Version Date:	3/26/2018
PSAP Name:	
PSAP Contact:	
Contract:	Next Generation 9-1-1 ESInet and Core Services 4400007825 (Fairfax County)
Contract Contact:	Jamie Pun, Fairfax County Contract Specialist (703) 324-3653 jamie.pun@fairfaxcounty.gov
Vendor:	AT&T Corp P.O. Box 5095 Carol Stream, IL 60197-5095
Vendor Contact:	Asif Iqbal, Sales Manager (703) 474-6025 ai001f@att.com

Executive Summary

The Commonwealth has been discussing and planning for next generation 9-1-1 (NG9-1-1) for nearly a decade. With significant advances of the technology and capabilities and functionality of an NG network, now is the time to move from planning to implementation. The question is not if the Commonwealth should deploy NG9-1-1, but rather, how should the Commonwealth deploy NG9-1-1. There is no option for not deploying it. Since 9-1-1 is a local service, it is up to each locality to determine how they will move forward with NG9-1-1 deployment. To aide that decision, the 9-1-1 Services Board (the Board) adopted the Virginia NG9-1-1 Deployment Plan in January 2018. That plan proposed the methodology and process to guide the 9-1-1 Service Board and Commonwealth as a whole, through this deployment. Fortunately, localities in the Commonwealth are able to leverage a project in Northern Virginia for both lessons learned and a procurement vehicle that will make the process significantly easier. Though the Board is recommending the Fairfax County contract with AT&T for NG9-1-1 services since it was awarded through a competitive process, each locality will need to determine the most appropriate path. The Board and VITA are positioned to provide assistance, and to assure a seamless, unified network.

Regardless of the locality's decision, all stakeholders in the 9-1-1 ecosystem must work together on deployment. A primary goal of NG9-1-1 is to ensure calls and information received in one locality can be transferred to any surrounding locality even if it is to another state. Accomplishing that will require continual coordination, communications and cooperation among the stakeholders throughout the deployment process. The cost of failure is too high. Each stakeholder in the 9-1-1 ecosystem must work together and ensure a smooth transition to NG9-1-1.

This Migration Proposal is being developed for each locality (or groups of localities if served by a consolidated public safety answering point or PSAP) to provide information about the AT&T solution, prerequisite work needed within the PSAP and the expected costs and funding provided by the Board. The goal of this document is to provide each PSAP/locality with all of the information needed to evaluate the AT&T solution and determine whether it will meet the local needs. No locality should feel obligated to accept this proposal as they may use an appropriate procurement process for these services. This is simply to provide more information about services that are already available through an existing contract.

Solution Overview

AT&T is offering their Next Generation ESInet solution throughout Virginia as a solution that will facilitate a transition from legacy 9-1-1 networks to networks capable of supporting the growing demands of a mobile society. AT&T's solution supports key NENA i3 capabilities today, while forming the basis of a true NG9-1-1 platform that will support multimedia emergency services as standards are solidified in the industry.

The AT&T ESInet™ solution is a combination of a world class IP network and the NG9-1-1 components. Their ESInet solution (delivered as a service) comes complete with a full suite of advanced features, management services and tools to help ensure they provide the best possible service to each PSAPs and ultimately the citizens they serve.

The AT&T ESInet™ solution provides the public safety community with an i3 architecture built from the ground up. AT&T's commitment to the NENA i3 is based on years of contributions to NENA standards committees and understanding the evolving needs and requirements of the Public Safety community. The AT&T solution is not just "i3 like," or "i3 aligned." As elements of the i3 standard continue to be ratified, updated and enhanced—AT&T will continue its commitment to i3. The AT&T ESInet™ services will provide Virginia everything needed to deliver the critical foundational components of an industry standard i3 solution delivered over the worlds most advanced IP network.

AT&T ESInet™ Included Features

- Initial build-out with expandable capacity
- Nationally distributed, geographically diverse and redundant service architecture
- Pre-deployed ESInet Call Processing Centers in AT&T datacenters across US
- Aggregation Centers (AGC) in AT&T Central Offices across the US to easily augment growth capacity as well as one within a 50-mile radius
- Initial call processing capacity more than twice current US E9-1-1 call volumes
- NENA i3 compliant
- High availability design (99.999% availability)
- 6 core redundant architecture
- Redundant ALI database
- Interoperable with neighboring PSAPs Legacy PSAP Gateway at each PSAP
- Defense in depth security
- Text to 911 – National TCC Provider
- IPV6 capable
- Reporting Suite
- Full lifecycle management
- End to end management and monitoring
- Fully resourced team to install and support
- Full Business Continuity/Disaster Recovery organization
- Dedicated Program / Service Manager

The proposed solution provides a secure IP-based network with no single point of failure. With no single point of failure, the solution includes six ESInet data centers located at AT&T facilities throughout the country. The ESInet will provide the core for a robust emergency services IP network that assures call delivery. The AT&T solution enables call delivery into a legacy PSAP environment, an IP-enabled 9-1-1

PSAP, or to peer ESInets. This environment will provide the NCR with the flexibility to grow its own IP-enabled 9-1-1 solution and to share it with other systems in and around the nation AT&T and West Corporation have deep security and support provisions in place. AT&T has demonstrated experience in cybersecurity. All of this is backed by AT&T's 24/7/365 Resolution Center, AT&T Labs, AT&T's world class project management and service delivery organizations.

Additional information about the AT&T solutions and the contract with Fairfax County can be found at:

https://www.fairfaxcounty.gov/cregister/ContractDetails.aspx?contractNumber=4400007825

PSAP Call Handling Systems and Applications

Each PSAP system and application that interfaces with the 9-1-1 call must be assessed to determine if it will be compatible with NG9-1-1. This section of the migration proposal identifies each major system, assesses its readiness and outlines any upgrades that must or could be implemented with NG9-1-1.

Call Handling Equipment

Obviously, the PSAP's call handling equipment (CHE) is the primary system that interfaces with the 9-1-1 network. As such, it is likely the one that will require the deepest assessment and potential upgrades to operate with the NG9-1-1 network. CHE that is non-vendor supported (NVS) (or will become NVS during the transition period) or cannot be upgraded to be NG9-1-1 ready will be identified for replacement, but will be subject to the funding limits currently in place for the PSAP grant program ($150,000 individual or $200,000 share services). This may also apply to technology refreshes of hardware due to becoming NVS or operating systems becoming end-of-support. The currently CHE in the PSAP has been identified as:

- CHE manufacturer:
- CHE model:
- CHE version number (clients):
- CHE version number (server):
- CHE maintenance provider (channel):
- CHE Geodiversity:

This CHE has been determine to [not] be NG9-1-1 ready, but will require the following upgrades:

[Insert CHE assessment here – Could be NG9-1-1 ready or replacement of entire system.]

Text to 9-1-1

Text to 9-1-1 can be deployed web-based on a separate computer or integrated with the CHE. While the former is typically at no cost, the latter tends to have a cost associated with it. Though text to 9-1-1 will be a base feature of NG9-1-1, the passage of Senate Bill 418 in the 2018 General Assembly requires all PSAPs to implement text to 9-1-1 by July 1, 2020. To meet that requirement and to be prepared for the deployment of NG9-1-1, the PSAP plans to…

Computer-Aided Dispatch

A computer-aided dispatch (CAD) system usually receives 9-1-1 location information (ALI) through an interface with the CHE. As a result, the change to NG9-1-1 should not have an impact on a CAD system. However, an assessment is made to determine if that is the case and if any options are available from the CAD vendor that could improve operations after NG9-1-1 is deployed. Any required upgrades would be funded through the Board, but any options to improve operations would be at the PSAP's expense.

Additionally, as a reminder, CAD system replacement is no longer funded through the PSAP grant program so PSAPs need to plan for its replacement locally. The current CAD system has been identified as follows:

- CAD vendor:
- CAD software version:
- CAD interfaces:
- Method of data transfer:

[This CAD system has been determined to not require any upgrade or modification with the deployment of NG9-1-1.]

Mapping Display System

Similar to a CAD system, a mapping display system usually receives 9-1-1 location information (ALI) through an interface with the CHE or is part of the CHE or CAD. As a result, the change to NG9-1-1 should not have an impact on a mapping display system. However, an assessment is made to determine if that is the case and if any options are available from the mapping vendor that could improve operations after NG9-1-1 is deployed. The current mapping display system has been identified as follows:

- Dispatch Mapping Vendor:
- Dispatch Mapping Software Version:
- Method of data transfer:

[This mapping display system has been determined to not require any upgrade or modification with the deployment of NG9-1-1.]

Voice Logging and Recording

Typically, the audio recorded by a voice logging recorder is generated by the CHE. Though not a best practice, it is possible to record audio directly from the incoming 9-1-1 trunks so an assessment must be performed to ensure that audio from 9-1-1 calls will still be recorded after the deployment of NG9-1-1. The current mapping display system has been identified as follows:

- Logging Recorder Vendor:
- Logging Recorder Model:
- Logging Recorder Software Version:
- Audio Origination Point: trunk-based or position-based

[This voice logging recorder system has been determined to not require any upgrade or modification with the deployment of NG9-1-1.]

Data Analytics

Though the ECaTS data analytics application is provided to all PSAPs by the 9-1-1 Services Board, some PSAPs still use a second application, native to the CHE, for data analytics in the PSAP. While the Board will directly fund the upgrade to ECaTS to handle NG9-1-1, the local data analytics application may also need to be upgraded. The current data analytics application has been identified as follows:

- Data Analytics Vendor:
- Data Analytics Software Version:

The PSAP can use the upgrade to NG9-1-1 as an opportunity to migrate away from having a second data analytics application to using ECaTS exclusively. If not, the following upgrades will be required:

-

Outcall Notification Systems
If the PSAP has an outcall notification system, AT&T will provide quarter subscriber data for use in this system at no cost. It is important to note that this data's use is limited to the outcall notification system and cannot be used for other purposes.

Other Systems or Applications
Any other systems, that interface with the 9-1-1 call will be identified her along with the assessment of their readiness of NG9-1-1.

Rack Space
The AT&T solution requires four units (4U) of rack space in the PSAP equipment/computer room for networking equipment. The rack must also have available electrical connections and be properly grounded. [The PSAP confirms that this space is available or Additional rack space will need to be acquired to meet this need.]

Coordination with Open Grants
The PSAP currently has open grants, as of April 1, 2018, as follows with the noted status:

1. FY17
2. FY18
3. FY19

To ensure the grant fund support the migration to NG9-1-1, the PSAP should ensure the following issues are addressed:

-

GIS Data Preparation

Locality GIS Data Readiness
Geospatial data drives the routing of NG9-1-1 calls. It is imperative that road centerline and address point data layers are highly accurate and well maintained. In 2016, VITA conducted an analysis of these data against the existing automatic location identification (ALI) database and master street address guide (MSAG) to help determine readiness and provided a report to each PSAP of the results. This analysis has been repeated making adjustment to the logic to ensure it matches the methodology used by AT&T in their analysis. The goal is to have 98% of all addresses in the current ALI database geocode against the locality's road centerline data layer. Achieving the 98% threshold means that the PSAP is technically ready to deploy NG9-1-1. Since matching to the address point is more accurate, VITA has added the secondary goal of matching 98% of ALI database address when geocoded against the address point data layer. If either of these goals in not achieved, then GIS data work must be completed to meet or exceed these goals.

The MSAG/ALI/GIS analysis for the PSAP determined the current match rate to be as follows:

- Road Centerline – ##%

- Address Point – ##%

To resolve the issues identified in the analysis, the following improvements are recommended:

-

PSAP Boundary

This is a GIS polygon data layer that defines the area of responsibility for each PSAP, with no unintentional gaps or overlaps. The PSAP boundary must be agreed to by all adjoining PSAPs. VITA ISP will support the development and maintenance of a statewide PSAP boundary. This PSAP boundary layer is essential to routing 911 calls based on caller location by either civic address or coordinate location. This layer must not have gaps or overlaps to ensure optimal call routing. VITA will develop a best practice to guide each PSAP through this process, which can also be facilitated by the VITA ISP regional coordinator.

Authoritative GIS Data Source

This polygon layer defines the area of authoritative GIS data sources, with no unintentional gaps or overlaps. The boundary must be agreed to by all adjoining data provisioning providers. Edge-matching conformance is ensuring that one and only one entity is responsible for maintaining each piece of GIS data within a PSAP. Within a PSAP boundary, there may be multiple sources for authoritative GIS data as a combination of cities and counties. The GIS sources within the PSAP need a common and agreed-upon understanding for the maintenance of each feature and the provisioning boundary of responsibility. Making sure there is agreement of that point and ensuring each locality is only providing data where they are the authoritative GIS data source are the purpose of this assessment. External edge-matching conformance addresses boundaries between neighboring PSAPs to ensure that there are no overlaps or gaps in the maintenance of GIS data. Geometric features need to meet at the agreed upon boundary.

MSAG transition/confirmation

In order to service originating service providers (OSP) that are not fully i3 capable, AT&T will maintain a master street address guide (MSAG) as part of the NG9-1-1 solution. While the existing MSAG can be used and maintained, generating a new MSAG from local GIS data is a better solution since existing GIS data is generally of superior quality than the MSAG. To use GIS data to generate the MSAG, an emergency service number (ESN) data layer must exist or be created. Alternatively, a PSAP may choose to collapse their existing ESN structure to a single ESN boundary coincident with the PSAP boundary. [The PSAP selected…]

GIS Ingest Readiness

Localities may choose to implement AT&T's tools and workflows for ongoing maintenance of GIS data, or may choose to continue using internal workflows or third-party support services. As GIS data is updated, regardless of the tool set or service provider, the GIS datasets must be provided to the spatial interface (SI). The SI provisions the updated GIS data to drive location validation and call routing functions in the ESInet.

Localities choosing to adopt or transition to the AT&T toolset will have a defined workflow for providing updated GIS data. Localities wishing to use existing tools, acquire third-party tools, or rely on a service provider will need to ensure the workflows are in place to accept and resolve discrepancy calls (formalized requests to update GIS datasets), and periodically transfer updated GIS datasets to the AT&T spatial interface. This section will establish the path and milestones for completing this work.

[Based on a review with the PSAP, the selected method for the SI is…]

Data maintenance Workflow/Procedures

The quality of GIS data diminishes over time unless it is properly maintained. It is important that localities document GIS data maintenance workflows and validations to ensure synchronization across GIS layers. This can include periodically ensuring conformance of edge matching of GIS data at shared boundaries. [VITA has confirmed that the GIS organizations supporting the PSAP have appropriate internal data maintenance procedures/discrepancy management workflows.] Responsibilities and performance metrics for GIS maintenance are documented for all data providers with appropriate contact information for each.

Call Routing

The ultimate goal for all PSAPs is to geospatial (i3) routing for all 9-1-1 calls. This solution uses all the NENA i3 standards for voice and data directly into the PSAP's CHE. 9-1-1 call routing is based on the PSAP-provided GIS data. The ESInet router hands off to the PSAP networking equipment (router or firewall). The PSAP's CHE must be able to receive the voice call via SIP. Location data delivered via SIP using PIDF-LO, and would perform all the i3 protocols such as LoST and HELD.

If the PSAP's CHE is NG9-1-1 ready or the geospatial data is not ready for deployment, a PSAP can still deploy the IP network with an interim solution for call delivery. This will allow the PSAP to deploy on schedule, and they can convert to geospatial (i3) routing later.

All two, interim solutions are as follows:

Legacy PSAP Gateway - This solution uses an IP (SIP) connection to get the voice call to a gateway in the PSAP. The gateway converts the voice call back to analog voice circuit (CAMA) to connect to the PSAP's CHE as is done currently. This does not require any upgrade to the CHE and use a legacy ALI lookup. The ALI lookup would use the standard serial connection (in this case to the ESInet routers) to retrieve location information. MSAG and ALI are still used to conduct the routing.

Transitional SIP - This solution uses an IP (SIP) connection to get the voice call directly into the PSAP's CHE. The ESInet router passes the call to the PSAP networking equipment (router or firewall). The PSAP's CHE must be able to receive the voice call via SIP. The PSAP would still use a legacy ALI lookup. The ALI lookup would use the standard serial connection (in this case to the ESInet routers) to retrieve location information. MSAG and ALI are still used to conduct the routing.

Again, the ultimate goal for all PSAPs is to geospatially route all 9-1-1. If the geospatial data meets the accuracy goals, a PSAP should be able to deploy NG9-1-1 with geospatial routing. If for some reason, this cannot be accomplished interim solutions are available to allow the PSAP to deploy on schedule, and they can convert to geospatial routing later. Based on an assessment of the CHE and GIS data, geospatial routing can be implemented initially with NG9-1-1 and no interim solution will be necessary.

Call Transfers

During the transition to NG9-1-1, the AT&T ESInet will be interconnected with all selective routers from Verizon and CenturyLink to ensure that calls received by PSAPs that have deployed NG9-1-1 can be transferred to PSAPs on the legacy E9-1-1 network and vice versa. No ability to transfer calls will be lost during the transition when neighboring PSAPs may be on different networks.

Post deployment, all Virginia PSAPs should be on an ESInet and should be able to transfer calls among PSAPs with accompanying location data. Even if more than one ESInet is deployed from different solution providers, the goal is that they are interconnected and calls can be transferred between them.

Network

The NG9-1-1 solution offered by AT&T is a service; therefore, the network is provided as part of that service. However, there are several issues impacting the network that may be outside of this service that must be considered. The design of the network is based on the legacy E9-1-1 network information as follows:

- Legacy E9-1-1 service provider:
- ALI database provider:
- Selective router pair(s):
- Trunk counts (all):
  - Wireline:
  - Wireless:
  - Administrative:

The NG9-1-1 network will be designed to support the same number of concurrent 9-1-1 calls as can be supported on the legacy network (wireline and wireless trunks). The PSAP can designate what happens to calls that exceed this number. This setting is determined in the PSAP CHE, but the options will be discussed with AT&T during system configuration. The options include providing the caller with a fast busy signal, routing the call to another PSAP or overflowing the call to another line. As a best practice, VITA ISP recommends routing the call to a fast busy signal.

Redundancy and Diversity

In order to provide 99.999% availability of the NG9-1-1 service, each PSAP must have diverse and redundant IP connections to the ESInet. Having redundant connectivity means having two connections, but they could be co-located or follow the same path. Having diversity means that those redundant connections follow different paths that never touch from origin to destination. To achieve the 99.999% availability, diverse connectivity is planned for all PSAPs. There is a chance the diversity is simply not available to all PSAPs. AT&T has conducted a diversity study for each PSAP and the results are as follows:
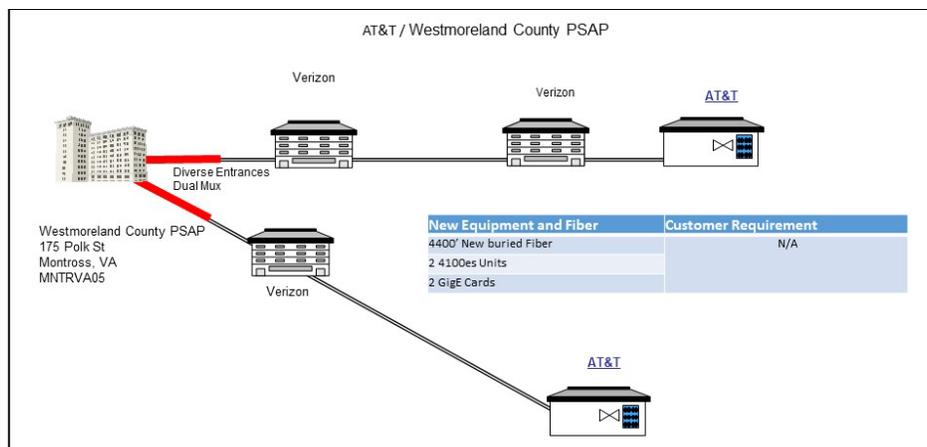
In order to provide the diversity identified in the study, the following special construction must take place:

- 4,400 feet of new buried fiber must be installed
- Two 4100es units must be installed
- 2 GigE cards must be installed

The total cost of this special construction is $##,###, which will be provided by the Board as part of the PSAP's funding submission. The timing of the implementation of that special construction may not be completed until after initial NG9-1-1 deployment. [Additionally, the path of the special construction has been determined to not provide additional opportunity for leveraging at the local level.]

Disaster Recovery

Though the NG9-1-1 solution is designed to provide 99.999% availability, disaster recovery plans still need to be in place for instances when the network becomes unavailable or the PSAP is otherwise inoperable (evacuation, structural damage, etc.). Broadly, when the PSAP must be abandoned, there are two approaches to disaster recovery, a) having a backup PSAP within the locality or b) partnering with a neighboring PSAP to take the calls. Additionally, if only the network is impacted and the PSAP is still operable, 9-1-1 calls can be forwarded to a 10-digit telephone number in the same PSAP. Location data is lost, but that call can still be answered and processed.

Currently, the PSAP [has or does not have] a disaster recovery plan, which states that [...] should the network be unavailable or PSAP be evacuated.

Based on the current disaster recovery plan, the following steps must be taken in order for this plan to continue to be viable with NG9-1-1:

-

While support will be available to maintain the current disaster recovery capability for the PSAP, it is important to note that there are aspects of disaster recovery that are beyond the scope of this migration proposal. As an example, while the NG9-1-1 network can be configured to route calls to a neighboring PSAP in the event of a PSAP evacuation, getting the 9-1-1 call to another PSAP to be answered is only part of the dispatching process. The call for service then needs to be sent to first responders through a radio channel or mobile data. Assuming that capability already exists, nothing about the deployment of NG9-1-1 should impact that. In cases were disaster recovery does not exist currently, this migration proposal only deals with getting the 9-1-1 call routed to another PSAP (backup or neighboring) and does not address radio or CAD interoperability needed to effect the dispatch of first responders. VITA ISP can assist with that process, but outside of NG9-1-1 deployment. Additionally, VITA ISP can assist with the exercising of disaster recovery plans, which should be done at least once a year to make sure they are fully functional when needed.

Secondary PSAP

The following secondary PSAP that are not connected to the selective router pair have been identified within the service area of the primary PSAP:

1.

Each of these PSAPs is currently transferred calls through a 10-digit telephone line. As a result, no upgrades need to take place for these secondary PSAPs. If these secondary PSAP want to connect to the

ESInet, the primary PSAP must agree and they would need to have NG9-1-1 ready call handling equipment. The secondary PSAP would need to pay the cost to connect to the ESInet, which should be minimal since its geospatial data should already be included in the primary PSAP's data and the 99.999% availability may not be required, thus eliminating any special construction costs. However, if the secondary PSAP desires that availability, they would need to cover that cost as well.

Network Security
AT&T to provide.

Schedule for Deployment

A clear and accurate schedule for deployment is essential for ensure cost effective and coordinated deployment throughout the Commonwealth. For that reason, this section must identify all milestones that must be met in order to successfully deploy. To manage costs, a six-month deployment window has been established for each selective router pair regardless of whether the PSAPs choose the AT&T or another NG9-1-1 solution. The following chart identifies the deployment periods for each selective router pair:

Selective Routers	9-1-1 Service Provider	Population	Time Period
Fairfax/Alexandria	Verizon	2,494,184	June 2018 - December 2018
High St Portsmouth/Jefferson	Verizon	1,662,247	January 2019 – June 2019
Stuart/Chester	Verizon	1,660,182	July 2019 – December 2019
Charlottesville/Farmville	CenturyLink	403,369	January 2020 – June 2020
Fredericksburg/Winchester	Verizon	343,031	January 2020 – June 2020
Danville/Lynchburg Church St	Verizon	320,247	January 2020 – June 2020
Staunton/Salem	Verizon	453,065	July 2020 – December 2020
Shenandoah County ECC	Shentel	43,175	July 2020 – December 2020
Covington	Ntelos	21,556	July 2020 – December 2020
New Castle	TDS Telecom	5,158	July 2020 – December 2020
Monterey-Highland Telephone	Highland Telephone	2,216	July 2020 – December 2020
Blacksburg/Norton	Verizon	340,101	January 2021 – June 2021
Johnson City/Wytheville	CenturyLink	338,311	January 2021 – June 2021

In order to make this deployment window, the following milestones must be completed by the date listed:

Milestone	Date	Known Issues or Dependencies
Local NG9-1-1 Deployment Decision		[Note any local decision making constraints or steps needed to complete.]
Participation Agreement Execution		
CHE Upgrade Completion		
Special Construction Completion		
98% GIS Data Goal Achieved		
Deployment Window		
Other significant milestone potentially impacting		Consolidations, moves, etc.

Cost Estimates for NG9-1-1 Funding

The 9-1-1 Service Board has committed to covering the transitional costs for NG9-1-1 deployment so it is important that all such costs are identified and made part of the overall budget. It is also important that the funding be provided on a fair basis across all PSAPs in Virginia. While most costs will be fully funded, others like replacement of non-vendor support CHE will continue to be funded at the same levels as has been provided through the PSAP grant program in prior years such as CHE replacement, noted above. Based on all of the information provided above in this migration proposal, the following budget is set for the deployment of NG9-1-1:

Category	Amount	Notes
NG9-1-1 non-recurring cost	$4,000	Flat rate from AT&T
CHE upgrade	$30,000	Through existing maintenance provider
CAD upgrade	$0	Not required
Mapping upgrade	$0	Not required
Voice logging upgrade	$0	Not required
Data analytics expansion	$1,000	i3 logging and text to 9-1-1
Other system upgrades	$0	Not required
Rack space	$2,000	Need for an additional rack
Special construction costs	$1,800,000	
Disaster recovery upgrade	$0	Not required
Secondary PSAPs	$0	None
GIS data preparation	$50,000	Cost provided by local GIS vendor
OSP transition cost	$0	No costs identified
Legacy 9-1-1 transition costs	$5,000	Verizon or CenturyLink
Project management assistance	$0	To be provided by VITA ISP
Total	$1,892,000	

The monthly recurring cost for the AT&T solution is **$18,589.40**, which is set for the ten-year term of the Fairfax County contract. The current monthly recurring cost for the legacy E9-1-1 solution is approximately $**22,892.47**. The estimated savings to the PSAP after deployment is approximately $4,308.02. [note: if the calculation has worked out the opposite way, then the statement would be that the Board will cover this cost for 24 months after deployment of the PSAP.] The monthly recurring cost is impacted by the bandwidth into the PSAP. Bandwidth is primarily impacted by the number of concurrent calls each PSAP wants to be able to process. As the PSAP grows and adds bandwidth to handle more concurrent calls, the increased monthly cost will be the obligation of the PSAP even if during the 24 months following transition. Additionally, the recurring maintenance costs for PSAP equipment and GIS data will remain the responsibility of the PSAP.

Projected Board Funding

The Board will begin awarding funding for NG9-1-1 in late 2018. Until the Board approves the funding request from the PSAP, all funding levels show are just projected. Based on the funding guidelines approved by the Board (or will be approved by the Board), the following funding would be awarded to the PSAP:

Type of Funding	Amount
Non-recurring	$1,892,000
Recurring	$0

The funding amount shown is based on estimates at this point. As binding quotes are received, the budget will be adjusted. The approval from the Board will be for the specific equipment or services and contingency funding will be available should the final cost be slightly higher so long as the original scope of the effort does not change. Similarly, if the final cost is lower, the budget will be adjusted lower. That additional funding cannot be shifted to another part of the project.