOT	Date	1/19/09

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**GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130

- Rev. 7/01/08

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<p>EXHIBIT 3</p> <p>LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON _____ AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTACT OR RENEW THE ORIGINAL CONTACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE" TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING 30 DAYS WRITTEN NOTICE.</p> <p>UNLESS SPECIFIC PROVISIONS ARE STIPULATED ELSEWHERE IN THIS CONTACT DOCUMENT, THE TERMS, CONDITIONS AND PRICING SET HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT.</p> <p>RENEWAL: THIS CONTACT MAY BE RENEWED UPON THE MUTAL WRITTEN CONSENT OF THE SPENDING UNIT AND DENVOR, SUBMITTED TO THE DIRECTOR OF PURSHASING THIRTY (3) DAYS PRIOR TO THE EXPIRATON DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTACT AND SHALL BE LIMITED TO TWO (2) ONE (1) YEAR PERIODS.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICES SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</p> <p>OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>[Signature]</i>	TELEPHONE 757490-6118	DATE 9 FEB 09
TITLE <i>PR135</i>	FEIN 541574819	ADDRESS CHANGES TO BE NOTED ABOVE

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<p>IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORSEEN CAUSE (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.) QUANTATIES: QUANTATIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTATIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WETHER MORE OR LESS THAT THE QAUNTATIES SHOWN. ORDERING PROCEDURE: SPENDING UNIT (S) SHALL ISSUE A WRITTEN STATE CONTRACT ORDER (FORM NUMBER WV-39) TO THE ORIGINAL VENDOR FOR COMMODITIES COVERED BY THIS CONTRACT. THE ORIGINAL COPY OF THE WV-39 SHALL BE MAILED TO THE VENDOR AS AUTHORIZATION FOR SHIPMENT, A SECOND COPY MAILED TO THE PURCHASEING DIVISION, AND A THRID COPY RETAINED BY THE SPENDING UNIT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR / CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTHOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</p> <p>THE TERMS AND CONDITIONS CONTANED IN THIS CONTRACT SHALL SUPERSEDE ANY AND ALL SUBSEQUENT TERMS AND CONDITIONS WITH MAY APPEAR ON ANY ATTACHED PRINTED DOCUMENTS SUCH AS PRICE LISTS, ORDER FORMS, SLAES AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANYT ELECTRONIC MEDIUM SUCH AS CD-ROM.</p> <p>REV. 04/11/2001</p> <p>PURCHASING CARD ACCEPTANCE: THE STATE OF WEST VIRGINIA</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Michael Austin</i>	TELEPHONE 757-4986118	DATE 9 FEB 09
TITLE <i>MES</i>	FEIN 54-1574819	ADDRESS CHANGES TO BE NOTED ABOVE

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Request for Quotation

RFQ NUMBER	PAGE
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ADDRESS CORRESPONDENCE TO ATTENTION OF
MICHAEL AUSTIN 304-558-2402

RFQ COPY
 TYPE NAME/ADDRESS HERE

Loyola Enterprises Inc. 2984 South Lynnhaven RD Suite 101 Virginia Beach, VA. 23452

SUPPLIER

DIVISION OF HIGHWAYS CHIEF OF INFORMATION SYSTEMS BUILDING 5 1900 KANAWHA BOULEVARD, EAST CHARLESTON, WV 25305-0430 304-558-0408

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
12/04/2008				

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<p>CURRENTLY UTILIZES A VIA PURCHASING CARD PROGRAM WHICH IS ISSUED THROUGH A BANK. THE SUCCESSFUL VENDOR MUST ACCEP THE STATE OF WEST VIRGINIA VISA PURCHASING CARD FOR PAYMENT OF ALL ORDERS PLACED BY ANY STATE AGENCY AS A CONDITION OF AWARD.</p> <p>EXHIBIT 10</p> <p>REQUISITION NO.: <u>639000024</u></p> <p>ADDENDUM ACKNOWLEDGEMENT</p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NO.'S:</p> <p>NO. 1 <u> </u> NO. 6 <u> </u></p> <p>NO. 2 <u> </u> NO. 7 <u> </u></p> <p>NO. 3 <u> </u></p> <p>NO. 4 <u> </u></p> <p>NO. 5 <u> </u></p> <p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.</p> <p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <u>Michael Austin</u>	TELEPHONE <u>757-490-6118</u>	DATE <u>9 FEB 09</u>
TITLE <u>PRIS</u>	FEIN <u>54-1574019</u>	ADDRESS CHANGES TO BE NOTED ABOVE

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**Request for
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PAGE
 5

ADDRESS: CORRESPONDENCE TO ATTENTION OF
 MICHAEL AUSTIN
 304-558-2402

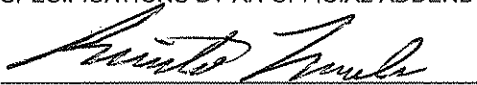
RFQ COPY
 TYPE NAME/ADDRESS HERE
 Loyola Enterprises Inc.
 2984 South Lynnhaven RD Suite 101
 Virginia Beach, VA. 23452

DIVISION OF HIGHWAYS
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<p>AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p style="text-align: center;">  SIGNATURE LOYOLA ENTERPRISES INC. COMPANY 9 FEB 09 DATE </p> <p>REV. 11/96</p> <p>NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;"> DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130 </p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOP OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: 33</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE 	TELEPHONE 757-498-6110	DATE 9 FEB 09
TITLE <i>PRIS</i>	FEIN 54-1594819	ADDRESS CHANGES TO BE NOTED ABOVE

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RFQ NUMBER
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PAGE
 6

ADDRESS CORRESPONDENCE TO ATTENTION OF
 MICHAEL AUSTIN
 304-558-2402

RFQ COPY

TYPE NAME/ADDRESS HERE

Loyola Enterprises Inc.
 2984 South Lynnhaven RD Suite 101
 Virginia Beach, VA. 23452

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Line	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>RFQ NO.: 639000024</p> <p>BID OPENING DATE: <u>11 FEB 09</u></p> <p>BID OPENING TIME: <u>1:30 PM</u></p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: <u>757-498-6110</u></p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY): <u>BENITO LOYOLA</u></p> <p>***** THIS IS THE END OF RFQ 639000024 ***** TOTAL: <u>\$43,099.57</u></p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>[Signature]</i>	TELEPHONE <u>757 498 6118</u>	DATE <u>9 FEB 09</u>
TITLE <u>PRSS</u>	FEIN <u>544574819</u>	ADDRESS CHANGES TO BE NOTED ABOVE

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2. Technical Specifications Line Item 0001

Device

- Device must use a Microsoft Windows Mobile 6 operating system with a minimum of 128 MB RAM and 1 GB of non-volatile flash data storage capacity and a minimum 520 MHz processor.
Leica Geosystems does not run Windows Mobile 6, please see (Appendix A) for specifications.
- Display must be a minimum of 3.5 inches with 480x640 resolutions and be sunlight readable with LED backlight.
Leica Geosystems runs ¼" VGA screen (11 lines by 32 characters), please see (Appendix A) for specifications.
- Must meet or exceed durability standards for IP 55.
Leica Geosystems Equipment IP67, MIL-STD-810-F please see (Appendix A) for specifications.
- Batter should be internal and provide a minimum of 27 Watt hours which will power the device all day.
Leica Geosystems runs 2.2Ah/7.4 V 17 hours of data logging please see (Appendix A) for specifications.
- Must contain at least one SD card slot compatible for standard SD and also SDHC (high capacity) storage cards.
Leica Geosystems uses Compact Flash Cards for seamless data flow, please see (Appendix A)

Device does not meet existing specification please see technical specification of Leica Geosystems RX1250 in (Appendix A)


GPS Receiver

- Must be integrated, dual frequency GPS receiver with L1 (code and carrier) and L2 (carrier) with internal antenna. Must be able to track a minimum of two WAAS satellites simultaneously.
Leica Geosystems exceeds the specification (Triple Frequency Receiver) please see (Appendix A).
- Must be capable of 30 cm accuracy with a minimum number of five satellites and maximum PDOP of 6.
Clarity on the type of correction being used needs to be defined, please see (Appendix A) for specifications.
- With an optional external antenna, GPS positions must be capable of 10cm level accuracy.
Leica Geosystems has a built in antenna in the ATX model, for clarity on the type of correction being used needs to be defined, please see (Appendix A) for specifications.

Device does not meet existing specification please see technical specification of Leica Geosystems ATX1230+ in (Appendix A)

Device Software

- Software must use full capability of GPS receiver for feature and attributes data collection.
Leica Geosystems can collect user defined feature and attribute information.
- Software must be fully compatible with existing Trimble Pathfinder Office software currently held by WV DOH. GPS positions recorded with this software must be able to be processed with differential corrections by the existing Pathfinder Office.
Please note this is a Trimble Navigation proprietary data format. Leica Geosystems can provide Rinex data with covariant matrix to import into Trimble Navigations Pathfinder Office software and shape file data can be processed and imported in.
- Features and attribute templates must be fully editable and created within the device software. The attributes should include the ability to use pick or category listings.
Leica Geosystems has the ability to create user defined features and attributes in the office and in the field to include choice list and category listings.
- Software must allow viewing of multiple background images at the same time while showing GPS collected data and current GPS position. These background images should include but not limited to the following geo-referenced formats: MrSID, JPEG, TIFF, and BMP.
Leica Geosystems does not provide the above mentioned imagery formats but can display multiple .dxf files, please see (Appendix A) for details.

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3. Technical Specifications Line Item 0002

Specifications Global Positioning System Continuously Operating Reference Stations

The goal of this project is to build the infrastructure required for the development of "smart" transportation applications for the state of West Virginia. Technological advances in mapping and surveying has outpaced supporting infrastructure that enable engineering design and construction, spatial management of assets, and navigation. The heart of this rapid advance in technology is the Global Positioning System (GPS).

In response to GPS technology, government entities, from state to the federal level, are working to increase efficiency by making GPS-related technologies more readily available, while reducing liabilities by insuring compatibility. The National Geodetic Survey has guided this effort by establishing the National GPS Constantly Operating References Stations (CORS) program. The National CORS system is a network of hundreds of GPS base stations whose data are made publicly available for various post-processing applications. In particular, CORS data is utilized to calculate GPS-derived positions with horizontal and vertical accuracies of less than a few centimeters. The National CORS system benefits from multi-purpose cooperative endeavors involving government, academic, commercial, and private organizations.

The infrastructure we are building would provide real-time kinematic (RTK) capabilities for the State of West Virginia which will significantly improve the accuracy of Global Positioning System (GPS) surveying in the State of West Virginia by comparing satellite data with known reference stations.

We are planning to implement the most recent advancement in GPS technology – the scalable GPS reference station infrastructure. The GPS infrastructure consists of permanent or semi-permanent GPS receiver operating continuously (24/7). By implementing this infrastructure the State will receive several benefits:

- Geospatial Community no longer needs to set up a separate base station to achieve centimeter accuracy.
- Provide the infrastructure necessary to reduce the cost of future build/design construction projects.
- Life saving capabilities (ex: Sago mining disaster).
- Integrate with a national system that connects with surrounding states.
- Common coordinate reference frame.
- Reference station security.
- Reduced cost for state and private sector field crews for field setup and equipment cost.


Projected users of this information include the West Virginia Department of Transportation, US Army Corps of Engineers, US National Geodetic Survey, WV Department of Environmental Protections, WV Department of Natural Resources, WV Department of Mine Safety, WV Department of Homeland Security, WV Department of Agriculture, and other state and federal agencies. Private and academic institutions as well as research centers would receive significant benefit.

Location and Requirement:


The implementation for this project will consist of two phases. Phase 1 will be the initial densification as shown in figure 1 which will consist of a total of 16 reference stations at the 25 mile radius covering the State. Phase 2 will consist of the improved densification with the goal of reducing the coverage radius to 15 miles but not to include more than 16 additional reference stations. The anticipated time between Phase 1 and Phase 2 will consist of one year.

The station will be located at the District office if the location permits; if no, we shall use any of the fuel sites or county offices since there are some requirements for the installation. All potential sites should be verified with the National Geodetic Survey to meet the requirements of the National Geodetic Survey – continuously Operating References Stations – National CORS program. If the requirements are not met, we will evaluate other State-owned facilities to meet the requirements.


The network should be set up as Multiple Base – One address. With this setup, as you move closer to one base and away from the one you are currently connected to, it will automatically switch to the closer base. Leica Geosystems provides the above mentioned functionality, please see (Appendix C, E,) for details.

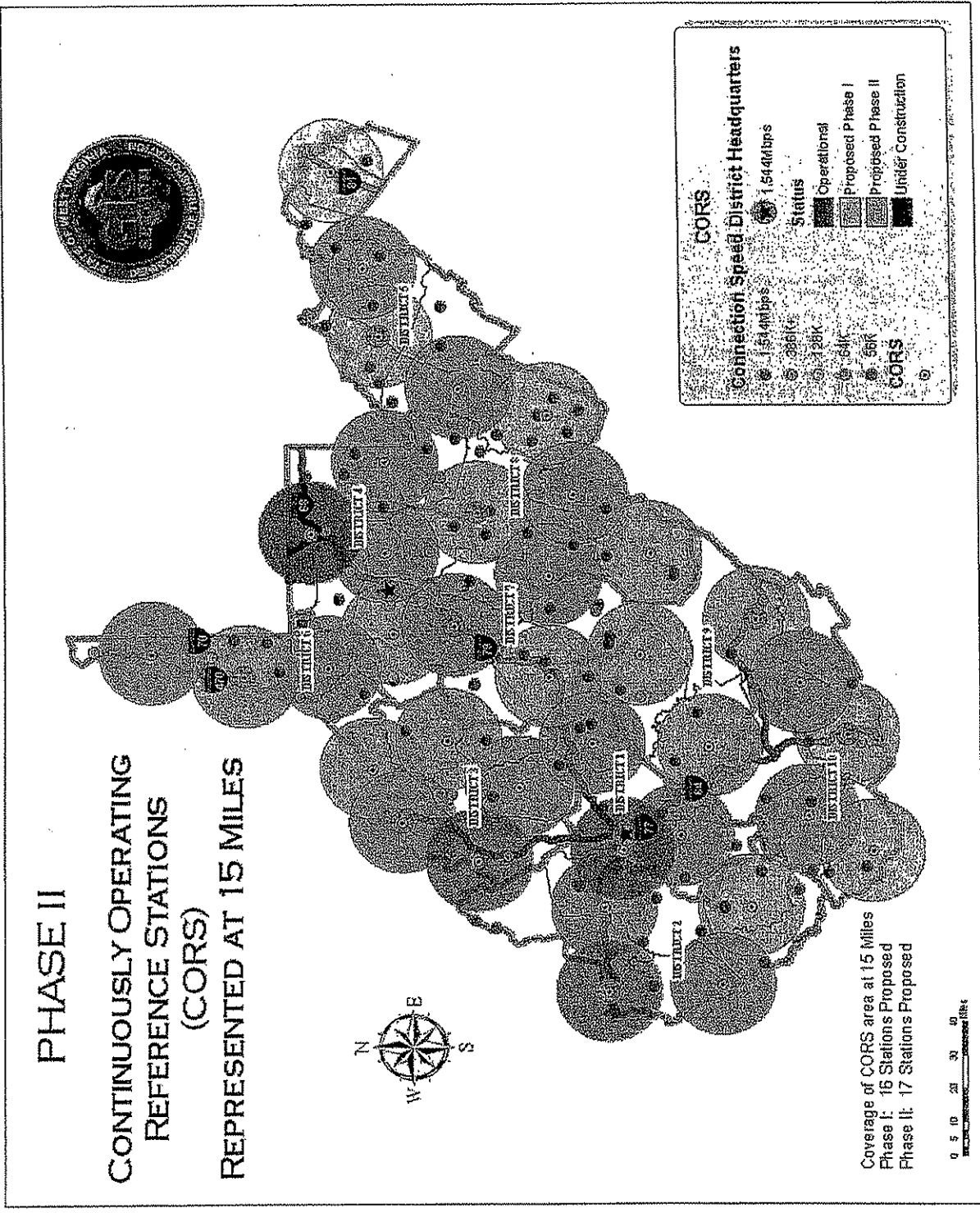
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The receivers should have multiple ports, allowing for corrections to the broadcast multiple ways. Leica Geosystems provides the above mentioned functionality, please see (Appendix K) for details..The receivers should also have RS232 ports that would allow for local CMR or RTCM corrections transmission or a remote dial-up through a modem. Leica Geosystems provides the above mentioned functionality, please see (Appendix C,) for details..The RS232 ports will need to be available for the DOH survey crews or contractors to connect their radio and broadcast a correction when in weak cell coverage areas. Leica Geosystems provides the above mentioned functionality, please see (Appendix C, K,) for details..This will benefit the DOH by providing the ability to connect cellular modems and gaining selective IP address for use in real time monitoring of bridge towers or other structures. Leica Geosystems provides the above mentioned functionality; please see (Appendix F) for details. In additional, the use of radio repeater will be required to work with link (cell) connections to the reference station. Leica Geosystems provides the above mentioned functionality, please see (Appendix C) for details..The receiver should have the ability to use radio repeaters with air link (cell) connections. Leica Geosystems provides the above mentioned functionality; please see (Appendix K) for details. The air link modem or cell phone would dial up to the CORS Stations, then the data would rebroadcast through a radio repeater into the areas of poor cell phone coverage to allow real time surveying. Leica Geosystems provides the above mentioned functionality; please see (Appendix K) for details.

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- when it has to be right Leica Geosystems				

TECHNICAL SPECIFICATION

4. 100-GENERAL

This specification defines the requirements for GPS Continuously Operating Reference Station equipment and software. All provided items must be standard production models. For each station the hardware will consist of a GPS Geodetic receiver with dual frequency, and many independent channels, up to 20Hz sampling, ~1 mm phase precision, with a masonry building mounting kit, antenna, power supply, data cables(s), antenna pre-amp, power supply, manuals, training and support. The system must track all signals from all three global satellite positioning constellations (GPS-Glonass-Galileo) and will need to track 72 channels, with the incorporation of GPS, GPS L1 C/A, L1 and L2 P, L1 and L2 phases, GPS L2C, L5, Glonass L1 C/A code, L1 P and L2 P, L1 and L2 phase, and Galileo – IOC/FOC. The receiver must provide all information required for precise surveying with all types of RTK and GIS rovers. Output from the base station must provide GPS, RTK, WASS/EGNOS and DGPS data for data transmission from the site by radio, phone or for distribution from a control center by radio, phone or Internet. RTCM, CMR and CMR+ formats must be supported. Receiver must be capable of meeting requirements for a Continuously Operating Reference Station (CORS) for geodetic, survey, high-accuracy GIS and monitoring applications. The software is to provide the necessary tools for configuration of CORS hardware, receiver operation, data collection and manipulation. NOTE TO VENDORS: The WV DOT currently operates Trimble Brand GPS survey equipment. Any modifications to the Departments equipment for the purposes of compatibility with the provided Stations equipment and/or software shall be at the full expense of the Vendor.

Leica Geosystems complies with the General (100-General) statement above.

(Addendum No. 7 Add the Following to the End of Section 100)

Vendor's CORS Hardware and Firmware Support Agreement shall be extended to Five Years. Vendors should review the attached "Phase 1" and "Phase II" with station addresses for Station Locations.

Leica Geosystems complies with the General (100-General) statement above.

ADD THE FOLLOWING BID ITEMS:


Phase 1 Software

Quantity: 1

Vendor shall provide Multiple Base Software for unlimited number of CORS stations to Interface via a WVDOH provided high speed internet network and network hardware. Phase 1 Software will permit individual Base Stations to come online as installs are completed. Vendor will provide remote Software Support, Upgrades, and Warranty for Phase 1 Software for a period of five years from date of issued Purchase Order.

Leica Geosystems complies with the General (100-General) statement above; please see (Appendix I).

- The Control software must be capable of communicating with CORS using native Trimble RT17 and TRT27 protocols to assure compatibility with currently-owned state equipment. Please note that Leica Geosystems Spider software can communicate with the RT17 message. The TRT27 message is a Trimble Navigation proprietary data format.
- Detect if real-time Ethernet connections to CORS have been lost. Upon reconnection the software must automatically download all remote CORS receiver memories and store the data in existing files. This will assure a high degree of data integrity. Leica Geosystems complies with the General (100-General) statement above; please see (Appendix C).
- The software must work as a fully-integrated system with the existing State-owned CORS receivers. Leica Geosystems complies with the General (100-General) statement above; please see (Appendix C).
- The software must be capable of simultaneously operating as:
 - A single-base correction generator
 - RTCM 3.1 NET (Master Auxiliary Concept –MAC) standard generator
 - Virtual Reference Station (Non-Physical or Computed Reference Station) generator
 - DGPS and RTK correction generator – simultaneously

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- Leica Geosystems complies with the General (100-General) statement above; please see (Appendix C).
- The software must incorporate SPAM filters for web site registration and post processing services.
Leica Geosystems complies with the General (100-General) statement above; please see (Appendix P).
- The software will validate registration entries, searching for duplicate entries or assigning login values for new users. All users will be required to key in a security code for registration and validation.
Leica Geosystems complies with the General (100-General) statement above; please see (Appendix P).
- The software security code activation will make use of CAPTCHA (Completely Automated Public Turing test to tell Computers and Humans Apart) to generate security code.
Leica Geosystems uses an alternative method to (100-General) statement above; please see (Appendix P).
- The Control Centre software must be capable of distributing logged-on-rover locations via NMEA format to other applications.
Leica Geosystems Exceeds with the General (100-General) statement above; please see (Appendix C, P).

Phase 2 Software Upgrade

Quantity: 1

Vendor shall provide VRS Network Software Upgrade for unlimited number of CORS stations to Interface via a WVDOH provided high speed internet network and network hardware. Vendor will provide remote Software Support, Upgrades, and Warranty for Phase 2 Software for a period of five years form date of issued Purchase Order. Vendor will supply a recommended Minimum Network Server / Hardware Component List for full VRS Network Upgrade to insure WVDOH IT Professionals specify and provide adequate network hardware from the system start up. Vendors should be aware the CORS Network might be expanded to include additional surrounding States CORS Stations to insure full Network coverage of the State of West Virginia.

Leica Geosystems complies with the General (100-General) statement above; please see (Appendix C, P, and Q).

Masonry Building Mounting Kit

Vendor must supply a sketch and parts list of supplied components of the proposed Masonry Building Mounting Kit. Vendor must refer to NGS technical Specifications Document titled "Guidelines for New and Existing Continuously Operating Reference Stations (CORS)" dated February, 2006" to insure the Masonry Building Mounting Kit design complies with those requirements set forth to be designated as a "National CORS". This line item also includes all previously unaddressed CORS installation hardware components in this bid document including: Low signal loss GPS Antenna Cables, GPS Antenna inline lightning arrestor, Uninterruptable power supply for CORS Receiver.


Leica Geosystems complies with the General (100-General) statement above; please see (Appendix N, O).

Vendor Requirement

- The supplier must state at least three (3) networks with more than 100 reference stations connected supporting the VRS or FKP technology
Leica Geosystems complies with the General (100-General) statement above: (SmartNet UK150 stations, SmartNet North America 115 stations, SmartNet Italy 120 stations).
- The supplier must have installations in three or more networks of at least 50 stations owned and operated by North American State Department of Transportation.
 - The networks must be operating and not consist of sales whereby equipment is uninstalled or non-commissioned.
 - The system(s) must be in operational use as part of a real-time network to be considered references.

Leica Geosystems complies with the General (100-General) statement above:

Iowa DOT Michael Jackson Senior Project Manager 515-239-1192	79 Stations. Iowa is also sharing data streams (receiving 9 passive data streams from Minnesota DOT and providing passive data streams from Spider to supplement each others network) Iowa DOT is supplying MAC corrections to include CMR. The network was derived to support all manufacturers GPS receivers to include agriculture, surveying, construction, and machine control.
Michigan DOT Andrew Semenchuk Operations Manager 517-335-1923	67 Stations. Michigan's Network currently exists of roughly 67 stations running both single baseline and SpiderNET corrections (limited only by cell phone coverage in certain areas). MDOT provides RTK "area corrected" data to Leica, Trimble and Topcon rovers everyday.

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Florida DOT Scott Harris Operations Manager 561-355-3070	70 Stations. Florida is currently in the process of phasing out older Ashtech GPS stations for Leica GRX1200 Pro's. They Currently have 70 Leica stations across the state and are providing SpiderNET Corrections throughout Central Florida and the counties of Pasco, Leon, Hillsborough and Collier.
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5. 200-SYSTEM HARDWARE

All GPS hardware that will be included in the bid will be the same make and model. All hardware and software (including available software specified under ADDITIONAL REQUIREMENTS) shall be form and supported from one source or manufacturer.

Leica Geosystems complies with the System Hardware (200 –System Hardware) statement above.

6. 201-RECIEVER

The Vendor shall supply a multi-frequency, minimum 72 channels (GPS L1/L2, L2C, L5, GLONASS L1/L2), network compatible GPS receiver for CORS reference station purposes.

Leica Geosystems exceeds the receiver (201–Receiver) statement above; please see (Appendix J).

7. 201.1 – Compliance


- Class B Part 15 and Part 90 FCC certification
Leica Geosystems is compliant.
- ACMA AS/NZS 4296 approval
Leica Geosystems is compliant.
- US ST/SG/AC.10.11/Rev. 3, Amend 1 and 10/27/Add. 2 (Li-Ion Battery)
Leica Geosystems is not compliant for this is a Trimble Navigation Patent.

8. 201.2 – Physical Requirements

- Rugged and suitable for use in field environments that may be hot, cold, wet or dusty.
- Must meet waterproof specification IP67
- Electronics must be fully sealed from sand, dust and moisture
- Capable of sustaining vibrations under operating mode according to mil spec MIL-STD 810-F
- Able to operate to measurement specification in temperatures between -40 to +65 C (-40 to 149F)
- 100% condensing humidity proof
- Able to be transported or stored in the following temperature range without sustaining damage to the equipment - 40 to 80 C (-40 to 176 F)

Leica Geosystems receiver physical specifications meets above requirements noted in (Figure 3) below.

Operating Temperature -40°C to +65°C	Compliance with: ISO9022-10-05, ISO9022-11-special and MIL-STD-810F Method 502.4-II, MIL-STD-810F Method 501.4-II
Storage Temperature -40°C to +80°C	Compliance with: ISO9022-10-05, ISO9022-11-special and MIL-STD-810F Method 502.4-II, MIL-STD-810F Method 501.4-II

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Humidity Up to 100%	Compliance with: ISO9022-13-06, ISO9022-12-04 and MIL-STD-810F Method 507.4-I
Protection against Water, Sand & Dust	Compliance with: IP67: Protection against blowing rain Waterproof to temporary submersion into water (max. 1 m) Dust tight, protection against blowing dust
Drops	Withstands 1m drop onto hard surfaces
Vibration	Compliance with: ISO9022-36-08 and MIL-STD-810F Method 514.5-Cat24

Figure 3. GRX1200+ GNSS Environmental Specifications

9. 201.3 – Power requirements


- Nominal voltage range of 9 VDC to 30 VDC
- Multiple power source inputs
- Include over-voltage protection on all power inputs
- Include reverse polarity protection
- Allow for power inputs over 30 V without sustaining damage
- Have nominal power consumption of no more than 4.8 W
- Turn on automatically when connected to a DC source that is produced by the manufacturer's AC power supply.
- Auto switch between power sources
- The GNSS receiver must automatically switch between power sources. There must not be a cycle slip or a new logging file created.
- Must be equipped with a non-field removable Li-Ion battery capable of powering the unit for minimum 12 hours
Leica Geosystems complies with all of the above except the above (must be equipped with a non field removable Li-Ion battery capable of powering the unit for 12 hours).Leica Geosystems has an external Li-Ion battery that can power for about 17 hours for data logging. Please note that a UPS is recommended for uninterrupted power. Power supply One Li-Ion 4.4 Ah/7.4 V plug into receiver for GNSS and TPS for about 17 hours (for data logging). Both the primary and backup ports accept DC input from 10.8V to 28V. An optional external power supply unit can accept AC inputs of 100V-240VAC, 50-60Hz. The ports are independently programmable. Both the primary and backup ports accept DC input from 10.8V to 28V. The GRX1200+ GNSS has two ports for input power; one port is defined as the primary and the second is the backup. Should power fail on the primary, the receiver will automatically switch to the back up.

10. 201.4 – Internal Data Storage

- Minimum 64 MB internal data storage
- Provide for memory expansion via USB-compatible memory media or hard drive
- The internal memory must not be removable
- Data must be stored in non-volatile RAM
- Be capable of downloading memory via HTML web browser, Internet Explorer 6.0 or later, Firefox (v1.50) and FTP client
Leica Geosystems GRX1200+ GNSS is compatible with above, Please see (Appendix K).

11.201.5 – Signal Tracking

- Must support in RINEX notation: L1, C1, P1, D1, L2, P2, D2*, L5, R1&R2. On L1:C/A Code, Carrier Phase and Doppler; On L2: P Code (derived under encryption) or, when available, L2C, Carrier Phase on L5 (when available).

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- When L2C signals are available, the receiver must be capable of tracking and logging L2C-L and L2C-M range data as the L2 pseudo range.
- Must be able to track and compute corrections available from WAAS geostationary satellites
- Provide improved tracking in areas of high ratio interference such as under power lines, around airports, near radio-intensive construction sites.
- Must be capable of tracking a WAAS/EGNOS/MSAS satellite for real time free of cost differential positioning and base station location.
Leica Geosystems GRX1200+ GNSS is compatible with above; please see (Appendix K)

12.201.6 – Operation

- Receiver must be capable of logging data at operator selected intervals of 0.1, 0.2, 0.5, 1, 2,5,10,15,30,60,300,600 seconds.
Leica Geosystems GRX1200+ GNSS is compatible with above; please see (Appendix K)
- The system must be controlled by an HTML web browser; Internet Explorer v 5.0 or newer
Leica Geosystems GRX1200+ GNSS is compatible with above; please see (Appendix C)
- Must have RTCM Output Version 2.1, 2.2, 2.3 and 3.0 available as a standard
Leica Geosystems GRX1200+ GNSS is compatible with above; please see (Appendix K)
- The Receiver must support CMR output and RTCM V2.0 (Type 1 and 3) simultaneously via separate ports
Leica Geosystems GRX1200+ GNSS is compatible with above; please see (Appendix K)
Leica Geosystems supports all of the above. The RTK corrections formats are standard formats (RTCM v. 2.1, 2.2, 2.3, 3.0, 3.1, Leica, CMR, CMR+). Most of these data formats and all of these communications standards are universally accepted between all rover manufacturers.


13.201.7 – Interfaces

- Minimum three independently configurable RS232 ports for serial data input or output
- Internal LAN interface
- Support an RJ45 connector with links to 10BaseT/100BaseT networks
- PPP server capability through a serial port to enable remote operations
- All network functions must be performed through a single IP address
- Network connection must allow multiple security options for varying levels of user access
- Must support streaming of GNSS observables, RTCM, or CMR data over TCP/IP or UDP links
- Must support configuration using a web browser over HTTP links
- Must allow download of logged data files using either FTP or HTTP
- Minimum three ports capable of handling baud rates up to 115,200
Leica Geosystems GX1200+ GNSS receiver is compatible with above; please see (Appendix K)

14.202 – ANTENNA

The vendor shall supply a multi-channel GNSS antenna that provides a keyboard and display for CORS reference station purchases.

- Capable of receiving GNSS multi-frequency GPS L1, L2 and L2C, L5 as well as Glonass L2 and L2 frequencies.
- Must operate in the following temperature range -40 C to +70 C (-40 F to 158F)
- Must be able to be transported and stored in the following temperature range -55 C to +85 C (-67F to 121F)
- Must pass the following environmental standards MIL-810 Figure 514.5c-17 vibration levels on each axis, (while operational) and Shock tested table MIL-810-F Table 516.5-I a 2M (6.56 ft) drop (while operational).
- Must be sealed and 100% humidity proof protected against Dust, Wind, Rain, Sand and Snow
- Sub-millimeter phase center error and enhanced right-hand polarization
- Provide low elevation tracking technology
- Phase Center with a <1mm precision stability
- Must be high gain of at least 50dB on all frequencies

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- Must have a TNC connector for cable connection
- Must have a non-removable ground plane at least 30cm (11.8") in diameter to reduce ground based multipath
Leica Geosystems AX1203+ GNSS antenna is compatible with above; please see (Appendix K)

15.202.1 – Interfaces (Moved the ten bullets to: Item 201.7, per ADDENDUM NO.7)

16.203 – Software/Firmware

The following specifications outline the requirements of software used to control and manage multiple GNSS CORS stations from a central location.

17.203.1 – General

- The software must be a fully integrated software solution or all functionalities needed at the control center of the reference station network
- The software must be capable of working as a system with commercially offered GPS/GLONASS receivers.
- All reference station receivers within the network must be controlled by the software
- The software must archive all reference station data for Post –Processing services, and processes receiver data epoch by epoch to create RTK Network Corrections from single stations and/or Virtual Reference Stations (VRS), which improves the RTK and DGPS fieldwork.
- The software must also be able to provide both Master Auxiliary Concept style and Non-Physical or Computed Reference Station style Network RTK Corrections as described the RTCM10403.1 standards
- Must support legacy RTK and DGPS equipment using RTCM version 2.3 in a VRS mode while also simultaneously supporting RTCM 3.1 Net style corrections in a Master Auxiliary format.


In general the software must be able to perform the following functions:

- Data collection from the reference stations
- Data storage and processing in the control center
- Produce correction data to field users
- Detect if real-time Ethernet corrections to CORS have been lost. Upon re-connection the software must automatically download all remote CORS receiver memories and store the data in existing files. This will assure the State of a high degree of data integrity
- The Software must work as a fully-integrated system with existing State-owed CORS receivers.
Leica Geosystems Spider software is compatible with above; please see (Appendix D)

18.203.2 – Distribution of RTK data:

- The control center software must be capable of generating RTCM and CMR simultaneously and distributing them on separate ports
- The software must be capable of simultaneously operating as:
 - A single-base correction generator
 - RTCM 3.1 NET (Master Auxiliary Concept –MAC) standard generator
 - Virtual Reference Station (Non-Physical or Computed Reference Station) generator
 - DGPS and RTK correction generator – simultaneously
 - FKP format must be supported simultaneously with other formats

The software must manage following tasks in this order:

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- The software must be streamed (real-time raw data) from all connected reference stations and process the data to produce correction parameters for all observables
- Antenna phase center corrections (relative or absolute) must be pre-catalogued in the software and are added to the observables
- The control center software must compute models of ionosphere error, tropospheric error, orbit errors and real-time Multipath.
 - Tropospheric model: Based on a Modified Hopfield Model the software must compute corrections for the tropospheric for the reference station. Tropo-model parameters must be sent with each data-block from the Network Processor
 - Ionospheric model: Based on a Single Layer Model the software must compute corrections for the ionosphere for the reference station. Ionomodel parameters must be sent with each data-block from the Network Processor
 - Orbit model: Based on ultra rapid orbits the software must compute corrections for the satellite orbits for the reference stations.
- The carrier phase ambiguities must be fixed for the network stations
- All the parameters of the network error influences must be stored in a database or in the Windows Registry
- A Virtual Reference Station (VRS) must be created for the user location when requested via a rovers' NMEA GGA position string. Network Corrections must be sent to the rover in the field using a bi-directional IP based communication such as: GPRS, CDMA2000, IDEN
- The VRS data is transmitted to the user in standard formats (RTCM2.3 messages 18 and 19), RTCM 2.3 messages 20, 21, message, released RTCM 3.1 and RTCM 3.1NET messages or CMR.
Leica Geosystems Spider software is compatible with above; please see (Appendix D)

19.203.3 – Data communication to the Reference Station Receivers:


- Control Center software must be capable of full IP control of Ethernet connected GNSS CORS receivers
- The Control Center software must be capable of decoding all major brand GNSS CORS receivers
- The software must be capable of decoding RTCM 3.1 messages with 1 Hz update rate as alternative real-time data output
- Capability for remote configuration of the CORS Receivers must be via TCP/IP
- The software must be able to support the following communication types to the Reference Station Receivers:
 - Serial Port Handler: connecting a data source (receiver, network router modem) using a serial cable directly to the software
 - Socket Client: for connecting the software with the data source (receiver, network router) within a WAN/LAN using a TCP/IP interface. In this case, the data source will act as Socket Server.
 - Socket Server: for connecting the software with the data source (receiver, network router) within a WAN/LAN using a TCP/IP interface. In this case, the data source will act as Socket Client.
 - TAPI Ver. 1.4-2.2 Data Modem: For a connection to the data source (network router modem) via telephone line using any type of modem supported by Windows TAPI interface.
 - Multicast Socket Server: Multiple connections on one TCP/IP address on same port
- The software must be able to accept Trimble RT27 raw data as streamed from existing GNSS CORS. Leica Geosystems Spider software is not compliant with RT27 for it is a Trimble proprietary data format however, Leica Geosystems Spider software is compatible with the RT17 message generated by the existing receiver; please see (Appendix C)
- The software must support a backup data line and be capable of automatically switching to a backup communications scheme if the main data line fails. The switch to a backup communications line must be user adjustable from the time of the main communication line failure.
- The software must be able to split the incoming raw data from the reference station receivers to another IP address to share the data with other service providers.
Leica Geosystems Spider software is compatible with above; please see (Appendix C)

20.203.4 – Software Features:

- The software must be installed on a central computer(s)

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- The software must not require a computer to be installed at each CORS site
- The software must run under Windows Server 2003
- The software must be configurable to use backup computers in a way that will allow distributed processing across multiple servers, provide redundancy, provide redundant archiving and split data to other services
- The backup computer configuration capabilities must be documented and installed at least three State DOT systems.
- The software must be able to run modular on different computers to support any network size and to support any numbers of incoming connections from field RTK rovers
- The software must be able to process a network of 50 stations or more on one single PC computer
- The graphical user interface of the software must contain the following items: a menu bar, a status bar, a navigator pane, an information pane, graph windows, output windows and control windows.
- The Software must be able to control an unlimited numbers of Reference Station Receivers
Leica Geosystems Spider software is compatible with above; please see (Appendix C)
- The Software must be able to display the data (network) latency of the incoming data from the reference stations. This display must be in the form of a continuously updating bar graph showing latest packet delay and average network latency over a known number of epochs. This display must be capable of showing status and latency of all stations in a single window
Leica Geosystems Spider software is compatible with above; please see (Appendix E)
- The software must be able to analyze the data quality of the Reference Station Receivers
- The software must be able to do Real-time multipath analyses of the reference station antennas and display this data as a color-coded polar plot.
- The software must be cable to display temperature and voltage for suitably equipped receivers
- The software must be able to save and load different configurations(without terminating the software)
- The software must be able to analyze and check the following subjects (with graphical and numerical display)
 - Point Position Analysis: showing difference, with respect to time, of north, east, height and horizontal differences between calculated and known position in meters
 - Single Point Position: computation of position averages and standard deviations from a receivers raw data
 - Raw Data: analysis and display of consistency of dual-frequency data for each satellite
 - Ionospheric Analysis: values show the effects on the measurement of satellites. These must be displayed for L1 in meters or as Total Electronic Count of the ionosphere. Values must be available in a single window for the current, mean for the past 60 seconds, standard deviation for the past 60 seconds, minimum and maximum values over the past 60 seconds.
 - RAIM (Receiver Autonomous Integrity Monitoring) Analysis: The software must perform two RAIM functions. First, a receiver must monitor its own integrity without external position information. Second the RAIM capability must cross check to a Single-Point Position.
 - Availability: calculates and reports the availability of satellite observations. This data must be capable of being stored in a MS Office Access database
- The Software must be able to utilize Predicted Ultra Rapid Orbits published on the Internet by NASA Jet Propulsion Labs and the University of Bern.
- The software must be able to perform continuous coordinate monitoring of the reference stations. Graphical displays of the results must be implemented in the software. The coordinates monitoring analysis must be capable of detecting errors in defined coordinates, wrong definition of antenna heights or antenna types.
- The software must have a network model integrity function
- Software must be able to store multiple different files in RINEX, compact RINEX CORS
- The software must be able to support the NGS cooperative CORS files site structure
- The software must be able to upload the RINEX data on a FTP Server automatically
- The software must be able to simultaneously support two network wide-area modeled real-time techniques
- The software must display the I95 Index
- Optionally, the software must be able to provide a web based solution for the delivery of RINEX data and provide VRS (modeled) RINEX data for a user-defined position.
- The Control Center software must be capable of distributing logged-on Rover locations via NMEA format to other applications
- The software must be able to run continuous statistical analysis of rover positioning precision and accuracy, as well as initialization time and reliability

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Leica Geosystems Spider software is compatible with above; please see (Appendix C)

21.203.5 – Alarm Generation

The software must be able to generate alarms based on the following status:

- Disk Watch: Low disk space
 - Receivers: No data from receiver
 - Low virtual memory
 - Station not available, corrections for station not available
 - RTK: Not enough satellites fixed for a station
 - DGPS: Not enough satellites fixed for a station
 - Rover positioning: Initialization reliability too low, Initialization time >200 seconds, RMS of position too high
- Leica Geosystems Spider software is compatible with above; please see (Appendix G)

If one of the software modules reports an error, an alarm window must pop up. Once an alarm is issued based on the individual configuration, the software must support different actions to perform after the alarm is issued:


- Send emails
- Send compact emails
- Play acoustic signal
- Send modem command
- Send boot command to power switch
- Run a batch file

Leica Geosystems Spider software is compatible with above; please see (Appendix G)

22.203.6 – Data Communication to the Users in the Field:

- Software must support the RTCM3.1 standard
- Software must support the RTCM3.1 NET standard
- Software must support the RTCM 2.3 standard
- Software must support the CMR and CRM+ formats
- The software must be able to provide VRS and networking corrections in FKP at the same time
- The software must be able to provide unlimited numbers of individual VRS stations to the users in the field
- The software must be able to support GSM, GPRS, CDMA2000, 1xRTT, IDEN for rover connections
- The software must be able to support a dial-in broadcast when using IP capable cellular connections
- The software must provide user Authentication through username and password when using IP capable cellular connections

Leica Geosystems Spider software is compatible with above; please see (Appendix C)

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23.203.7 – References

- The supplier must state a proven track record supplying hardware and software for GNSS networks using the VRS technology
 Designing, developing, deploying and maintaining a network of this magnitude is great responsibility. A responsibility few manufactures want to accept for the long term, and a GPS Reference Station Statewide Project clearly requires a long-term commitment. Leica recognizes these responsibilities and puts forth its legendary commitment to its customers, products and service, and will make this commitment.

Leica Geosystems has had a department of Reference Station experts dedicated solely to providing high precision Reference Stations since 1997. Leica Geosystems was the first manufacturer to recognize the direct need for infrastructure of this nature. In realizing early on that Reference Station networks would become the backbone of the Survey & Mapping industries of the future, we invested significant resources in developing a standard industry preferred solution, which is available today. We realized that like survey control network from the past Active Reference Station networks would quickly become stable infrastructure that State DOTs would build their future on. None of Leica GPS Reference Station has ever been taken down, quite the contrary they have increased in numbers.


We believe that GPS networks are infrastructure projects similar to the Interstate Highway system provided by DOTs. We strive to build the best most technologically advanced networks in the world. As with the highway system, the DOT cannot dictate which vehicles use the freeway system, nor can we dictate which rover receiver type will use the reference station network. Our guarantee is that it will be the best reference station network that can be built.

LEICA is **ISO 9001 CERTIFIED**; this certification is the most stringent quality control procedures of all manufacturing, sales and service in the world. This certification guarantees, that Leica's performance and response to the State of West Virginia Department of Administration Purchasing Division RFQ is guaranteed!

Leica's Reference Station Program is ideally positioned and qualified to provide the "State of the Art" GPS receiver and technology, in addition LEICA is also structured with its Reference Station engineering Staff, who have extensive knowledge of network design over 67 projects and "hands on" experience with GPS Array technology to provide long term support.

Leica's experience as an installer, operator and manager of reference station networks proves that the success of the system has always been through a partnership with the end-user. This entails a number of items such as communication of the intended goals and objectives, of the contractual issues, of the preliminary site requirements, which has a defined process that identifies responsible individuals to take action to resolve issues related to operations or contract. It involves two organizations that practice Project Team Coordination techniques and are committed to the successful operation of the system. With over 900 Reference Station installed throughout the United State Leica has proven its capability to be a reliable dependable partner in these types of operations.

Leica Geosystems Spider software is compatible with above; please see (Appendix H)

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Loyola References:

Mr. Tom Rayburn, P.S. Robotics 304-855-4546
 Surveying Director
 E.L. Robinson
 Chapmanville, WV

Mr. Roger Harris, L.S. GPS/Robotics/RTK-Net 703-729-9009
 Director – Field Surveys
 William H. Gordon Associates
 Leesburg, VA

Mr. John F. Hill, Jr., L.S. GPS/Robotics/RTK-Net 757-328-2671
 President
 Alphatec Surveyors, LTD
 Virginia Beach, VA

Mr. David Jordan, L.S. GPS/Robotics/RTK-Net 703-926-4777
 Director of Surveys
 Shirley Contracting Corporation
 Chantilly, VA

Mr. F. Hunter Walters, Jr., L.S. GPS 757-925-2657
 District Survey Manager – Hampton Roads
 Virginia Department of Transportation
 Suffolk, VA

- The supplier must state at least three networks with more than 100 reference stations connected supporting the VRS or FKP technology
 SmartNet UK150 stations, SmartNet North America 115 stations, SmartNet Italy 120 stations.
- The supplier must have installations in three or more networks of at least 50 stations owned and operated by North American State Departments of Transportation

Michigan DOT Andrew Semenchuk Operations Manager 517-335-1923	67 Stations. Michigan's Network currently exists of roughly 67 stations running both single baseline and SpiderNET corrections (limited only by cell phone coverage in certain areas). MDOT provides RTK "area corrected" data to Leica, Trimble and Topcon rovers everyday.
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Florida DOT Scott Harris Operations Manager 561-355-3070	70 Stations. Florida is currently in the process of phasing out older Ashtech GPS stations for Leica GRX1200 Pro's. They Currently have 70 Leica stations across the state and are providing SpiderNET Corrections throughout Central Florida and the counties of Pasco, Leon, Hillsborough and Collier.
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Iowa DOT Michael Jackson Senior Project Manager 515-239-1192	79 Stations. Iowa is also sharing data streams (receiving 9 passive data streams from Minnesota DOT and providing passive data streams from Spider to supplement each others network) Iowa DOT is supplying MAC corrections to include CMR. The network was derived to support all manufacturers GPS receivers to include agriculture, surveying, construction, and machine control.
---	--

- The supplier must manufacture and own all rights to supplied hardware and software under a common label Leica Geosystems is compatible with above; please see (Appendix C)

24. Additional Requirements:

This software must enable a single PC to centrally control and monitor all reference stations in network. Leica Geosystems is compatible with above; please see (Appendix C)

Software must provide user with graphical analysis tools for monitoring the quality of the GPS reference network. Leica Geosystems is compatible with above; please see (Appendix C)

Must provide user defined warnings and alarms and will notify the user or users on computer screen and/or text messages over cellular phone or pager when there are problems with the system. Leica Geosystems is compatible with above; please see (Appendix C, G)

Software must be stable on MS Windows platforms. Leica Geosystems is compatible with above; please see (Appendix C)

Software must log raw data in real-time and convert data to Rinex files for storage on a central networked computer or server. Leica Geosystems is compatible with above; please see (Appendix C)

Software must be able to compute and provide differential correctors using RTCM format for each station through the computer network. Leica Geosystems is compatible with above; please see (Appendix C)

The manufacturer must have been in business for a minimum of 5 years


Leica Geosystems is compatible with above; please see (Appendix M)

Annual service agreements or extended warranties must be available

Leica Geosystems is compatible with above; please see (Appendix I)

Minimum of 2 years warranty on hardware

Leica Geosystems is compatible with above; please see (Appendix I)

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Title	RFQ West Virginia DOT			Date	1/19/09	

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
2. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
3. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
4. **Application is made for 5% resident vendor preference for the reason checked:**
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.


Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (*West Virginia Code*, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: COYOLA ENTERPRISES INC Signed: [Signature]
 Date: 9 FEB 09 Title: PRESIDENT

*Check any combination of preference considerations indicated above, which you are entitled to receive.

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STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

VENDOR OWING A DEBT TO THE STATE:

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

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

West Virginia Code §21-1D-5 provides that: Any solicitation for a public improvement construction contract shall require each vendor that submits a bid for the work to submit at the same time an affidavit that the vendor has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code. A public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the West Virginia Code may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:


The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit www.state.wv.us/admin/purchase/privacy for the Notice of Agency Confidentiality Policies.

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

Vendor's Name: LOYOLA ENTERPRISES INC.

Authorized Signature: [Signature] Date: 9/28/09

Purchasing Affidavit (Revised 07/01/08)

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Title	RFQ West Virginia DOT		Date	1/19/09	



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

**Request for
 Quotation**

RFQ NUMBER
 639000024

PAGE
 1

ADDRESS: CORRESPONDENCE TO ATTENTION OF
 MICHAEL AUSTIN
 304-558-2402

RFQ COPY
 TYPE NAME/ADDRESS HERE
 Loyola Enterprises Inc.
 2984 South Lynnhaven RD Suite 101
 Virginia Beach, VA. 23452

DIVISION OF HIGHWAYS
 CHIEF OF INFORMATION SYSTEMS
 BUILDING 5
 1900 KANAWHA BOULEVARD, EAST
 CHARLESTON, WV
 25305-0430 304-558-0408

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
12/11/2008				

BID OPENING DATE: 12/23/2008

BID OPENING TIME: 01:30 P.M

Line	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM #01						
LINE 1 GPS POSITIONING SYSTEMS WITH RECEIVER						
READS: QUANTITY 1						
TO READ: QUANTATY 11						
LINE 2 GPS POSITIONING SYSTEM CONSTANTLY OPERATING STATION.						
READS: QUANTATY 1						
TO READ: QUANTATY 11						
BID OPENING DATE AND TIME REMAINS 12/23/08 @ 1:30 P.M.						
NO OTHER CHANGES						
0001	EA	840-45				
	11					
GPS POSITIONING SYSTEMS WITH RECEIVER \$22,668.98 \$249,358.78						
0002	EA	840-45				
	11					
\$20,430.59 \$224,736.49						
GPS POSITIONING SYSTEM CONSTANTLY OPERATING STATION						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Michael Austin</i>	TELEPHONE 7574986118	DATE 9/15/09
TITLE <i>Pres</i>	FEIN 54-1574819	ADDRESS CHANGES TO BE NOTED ABOVE

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Title	RFQ West Virginia DOT	Date	1/19/09	


GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130

Rev. 7/01/08

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

Request for Quotation

RFQ NUMBER
 639000024

PAGE
 1

ADDRESSES CORRESPONDENCE TO ATTENTION OF
 MICHAEL AUSTIN
 304-558-2402

RFQ COPY
 TYPE NAME/ADDRESS HERE

Loyola Enterprises Inc.
 2984 South Lynnhaven RD Suite 101
 Virginia Beach, VA. 23452

DIVISION OF HIGHWAYS
 CHIEF OF INFORMATION SYSTEMS
 BUILDING 5
 1900 KANAWHA BOULEVARD, EAST
 CHARLESTON, WV
 25305-0430 304-558-0408

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
12/11/2008				

BID OPENING DATE: 12/23/2008

BID OPENING TIME: 01:30 P.M

Line	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM #02						
LINE 2 GPS POSITIONING SYSTEMS CONSTANTLY OPERATING STATION						
READS: QUANTITY 11						
TO READ: QUANTATY 32						
NO OTHER CHANGES						
0001 EA 840-45						
11						
GPS POSITIONING SYSTEMS WITH RECEIVER \$22,668.98 \$249,358.78						
0002 EA 840-45						
32						
Propose are 27 for the same coverage. This is less than the RFQ specified quantity since our technology will have the same coverage, accuracy, and functionality as stated in the RFQ. This proposed coverage area per station is proved in the field by the many private and public GPS RTK networks Leica has installed throughout the country and Loyola is currently operating in Virginia, West Virginia, Maryland and Washington D.C.						
GPS POSITIONING SYSTEM CONSTANTLY OPERATING STATION						
\$20,430.59 \$551,626.03						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Michael Austin</i>	TELEPHONE 757 498 6118	DATE 9/15/08
TITLE PR 155	FEIN 54-1574019	ADDRESS CHANGES TO BE NOTED ABOVE

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Title	RFQ West Virginia DOT	Date	1/19/09	


GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

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State of West Virginia
 Department of Administration
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**Request for
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RFQ NUMBER
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 CHARLESTON, WV
 25305-0430 304-558-0408

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
12/22/2008				

BID OPENING DATE: 1/07/2009

BID OPENING TIME: 01:30 P.M

Line	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT	
ADDENDUM #03							
BID OPENING DATE AND TIME CHANGE							
FROM: 12/23/2008							
TO: 01/07/2009							
NO OTHER CHANGES							
	0001	EA	840-45				
		11					
	GPS POSITIONING SYSTEMS WITH RECEIVER					\$22,668.98	\$249,358.78
	0002	EA	840-45				
	32 Propose 27 for the same coverage, we recognize this is less but with our technology you will have the same coverage, accuracy, and functionality as stated in the RFQ.					\$20,430.59	\$551,626.03
	GPS POSITIONING SYSTEM CONSTANTLY OPERATING STATION						\$800,984.81
***** THIS IS THE END OF RFQ 639000024 *****					TOTAL:		

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Michael Austin</i>	TELEPHONE 7574986118	DATE 9/15/09
TITLE <i>Pres</i>	FEIN 54-1574619	ADDRESS CHANGES TO BE NOTED ABOVE

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- when it has to be right


GENERAL TERMS & CONDITIONS
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Rev. 7/01/08

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Title	RFQ West Virginia DOT		Date	1/19/09	



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

**Request for
 Quotation**

RFQ NUMBER
 639000024

PAGE
 1

ADDRESS CORRESPONDENCE TO ATTENTION OF
 MICHAEL AUSTIN
 304-558-2402

RFQ COPY
 TYPE NAME/ADDRESS HERE
 Loyola Enterprises Inc.
 2984 South Lynnhaven RD Suite 101
 Virginia Beach, VA. 23452

DIVISION OF HIGHWAYS
 CHIEF OF INFORMATION SYSTEMS
 BUILDING 5
 1900 KANAWHA BOULEVARD, EAST
 CHARLESTON, WV
 25305-0430 304-558-0408

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
01/06/2009				

BID OPENING DATE: 01/21/2009

BID OPENING TIME: 01:30 P.M

Line	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM #04						
BID OPENING DATE AND TIME CHANGE						
FROM: 01/07/2009 AT 1:30 P.M.						
TO: 01/21/2009 AT 1:30 P.M.						
NO OTHER CHANGES						
	0001	EA	840-45			
		11				
	GPS POSITIONING SYSTEMS WITH RECEIVER				\$22,668.98	\$249,358.78
	0002	EA	840-45			
	32 Propose 27 for the same coverage, we recognize this is less but with our technology you will have the same coverage, accuracy, and functionality as stated in the RFQ.					\$551,626.03
					\$20,430.59	
	GPS POSITIONING SYSTEM CONSTANTLY OPERATING STATION					\$800,984.81
***** THIS IS THE END OF RFQ 639000024 *****					TOTAL:	

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Michael Austin</i>	TELEPHONE 757 498 6118	DATE 9/15/09
TITLE ARS	FEIN 54-1574819	ADDRESS CHANGES TO BE NOTED ABOVE

Doc	639000024	Page	40 of 149	- when it has to be right
Title	RFQ West Virginia DOT	Date	1/19/09	


GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
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6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130

Rev. 7/01/08

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Title	RFQ West Virginia DOT		Date	1/19/09	



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

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RFQ NUMBER
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DIVISION OF HIGHWAYS
 CHIEF OF INFORMATION SYSTEMS
 BUILDING 5
 1900 KANAWHA BOULEVARD, EAST
 CHARLESTON, WV
 25305-0430 304-558-0408

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
01/06/2009				

BID OPENING DATE: 01/28/2009

BID OPENING TIME: 01:30 P.M.

Line	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM #05						
BID OPENING DATE AND TIME CHANGE						
FROM: 01/21/2009 AT 1:30 P.M.						
TO: 01/28/2009 AT 1:30 P.M.						
NO OTHER CHANGES						
	0001	EA	840-45			
		11				
	GPS POSITIONING SYSTEMS WITH RECEIVER				\$22,668.98	\$249,358.78
	0002	EA	840-45			
	32 Propose 27 for the same coverage, we recognize this is less but with our technology you will have the same coverage, accuracy, and functionality as stated in the RFQ.					\$551,626.03
					\$20,430.59	
	GPS POSITIONING SYSTEM CONSTANTLY OPERATING STATION					\$800,984.81
***** THIS IS THE END OF RFQ 639000024 *****					TOTAL:	

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Michael Austin</i>	TELEPHONE 757-498-6118	DATE 9/15/09
TITLE <i>RFQ</i>	FEIN 54-1574619	ADDRESS CHANGES TO BE NOTED ABOVE

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Title	RFQ West Virginia DOT	Date	1/19/09	


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Title	RFQ West Virginia DOT			Date	1/19/09	



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

Request for Quotation

RFQ NUMBER
 639000024

PAGE
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 CHIEF OF INFORMATION SYSTEMS
 BUILDING 5
 1900 KANAWHA BOULEVARD, EAST
 CHARLESTON, WV
 25305-0430 304-558-0408

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
01/26/2009				

BID OPENING DATE: 02/11/2009

BID OPENING TIME: 01:30 P.M.

Line	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM #06						
BID OPENING DATE AND TIME CHANGE						
FROM: 01/28/2009 AT 1:30 P.M.						
TO: 02/11/2009 AT 1:30 P.M.						
NO OTHER CHANGES						
0001	EA	840-45				
	11					
GPS POSITIONING SYSTEMS WITH RECEIVER					\$22,668.98	\$249,358.78
0002	EA	840-45				
32 Propose 27 for the same coverage, we recognize this is less but with our technology you will have the same coverage, accuracy, and functionality as stated in the RFQ.						\$551,626.03
					\$20,430.59	
GPS POSITIONING SYSTEM CONSTANTLY OPERATING STATION						\$800,984.81
***** THIS IS THE END OF RFQ 639000024 *****					TOTAL:	

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>[Signature]</i>	TELEPHONE 757-998-6118	DATE 9 FEB 09
TITLE PRES	FEIN 541574819	ADDRESS CHANGES TO BE NOTED ABOVE

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Title	RFQ West Virginia DOT	Date	1/19/09	


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Rev. 7/01/08

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Title	RFQ West Virginia DOT		Date	1/19/09	



State of West Virginia
 Department of Administration
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**Request for
 Quotation**

RFQ NUMBER
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PAGE
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ADDRESS CORRESPONDENCE TO ATTENTION OF
 MICHAEL AUSTIN
 304-558-2402

RFQ COPY
 TYPE NAME/ADDRESS HERE

Loyola Enterprises Inc.
 2984 South Lynnhaven RD Suite 101
 Virginia Beach, VA. 23452

DIVISION OF HIGHWAYS
 CHIEF OF INFORMATION SYSTEMS
 BUILDING 5
 1900 KANAWHA BOULEVARD, EAST
 CHARLESTON, WV
 25305-0430 304-558-0408

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
02/02/2009				

BID OPENING DATE: 02/11/2009

BID OPENING TIME: 01:30 P.M

Line	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM #07						
CHANGES AND ADDITIONS TO THE SPECIFICATIONS ATTACHED.						
BID OPENING DATE AND TIME REMAINS 02/11/09 @ 1:30 P.M.						
NO OTHER CHANGES						
	0001	EA	840-45			
		11		GPS POSITIONING SYSTEMS WITH RECEIVER	\$22,668.98	
	0002	EA	840-45			\$249,358.78
				32 Propose 27 for the same coverage, we recognize this is less but with our technology you will have the same coverage, accuracy, and functionality as stated in the RFQ.	\$22,964.74	
				GPS POSITIONING SYSTEM CONSTANTLY OPERATING STATION		\$620,048.00
***** THIS IS THE END OF RFQ 639000024 *****					TOTAL:	\$869,406.78

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Michael Austin</i>	TELEPHONE 757 498 6118	DATE 9/15/09
TITLE <i>Proc</i>	FEIN 54-1579819	ADDRESS CHANGES TO BE NOTED ABOVE

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Title	RFQ West Virginia DOT	Date	1/19/09

- when it has to be right

