



Virginia Information Technologies Agency

Are You Prepared for Next Generation 9-1-1 (NG9-1-1)???





Challenges to Existing 9-1-1 System

- 9-1-1 now
 - Nine, independent networks
 - Limited ability to process data
 - Decades old technology
 - CORE ANALOG TECHNOLOGY IS GOING AWAY
- Evolving telecommunications
 - Multiple service providers/technologies
 - New technologies/applications continually developed
 - Increased flexibility/mobility of citizens



What is Next Generation 9-1-1?

- NG9-1-1 is the solution to existing challenges
 - Migration from circuit (analog) to packet switched (IP) technology
 - Unified network among PSAP; data transferability
 - Required to meet the demands of new telecommunications technologies
- Makes data available
 - About the caller, the incident, and among PSAPs and first responders



Migration to NG9-1-1 in Virginia

- Has begun
 - Fairfax County and AT&T contract
 - Deployment of an ESInet and NG9-1-1 core services
 - Contract available to all localities
 - Recommendation of VA 9-1-1 Services Board
- Choice of NG9-1-1 provider is a local decision
- Code of Virginia section 56-484.16 requires migration by July 1, 2023



Planning and Recommendation

- NG9-1-1 Migration Proposal
 - VITA-ISP developed document based on the Fairfax County contract
 - Includes information on:
 - The AT&T solution
 - PSAP's existing systems and readiness for NG9-1-1 deployment
 - Description of network availability, redundancy and diversity for each locality
 - Associated costs and financial support offered by the Virginia 9-1-1 services board

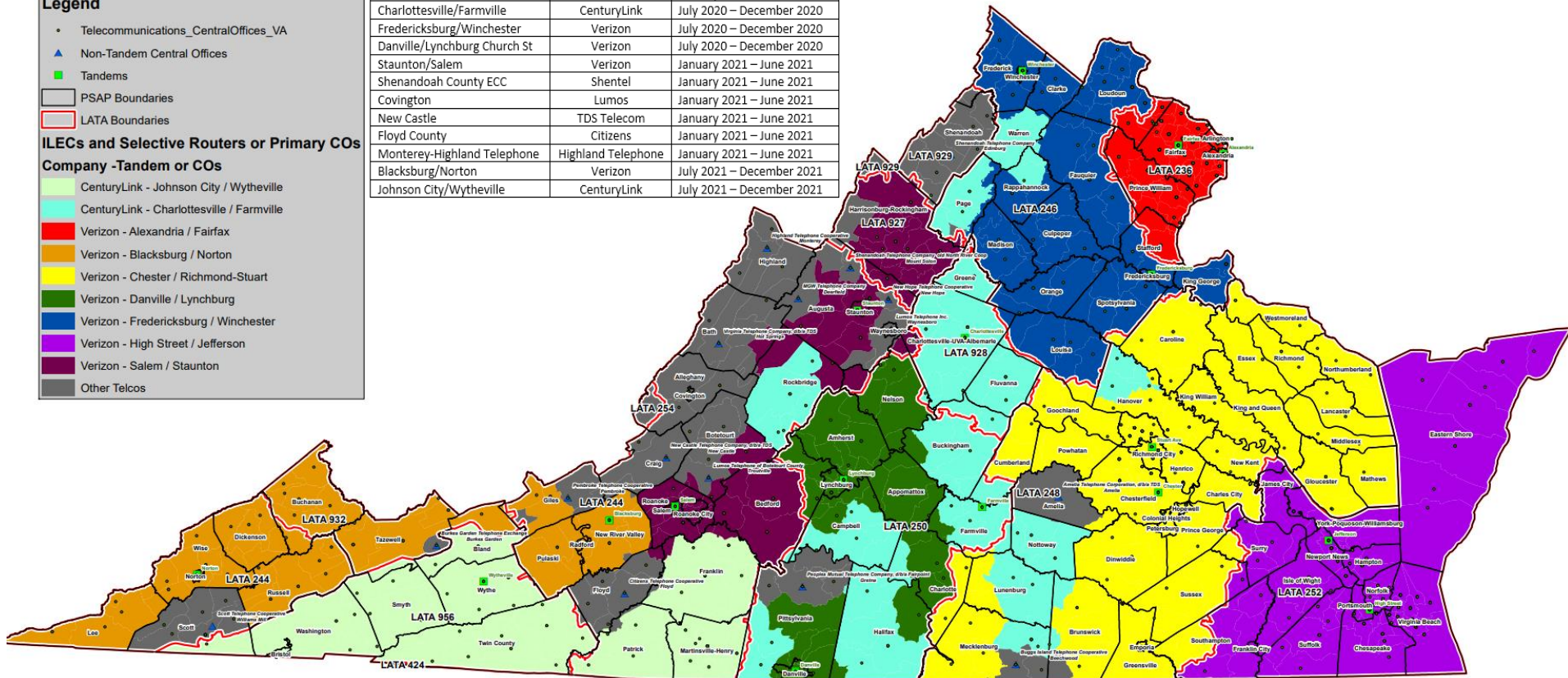


Proposed Deployment Schedule

Selective Routers	9-1-1 Service Provider	Proposed Deployment Timeframe
Fairfax/Alexandria	Verizon	January 2019 – June 2019
High St Portsmouth/Jefferson	Verizon	July 2019 – December 2019
Stuart/Chester	Verizon	January 2020 – June 2020
Charlottesville/Farmville	CenturyLink	July 2020 – December 2020
Fredericksburg/Winchester	Verizon	July 2020 – December 2020
Danville/Lynchburg Church St	Verizon	July 2020 – December 2020
Staunton/Salem	Verizon	January 2021 – June 2021
Shenandoah County ECC	Shentel	January 2021 – June 2021
Covington	Lumos	January 2021 – June 2021
New Castle	TDS Telecom	January 2021 – June 2021
Floyd County	Citizens	January 2021 – June 2021
Monterey-Highland Telephone	Highland Telephone	January 2021 – June 2021
Blacksburg/Norton	Verizon	July 2021 – December 2021
Johnson City/Wytheville	CenturyLink	July 2021 – December 2021

Legend

- Telecommunications_CentralOffices_VA
 - ▲ Non-Tandem Central Offices
 - Tandems
 - PSAP Boundaries
 - LATA Boundaries
- ILECs and Selective Routers or Primary COs**
- Company -Tandem or COs**
- CenturyLink - Johnson City / Wytheville
 - CenturyLink - Charlottesville / Farmville
 - Verizon - Alexandria / Fairfax
 - Verizon - Blacksburg / Norton
 - Verizon - Chester / Richmond-Stuart
 - Verizon - Danville / Lynchburg
 - Verizon - Fredericksburg / Winchester
 - Verizon - High Street / Jefferson
 - Verizon - Salem / Staunton
 - Other Telcos





Benefits of the AT&T ESInet™

- Nationally distributed architecture
 - Increased reliability of the network
- Interoperability among PSAPs
 - Allows data transfer with calls
- Integrated text to 9-1-1
- Dedicated Network Operations Center, management team and support
- Customer management portal
 - Initiate alternate routing plans
- Able to support future media; photos & video



Role of GIS in NG9-1-1

- One of the most time consuming efforts of moving to an NG9-1-1 system will be the preparation of GIS data
 - Used to provide location validation and routing of 9-1-1 calls to the appropriate PSAP
- Synchronization of the MSAG with the GIS centerline and address point data
- MSAG/ALI analysis



Deployment Funding

- Equipment and systems
 - Funding provided by the 9-1-1 Board
- Connectivity
 - Funding provided by the 9-1-1 Board
- Legacy 9-1-1 charges
 - Covered by the 9-1-1 Board
- Monthly recurring charges
 - Difference between current and future charges covered by 9-1-1 Board for 24 months

» Refer to your migration proposal for specific costs

NG9-1-1 Budget

- Based on Fairfax County Contract
- “Worst Case Scenario”

NG9-1-1 Cost per FY	
FY19	\$7,295,005.20
FY20	\$27,867,943.87
FY21	\$11,171,231.74
FY22	\$6,138,711.84
FY23	\$1,142,122.38
Total	\$53,615,015.03



NG9-1-1 Budget

NG9-1-1 Cost by Type	
NG9-1-1 Costs	\$452,000.00
CHE i3	\$2,925,000.00
CHE Replacement	\$10,650,000.00
Text to 9-1-1	\$2,220,000.00
ECaTS Expansion	\$117,000.00
Racks	\$24,000.00
Diversity	\$22,533,751.15
GIS Data	\$160,100.00
Legacy 9-1-1	\$991,320.60
Monthly Delta	\$13,541,843.28
Total	\$53,615,015.03



NG9-1-1 Monthly Recurring Cost

- Currently Monthly Recurring Cost
 - \$743,997.88 per month
 - \$8,927,974.56 annualized
- AT&T Monthly Recurring Cost
 - \$1,254,640.28 per month
 - \$15,055,683.36 annualized
- Difference
 - \$510,642.40 monthly
 - \$6,127,708.80 annualized



Path Forward

- Documents to review
 - NG9-1-1 Migration Proposal
 - Existing Fairfax County contract
 - Proposal Acceptance Letter (PAL) = funding request
 - AT&T Participation Agreement (PA)
- Decisions and Options
 - Proceed utilizing the Fairfax contract
 - Execute an RFP
 - Search for & review other procurement options



9-1-1 Board's Guiding Principles

- 9-1-1 is an essential, local/regional service
- Need to address ALL of 9-1-1 not just NG
- Full stakeholder engagement is needed
- Services must be not be degraded
- Economies need to be leveraged
- Doing nothing is NOT an option (legislation)