

ILLINOIS STATE POLICE
Office of the Statewide 9-1-1 Administrator



State of Illinois

Application for
9-1-1 Modification Plan

INTRODUCTION

The following document provides the application for submitting a 9-1-1 Modification Plan that will supply the Department of State Police (Department), the Illinois Commerce Commission (ICC), the Statewide 9-1-1 Advisory Board (Advisory Board) and the Statewide 9-1-1 Administrator (Administrator) with the necessary information about your proposal to modify your 9-1-1 system. All modified plans must comply with 83 Ill. Adm. Code Part 1325.

LONG FORM MODIFIED 9-1-1 PLAN:

The following 9-1-1 system changes require Administrator approval:

- 1) Changing boundaries that require an intergovernmental agreement between local governmental entities to exclude or include residents within the 9-1-1 jurisdiction
- 2) Changing or adding a 9-1-1 system provider
- 3) Changes in network configuration, except as provided for in subsection 1325.200(h), (i.e. implementation of a Next Generation 9-1-1 (NG9-1-1) system)
- 4) Change of Backup PSAP arrangement

The Modified Plan must include the following documents:

General Information	Contact and 9-1-1 System information.
Verification	Notarized statement of truth regarding information provided in the plan.
Letter of Intent	Letter that is sent to the 9-1-1 System Provider with a copy of the plan.
Plan Narrative	A summary of the changes of the proposed system's operation.
Financial Information	A summary of anticipated implementation costs and annual operating costs of the modified 9-1-1 system that are directly associated with 9-1-1 as well as the anticipated revenues.
5-Year Strategic Plan	A detailed plan for implementation and financial projections.
Communities Served	A list of all communities that are served by the 9-1-1 System.
Participating Agencies	A list of public safety agencies (Police, Fire, EMS, etc.) who are dispatched by the 9-1-1 System.
Adjacent Agencies	A list of public safety agencies (Police, Fire, EMS, etc.) that are adjacent to the 9-1-1 System's jurisdictional boundaries.

Attachments (if applicable):

Ordinance	Any local ordinances which dissolve an existing ETSB or creates a new ETSB.
Intergovernmental Agreement	Any intergovernmental agreements or MOU's creating a joint ETSB or any other agreements pertinent to the 9-1-1 system.
Contracts	Contract(s) with a 9-1-1 system provider or for NG-9-1-1 service.
Back-up PSAP Agreement	Establishes back-up and overflow services between PSAPs.
Network Diagram	Provided by the 9-1-1 system provider showing trunk routing and backup configuration.
Call Handling Agreements	Call handling agreements shall describe the primary and secondary dispatch method to be used by requesting parties within their respective jurisdictions.
Aid Outside Jurisdictional Boundaries Agreements	Aid outside normal jurisdictional boundaries agreements shall provide that once an emergency unit is dispatched in response to a request through the system, such unit shall render its service to the requesting party without regard to whether the unit is operating outside its normal jurisdictional boundaries.

Carrier Listing	A list of each carrier telephone company(s), exchange(s), prefix(es), and the various 9-1-1 System configurations that will be used in the proposed system.
Test Plan	The 911 System's overall plan detailing how and to what extent the network and data base will be tested.

These modified 9-1-1 Plans must be filed electronically on the Department's website at:

<http://www.isp.state.il.us/Statewide911/statewide911.cfm> where you will see the box below to submit your plan.



Once the plan is submitted, the Department and the ICC will have 20 days to provide a technical review of the plan to submit to the Administrator for approval.

SHORT FORM MODIFIED 9-1-1 PLAN:

The following modifications do not need to be submitted electronically on the Department's website.

The 9-1-1 Authority must provide written notification to the Administrator at 911_tech_support@isp.state.il.us at least 10 business days prior to making the following changes pursuant to Section 1325.200(h). After review, the Administrator will provide a letter of acknowledgment.

- 1) Permanent relocation of an existing PSAP or backup PSAP facility
- 2) Reduction in 9-1-1 trunks from the selective router to the PSAP
- 3) Further reduction of PSAPs within a 9-1-1 Authority beyond consolidation as required by the Act

The notification should include:

General Information Contact and 9-1-1 System information.

Plan Narrative A detailed summary of the changes in the proposed system's operation.

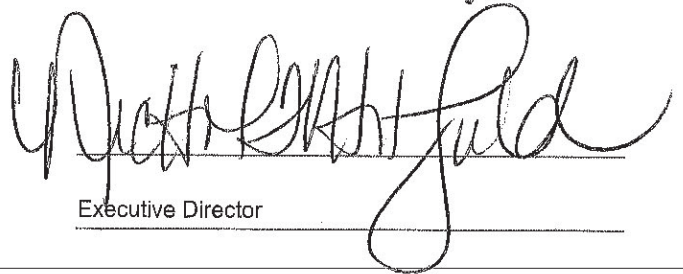
Attachments (if applicable):

Network Diagram Provided by the 9-1-1 system provider showing trunk routing and backup configuration

Call Handling Agreements Call handling agreements shall describe the primary and secondary dispatch method to be used by requesting parties within their respective jurisdictions.

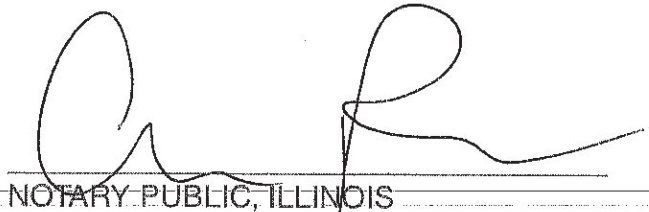
VERIFICATION

I, Nichol Whitfield, first being duly sworn upon oath, depose and say that I am Executive Director, of CenCom E9-1-1 Public Safety Communic; that I have read the foregoing plan by me subscribed and know the contents thereof; that said contents are true in substance and in fact, except as to those matters stated upon information and belief, and as to those, I believe same to be true.


Executive Director

Subscribed and sworn to before me

this 5 day of August, 2022.


NOTARY PUBLIC, ILLINOIS



**9-1-1 SYSTEM PROVIDER
LETTER OF INTENT**

8/5/2022

(Date)

Lisa Wirtanen

(9-1-1 System Provider Company Representative)

AT&T

(9-1-1 System Provider Company Name)

4918 W 95th Street

(Street Address)

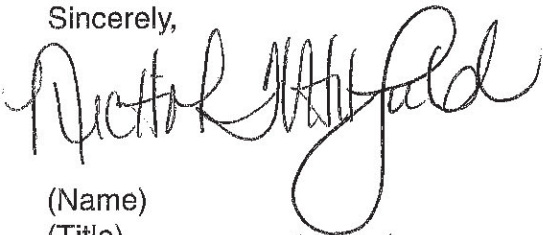
Oak Lawn, IL 60453

(City, State, Zip Code)

Dear Ms Wirtanen _____:

This letter is to confirm our intent to modify our 9-1-1 System. Enclosed is your copy of our modification plan to be filed with the Department of the Illinois State Police for approval. Thank you for your assistance in this matter.

Sincerely,



(Name)

(Title)

Executive Director

enclosure: Modification Plan

NARRATIVE STATEMENT:

(Provide a detailed summary of system operations for a modified 9-1-1 plan. Also, if incorporating an NG9-1-1 solution, please include the additional items listed below pursuant to 1325.205 b)12).

- 1) Indicate the name of the certified 9-1-1 system provider being utilized.
- 2) Explain the national standards, protocols and/or operating measures that will be followed.
- 3) Explain what measures have been taken to create a robust, reliable and diverse/redundant network and whether other 9-1-1 Authorities will be sharing the equipment.
- 4) Explain how the existing 9-1-1 traditional legacy wireline, wireless and VoIP network, along with the databases, will interface and/or be transitioned into the NG9-1-1 system.
- 5) Explain how split exchanges will be handled.
- 6) Explain how the databases will be maintained and how address errors will be corrected and updated on a continuing basis.
- 7) Explain who will be responsible for updating and maintaining the data, at a minimum on a daily basis Monday through Friday.
- 8) Explain what security measures will be placed on the IP 9-1-1 network and equipment to safeguard it from malicious attacks or threats to the system operation and what level of confidentiality will be placed on the system in order to keep unauthorized individuals from accessing it.

Plan Narrative:

The CenCom E9-1-1 9-1-1 System is transitioning from E9-1-1 to Next Generation 9-1-1 (NG911). AT&T is the 9-1-1 System Provider ("SSP").

The CenCom E9-1-1 9-1-1 System will comply with all Federal and State laws and with National Emergency Number Association Standards (NENA) that pertain to NG911 including the NENA i3 Standard for Next Generation - NENA-STA-010.3a-2021.

The State of Illinois has selected AT&T to provide a statewide Next Generation 9-1-1 System. AT&T's ESInet combines AT&T's network capabilities with technology from Intrado Life & Safety, Inc. (Intrado). The AT&T ESInet solution will facilitate an efficient transition from legacy 9-1-1 networks to networks capable of supporting the growing demands of a mobile society. With AT&T ESInet, the State is taking advantage of AT&T's investment in a pre-built, cloud-based solution that delivers next-generation functionality. AT&T is also providing their industry-leading AT&T VPN MPLS network for primary access to all PSAPs.

AT&T's ESInet solution is a combination of their IP network and Next Gen Core Services (NGCS) components that includes industry leading SLAs, management services and tools to help ensure that they provide the best possible service.

The design is based on building redundant systems to avoid any single point of failure (SPOF) in the ESInet and the overall NG9-1-1 Network Architecture. The NG9-1-1 system will provide flexibility in the routing of calls. The ESInet being deployed has all PSAPs connected and can route calls based on not only location, but also by availability. In a Next Generation solution, a call will be answered through intelligent routing. Additionally, there will be more available positions to answer calls because all connected and tested PSAPs will be technically able to answer the call and will be able to dispatch or transfer the call to another PSAP.

AT&T's ESInet defense-in-depth security is built into the architecture. AT&T's Global IP network is monitored by 8 different Security Operations Center (SOC) facilities located across the world. AT&T uses its security portfolio capabilities to protect their data centers and networks.

AT&T's ESInet provides six (6) geographically diverse and fully redundant facilities to increase resiliency and survivability in natural and man-made disaster scenarios, with scalable capacity capable of supporting more than twice the 9-1-1 busy hour call for the entire United States. AT&T has documented business continuity and restoration plans, including complex disaster and evacuation contingencies. The 24x7 operations center employs an Incident Handling process modeled on FEMA's Incident Command System, with notifications built into the process.

Plan Narrative:

The ESInet is monitored 24x7x365 from a NOC with tier 2 and tier 3 technical resources dedicated to the AT&T ESInet. AT&T's 9-1-1 Resolution Center has dedicated public safety resources.

The AT&T ESInet provides a flexible routing platform that supports both ESN (tabular) and GIS (spatial) routing on the same Emergency Call Routing Function (ECRF).

The AT&T ESInet solution will interconnect to legacy selective routers as defined per NENA standards. AT&T provides redundant, public safety grade points of presence in each LATA for OSP ingress locations for Legacy Network Gateways (LNGs).

AT&T will interconnect to Legacy Selective Routers to transfer and/or receive calls with Automatic Number Identification (ANI) and Automatic Location Identification (ALI) information to the State's NGCS via legacy means through the Legacy Selective Router Gateway (LSRG). Interconnections will also allow legacy PSAPs served by legacy selective routers to serve as the abandonment route for PSAPs served by the AT&T ESInet solution.

Connectivity extends beyond the internal ESInet transport to external network and OSP interfaces. The ESInet supports both TDM and IP OSP ingress at geographically distributed Points of Interconnection (POI's). The ESInet supports standards-based protocol interfaces to external ESInets for call hand-off and call transfers. With pre-established connectivity capabilities, PSAPs on the ESInet have the ability to transfer calls to PSAPs on other ESInets or PSAPs that have not yet transitioned off legacy selective routers.

AT&T will coordinate getting the OSPs records into the AT&T ESInet database. AT&T will also jointly plan the interconnecting network with the OSP. Circuits will be ordered and implemented between the OSP and the ESInet POI. The ESInet POI may reside in an AT&T office or hub. AT&T will cooperatively test and turn up all trunking arrangements with the OSP. Traffic migrations from the legacy to new AT&T infrastructure will follow.

Integrated Text-to-911 is supported by the ESInet.

AT&T is responsible for negotiating interconnection agreements and trunking arrangements with each service provider. Interconnection agreements will include the roles and responsibilities of the Parties related to the exchange of 9-1-1 traffic including but not limited to, split rate centers, tandem to tandem and IP connections.

GIS data is submitted to the AT&T ESInet via a web-based spatial interface (SI) portal. The portal provides secure GIS file transfer. 9-1-1 Authorities can maintain their local database schema and configure database changes using attribute field mapping tools.

The Spatial Interface (SI) validation engine logs errors and refers errors back to the originating 9-1-1 Authority in comprehensive reports that are retrieved in the 9-1-1 Enterprise Geospatial Database Management System (9-1-1EGDMS). Validation errors are corrected by the 9-1-1 Authority within their own GIS database. Updates are submitted and processed on an on-going basis.

AT&T's ESInet cyber security policies, standards, and guidelines are consistent with industry best practices as defined by International Organization for Standardization and Control Objectives for Information and related Technology. The AT&T ESInet is a highly secure, privately managed IP network providing IP based call routing services for next generation 9-1-1 call delivery. All inbound and outbound traffic interactions are with pre-authorized entities, utilize agreed upon protocols and traverse controlled access points. Call processing and real-time data delivery are protected through both physical and logical controls.

Sensitive data resides in trusted data centers that employ logical and physical access controls. All hardware and software elements deployed in a production environment go through stringent release management processes that incorporate thorough penetration scan testing. Corporate and development environments are separate from production and are not used in development or system test environments. Inter-zone traffic is restricted to only that of authorized personnel and the necessary protocols destinations used to support the management and applications of the ESInet with all other traffic implicitly denied by way of redundant and diverse Session Border Controllers (SBC) and stateful firewalls. A Network Operations Center (NOC) staffed 24 hours a day, seven days a week, 365 days a year to actively monitor and manage the AT&T ESInet end-to-end service is provided. When a potential or actual Customer-affecting issue is detected, the Incident Administration team is engaged by the NOC. The team uses established processes that are ISO 9001:2008-compliant for immediate escalation, notification, resolution, and reporting. All buildings, NOC and Data Center access are monitored by 24x7 security and access control systems.

Back UP ---- CenCom E9-1-1 will be maintaining the current backup configuration. Fox Lake is currently the backup for CenCom E9-1-1

Text to 9-1-1 --- Current TCC is Comtech. CenCom deployed Text to 9-1-1 in July 2015

FINANCIAL INFORMATION

Annual recurring 9-1-1 network costs prior to modification	\$ _____
Projected annual recurring 9-1-1 network costs after modification	\$ _____
Installation cost of the project	\$ _____ \$ 0.00
Anticipated annual revenues	\$ _____

FIVE YEAR STRATEGIC PLAN FOR MODIFIED PLAN

(Provide a detailed summary of the proposed system's operation, including but not limited to, a five-year strategic plan for implementation of the modified 9-1-1 plan with financial projections)

Narrative:

A large, empty rectangular box with a thin black border, intended for the user to provide a detailed narrative summary of the proposed system's operation and a five-year strategic plan for implementation of the modified 9-1-1 plan with financial projections.

ADJACENT AGENCIES LIST

Provide a list of public safety agencies and existing 9-1-1 Systems that are adjacent to the proposed system's boundaries. Each agency that appears on this list should also have signed a call handling agreement and/or aid outside jurisdictional boundaries.

AGENCY	STREET ADDRESS, CITY, ZIP CODE	TELEPHONE NUMBER
Grayslake Police Department		
Lake Villa Police Department		
Lake Villa Fire Protection District		
Lake County Sheriff		
Wauconda Fire Protection District		
Fox Lake Fire Protection District		
Fox Lake Police Department		
Grayslake Fire Protection District		

ATTACHMENTS

Ordinance - The local ordinance which created an ETSB prior to January 1, 2016.

Contracts - The contract for a new 9-1-1 system provider or for NG 9-1-1 service.

Intergovernmental Agreement

Back-up PSAP Agreement - The agreement that establishes back-up service due to interruptions or overflow services between PSAPs.

Network Diagram - Diagram provided by the 9-1-1 System Provider. Re-evaluate P.01 grade of Service for cost savings and network efficiency.

TEST PLAN DESCRIPTION

1) Description of test plan (back-up, overflow, failure, database).

See Attached

2) List wireline exchanges to be tested.

AT&T

3) List of wireless and VoIP Carriers to be tested.

Intrado
ComCast
Vonage

Test Plan Description i3

TEST #	TEST CASE	TYPE
1	Trunk Verification (SIP)	Call Routing
2	Trunk Verification (SS7 Ingress from LSR)	Call Routing
3	Trunk Verification (SS7 Egress from AGC to LSR)	Call Routing
4	Perform reboot and validation on each AT&T network edge router at PSAP	Failover test
5	Perform WAN interface shutdown and validation on each AT&T network edge router at PSAP	Failover
6	Perform reboot and validation on each ATT Interface Router (between CPE and AT&T router)	
7	Wireline Call Routed to PSAP through AT&T ESInet	Equipment
8	Wireless Call Routed to PSAP through AT&T Esinet	Equipment
9	VOIP Call Routed to PSAP through AT&T ESInet	Equipment
10	CPE bids i3 Components	Call Handling
11	i3 Routing Fails, Routing via SRDB for Wireline call	Call Routing
12	i3 Routing via ECRF for Wireline call	Call Routing
13	i3 Transfer: Fixed Bridge Conferencing Confirmation (Call to IP PSAP then bridge to i3 PSAP if available – willing PSAP)	Call Handling
14	S/R Transfer: Selective Bridge Conferencing Confirmation, if used by the PSAP	Call Handling
15	S/R Transfer: Fixed Bridge Conferencing Confirmation	Call Handling
16	S/R Transfer: Fixed Bridge Conferencing Confirmation	Call Handling
17	PSTN Transfer: Fixed Bridge Conferencing Confirmation	Call Handling
18	Manual Transfer to valid local TN	Call Handling
19	Manual conference bridging to invalid unassigned number	Call Handling
20	Manual conference bridging to a valid 8YY number	Call Handling
21	Manual conference bridging to a valid Busy number	Call Handling
22	Manual conference bridging to a Multi-Party Conference	Call Handling
23	Manual conference bridging to a valid long-distance cell	Call Handling
24	Alternate Routing	Call Routing
25	Ring no Answer Timer	Call Routing
26	No position Logged In	Call Routing
27	Abandonment Routing	Call Routing
28	Un-Abandonment Routing	Call Routing
29	Abandonment Routing – PAD Testing (if PAD available)	Call Routing
30	Un-Abandonment Routing – PAD Testing (if PAD available)	Call Routing
31	Test line appearances that appear on each CPE	Call Processing
32	TTY call	Call Handling
33	TTY conference call	Call Handling