Request for Proposal (RFP)
Network Core Design and Implementation

Issued by: Roanoke Valley Broadband Authority
Contact: James Bandy, Executive Director, jbandy@highspeedroanoke.net, 540-494-0329
Issue Date: 11/21/2025
Response Deadline: 1/12/2026

1. Introduction

The Roanoke Valley Broadband Authority (RVBA) is seeking qualified vendors to provide services for the design, configuration, testing, documentation, for integration of a new network core. The solution must be compatible with existing network infrastructure and support future scalability.

2. Scope of Work

The selected vendor will be responsible for:

- **Network Architecture Design**: Develop a scalable and resilient core network design. A single equipment vendor is desired for the Core but multiple independent vendor solutions can be presented for the decision.
- **Configuration**: Design configuration for all core network components to meet typical performance and security requirements. Configuration documentation for customer turn up.
- **Testing**: Design thorough testing to ensure reliability, redundancy, and performance benchmarks.
- **Documentation**: Provide detailed documentation including network diagrams, configuration files, and operational procedures.
- **Integration**: Ensure full functionality and compatibility with existing network devices and systems.

3. Technical Requirements

- Compatibility with existing hardware. Currently, the RVBA service delivery switches are specifically Ciena 39xx and 51xx in G.8032 rings around the metro. The new core infrastructure must support existing rings with a sub-second failover.
- Current products delivered over the network include E-LINE, E-LAN and Internet Access. All customers are segmented using VLAN IDs and Virtual switches. Currently CoS is not implemented to prioritize specific traffic.
- All Ciena 6500 Chassis are carded with Duel CPU and NTK536FB eMOTR cards. Layer 2 Ethernet. Software is 10.2 release.
- Core BW is currently 10G running at 30% capacity.
- The new core must also support a high availability ring topology.
- IPv4/IPv6 support in areas where required
- VLAN and routing protocols
- Network monitoring and alerting capabilities
- Compliance with industry standards

4. Deliverables

- Finalized network design and equipment recommendation documents
- Testing and configuration documentation
- Full documentation package
- Knowledge transfer and training (if applicable)
- Written RFP for Core Equipment purchase.

5. Proposal Requirements

Please include the following in your response:

- Company profile and relevant experience
- Detailed project plan and timeline
- Itemized cost breakdown

- References from similar projects
- Support and warranty information

6. Evaluation Criteria

Proposals will be evaluated based on:

- Technical approach and understanding of requirements
- Experience and qualifications
- Cost competitiveness
- Timeline and delivery schedule
- Support and service offerings

7. Questions

For any questions relating to design requirements please contact Jim Bandy jbandy@highspeedroanoke.net All questions will be posted.

7. Submission Instructions

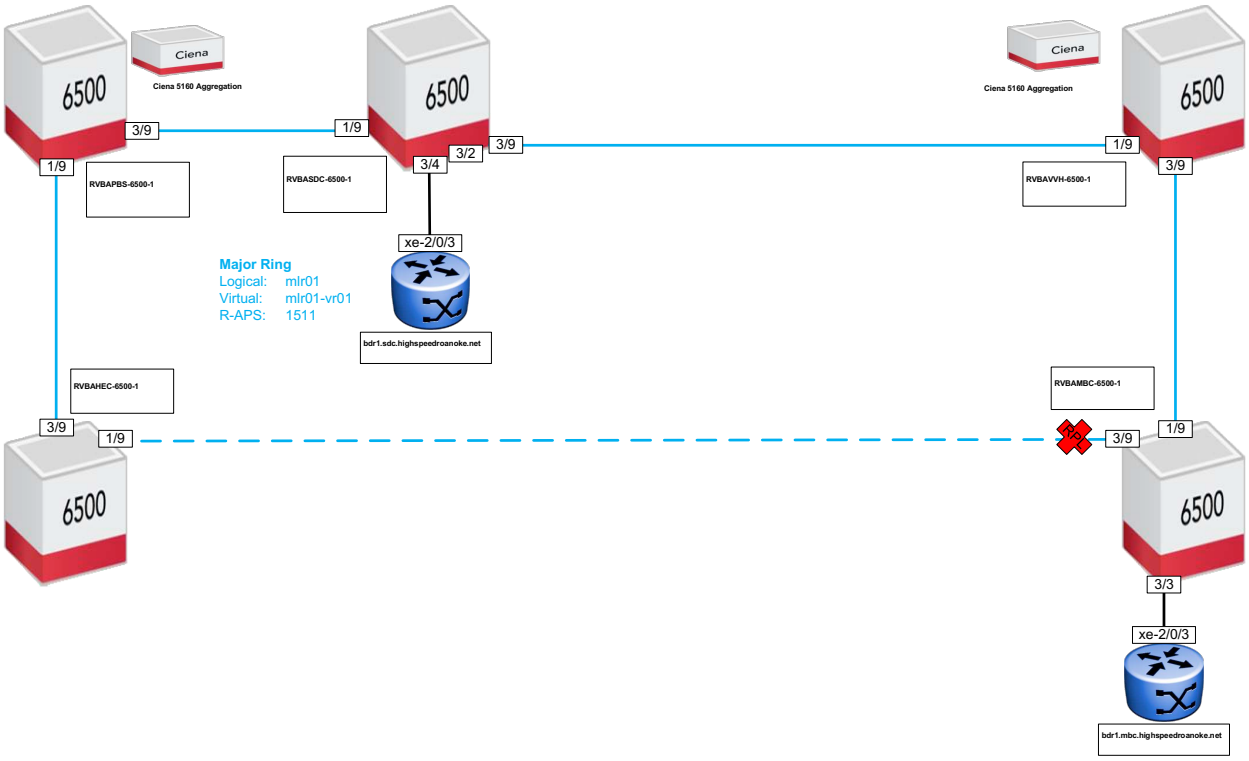
Submit your proposal electronically to:
[Insert Contact Email]
Subject line: **RFP – Network Core Design**

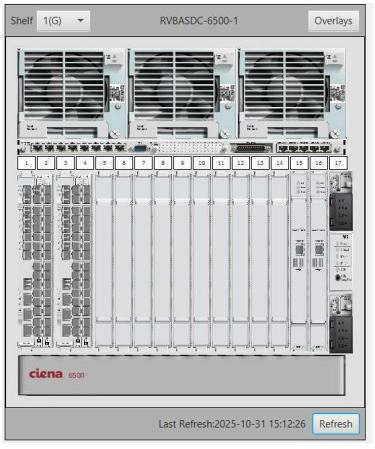
Deadline for submission: **1/12/2026**

Attachment A – Current drawing of core network

Figure 1 Attachment A

NTK536FB eMOTR qty 2 in each 6500 chassis
Current core bandwidth in 10G
Also depicted are two internet access drains
All customers for internet are terminated using vlan sub interfaces at the pop
Network Protection is G.8032
Some locations have Ciena 5160 for port aggregation





Typical Chassis Cards