



Request for Proposal (RFP) Fort Carson CBRS/LTE Network Audit

Issue Date: March 10, 2022

Overview

US Ignite is seeking a qualified Small Disadvantaged Business to perform an audit of a newly completed CBRS/LTE network at Fort Carson, a United States Army post located directly south of Colorado Springs, Colorado. The audit will include an in-depth assessment of the existing hardware, software, architecture, connectivity, coverage, and security associated with the wireless network.

About US Ignite

US Ignite is a national nonprofit, a 501(c)(3), that is accelerating the smart city movement – and creating value for an entire ecosystem – by guiding communities into the connected future, creating a path for private sector growth, and advancing technology research that’s at the heart of smart city development. As a trusted partner, US Ignite brings this entire smart city ecosystem together, successfully pairing financial investment with technical and organizational expertise. Through the public-private partnership programs we run, US Ignite is a catalyst for communications network advancement, and for innovation in smart city services that are powered by a new generation of technologies. Read more about US Ignite at <https://www.us-ignite.org/>.

Scope of Services

US Ignite installed the CBRS/LTE network as part of the Fort Carson Smart Transportation Testbed with funding from the U.S. Army Engineer Research and Development Center (ERDC). The network serves as a foundation for Smart Base projects at Fort Carson focused on IoT applications. Specifically, the CBRS/LTE network was designed to support the operation of an automated shuttle in the central cantonment area of the post.

The private LTE CBRS band (3.5GHz) network consists of five JMA XTRAN equipped nodes connected via point-to-point BridgeWave RF backhaul and Athonet Core. The RF network allows for hand-offs when moving from node to node. More detailed information regarding the network can be found in *Appendix A*.

The objective of this Network Audit Report is to provide an end-to-end network audit (RAN, Core and Backhaul) for the complete CBRS/LTE network at Fort Carson in both the stationery and mobility modes and identify any recommendations to expand the network.

The selected vendor will be expected to perform a stationary test for the five operating cells at Fort Carson, as well as a drive test. The entire drive test route is shown in *Appendix A* and will be provided to the vendor in various files formats (.kmz, .tab, .csv). It is expected that a subset of the route will need to be driven as there may be no network coverage on certain roads. The total mileage is expected to be less than what is shown.



The vendor shall provide a three-part Network Audit Report. The Network Audit Report shall contain the following:

- 1) RAN Audit
 - a) Hardware inventory and map
 - b) Nodes remote access with functionality and capability
 - c) Antenna's details (height, azimuth, tilt)
 - d) Coverage map
 - e) Radio network performance
 - f) Data network performance
 - g) Stationery and mobility tests shall provide the following radio and non-radio Key Performance Indicators (KPIs):

i) RSRP	vii) PDSCH MCS	xii) Latency
ii) RSRQ	viii) PUSCH MCS	xiii) Packet loss
iii) SINR	ix) DL Throughout Avg/Max	xiv) Failure events
iv) MIMO	x) UL Through Avg Max	xv) Data metrics
v) BLER DL		
vi) BLER UL	xi) Call Events	
 - h) Raw Test Data (log files)
 - i) Conclusion and Recommendations for improving or expanding the network.
- 2) Core Audit
 - a) Hardware inventory and map
 - b) Core remote access with functionality and capability
 - c) Conclusion and Recommendations for improving or expanding the network.
- 3) Backhaul Audit
 - a) Hardware inventory and map
 - b) Backhaul details/Configuration (Link path, height, azimuth, tilt)
 - c) Link performance
 - d) Conclusion and Recommendations for improving or expanding the network.
- 4) Full Network Diagram
- 5) Network documentation/configuration similar, but not limited to, band, frequency, spectrum, MCC, MNC, PCIs, or other enabled features.

The vendor will be expected to discuss this Report with US Ignite following delivery of the Network Audit Report.



TIMELINE FOR EVALUATION AND SELECTION

Milestone	Date	Description
RFP Release	March 10, 2022	Public Release of RFP by US Ignite
RFP Request for Clarification	March 18, 2022	Deadline for Questions
RFP Responses Due	March 25, 2022	Proposer Responses due to US Ignite
Interview Finalist(s)	March 28-29, 2022	Conduct briefings with finalist(s)
Contract Award (CA)	March 31, 2022	US Ignite Executes Contract
Vendor: Audit Pre-Requisites Completed (PRC)	15 calendar days after CA	Project kick-off completed, network fully operational to perform audit
Network Audit Completed	20 calendar days after PRC	On-site work completed including drive and stationary testing. Share preliminary findings.
Audit Documentation Complete	30 calendar days after PRC	Delivery of final audit report due.
Period of Performance End	120 calendar days after PRC	Close out contract.

Request for Clarification

Proposers may submit written questions and requests for clarification regarding the RFP. The questions or requests for clarification must be submitted via e-mail prior to 5:00 p.m. Eastern Standard Time, March 18, 2022. Please direct any questions or clarifications to bases@us-ignite.org.

Small Disadvantaged Business Eligibility

Proposers must be a qualified Small Businesses (SB), Small Disadvantaged Business (SDB), 8(a) Certified SDB, Historically Underutilized Business Zone Small Business (HUBZone SB), Service-Disabled-Veteran-Owned Small Business (SDVOSB), or Woman-Owned Small Business (WOSB).

Submission of Proposals

Please send your RFP response to bases@us-ignite.org with a subject line of “RFP: Network Audit – Your Organization”. Please include the following in your response:

- 1) Proposer Information and References
 - a) Primary contact information, including name, phone number, email, and main point of contact for the project.



- b) Description of your organization, including NAICS code and Small Disadvantaged Business status.
- c) List of three professional references that US Ignite can contact. Please include a summary of the work provided, the name of organization, the main point of contact, phone number, and email address.
- d) A summary of the qualifications of the key team members that will be committed to the project, including their resumes.

2) Qualifications and Response to Scope of Services

- a) Please detail how the proposer will perform the services and meet the requirements outlined in “Scope of Services”. Specifically, provide a complete test plan that includes but is not limited to testing tools, devices, and test protocols.
- b) Please include a pre-audit checklist of items proposed for audit.

3) Cost Proposal

- a) Provide the fixed cost estimate to deliver the Network Audit Report described in the “Scope of Services” as follows:

Report	Price in \$
RAN Audit & Analysis	
Core Audit & Analysis	
Backhaul Audit & Analysis	
Total Cost	

Proposal Preparation Guidelines

- 1. All proposals must be submitted in writing.
- 2. All proposals must be emailed exclusively to the US Ignite point of contact.
- 3. Organizations may modify or withdraw proposals prior to the submission deadline.
- 4. Proposals may not be changed after the submission deadline.

Closing Date and Time

US Ignite must receive proposals by email (please email to bases@us-ignite.org) no later than March 25, 2022 at 5 p.m. Eastern Time.

Proposal Evaluation and Selection Criteria

An Evaluation Committee will review all submitted proposals in accordance with this RFP to ensure that all proposals are reviewed in a fair, competitive, transparent, and in-depth manner. The proposals will be evaluated based on the following criteria:



1. Knowledge of project requirements as defined in the “Scope of Services”
2. Capabilities of the team to perform in-depth audit of existing solutions including hardware, software, architecture, connectivity, coverage, and security of the network
3. Qualifications and range of experience of the proposed vendor
4. Project costs and overall value

US Ignite will conduct interviews with the down selected finalist(s) to gain additional insight into the proposer capabilities and address any outstanding questions.

US Ignite reserves the right not to select any organization if conditions change between the time of the RFP release and completion of the review process. No contractual obligation on behalf of US Ignite whatsoever shall arise from the RFP process. Additionally, this RFP does not commit the US Ignite to pay any cost incurred in the preparation or submission of any response to the RFP.