170908A

Alachua County Public Safety Radio System Design and Engineering



System Analysis Review October 9, 2018



Agenda



- Current Public Safety/Public Service System Review
- Upgrade and Replacement Options
- Recommendations/Actions Items
- Q&A



Current Systems Overview



- GRUCom Trunked Radio System (TRS)
 - Originally installed in 1999/2000
 - Upgraded in 2012
 - Upgrade in 2018 (in progress)
- Operated by GRUCom as an enterprise operation
- User fees on a monthly, per device basis
 - Intended to cover both capital and ongoing support costs



Current System Limitations



- Limited in-building coverage
- System reliability
- System features and functions
 - Further upgrades may be needed to support enhanced services
- Governance and support model
 - Current governance structure and support mechanisms do not fully support public safety and public service needs



System Alternatives



• Alternative 1: Enhance GRUCom system

- Leverage existing investments
- Highest level of interoperability
- Revised governance and support model needed
- Estimated capital costs ~ \$7M

Alternative 2: Standalone County system

- New sites and equipment
- Similar sites to provide improved coverage
- City and County interoperability reduced
- New governance and support model
- Estimated capital costs ~ \$15M



Recommendation



• Alternative 1: Enhance GRUCom system

- Leverages existing system assets to achieve the most costeffective alternative
- Provides the highest levels of day to day operability and interoperability by keeping all users on a single, standardsbased system

Redefine governance and support mechanisms

- In accordance with DHS guidelines and best practices
- Development of effective governance and sustainable funding mechanisms is critical to the long-term future of public safety and public service communications in both the City and County



Action Items



- Develop/implement ordinances and building codes requiring new or modified buildings to include coverage enhancements to ensure inbuilding coverage for public safety agencies
- Evaluate costs/benefits of deploying geo-diverse radio system core and/or prime sites



Action Items (continued)



- Evaluate costs/benefits of connections to adjacent counties to allow for intersystem roaming, further enhancing coverage and interoperability
- Evaluate optional system features such as low speed data, over the air programming (OTAP), and over the air rekeying (OTAR) to enhance system performance and usability



Action Items (continued)



- Leverage existing City, County and other stakeholder facilities, including IP-based Wi-Fi networks, to create a network of Wi-Fi access points to augment TRS coverage in key buildings and facilities
- Evaluate costs versus benefits of extending fiber service versus deploying microwave backhaul to new or existing TRS sites



Discussion/Q&A