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

State of Illinois

Application for
9-1-1 Modification Plan

911 GENERAL INFORMATION

DATE: 08/05/2022

Type of Change:	☒ Long Form Modification Plan	☐ Short Form Modification Plan	
Current System Name:		Population Served	Land Area in Sq Miles
METCAD (Champaign County 9-1-1)		209,002	1,001

List PSAPs:	Primary	Secondary
METCAD (Champaign County 9-1-1)	X	

911 System Contact: Jeffrey Wooten

Street Address: 1905 E. Main Street

City, State and Zip Code: Urbana, Illinois 61802

Office Telephone: (217) 265-4101

Cellular Telephone: (217) 841-2764

Email: jeffrey.wooten@champaignil.gov

Wireless Coverage for Consolidated System:

___100___ % Phase II compliant

___100___ % Phase I compliant

Please check if applicable:

___X___ NG9-1-1 capable

___X___ Receive 9-1-1 Text

_____ Receive 9-1-1 Video

4

VERIFICATION

I, John M. Dwyer   , first being duly sworn upon oath, depose and say that

I am Chariman   , of Champaign County ETSB   ; 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.

_____
Chairman - Champaign County ETSB

Subscribed and sworn to before me

this __5__ day of __August__, 20 22.

_____
NOTARY PUBLIC, ILLINOIS

9-1-1 SYSTEM PROVIDER
LETTER OF INTENT

08/05/2022
_____
(Date)

Ms. Lisa Wirtanen
_____
(9-1-1 System Provider Company Representative)

AT&T
_____
(9-1-1 System Provider Company Name)

4918 W. 95th Street
_____
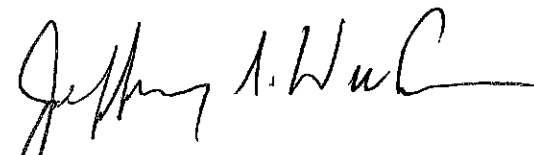(Street Address)

Oak Lawn, IL 60453
_____
(City, State, Zip Code)

Dear Ms. Wiranen   :
_____

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)

Jeffrey A. Wooten
Deputy 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 METCAD (Champaign County 9-1-1) 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 METCAD (Champaign County 9-1-1) 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 Originating Service Provider (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. METCAD 9-1-1 Center has utilized a web-based Text-to-911 solution through Intrado since 2016. That arrangement will continue for now in anticipation of a state-wide Text-to-911 solution that is currently being discussed at the state level.

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 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 a 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.

The Vermilion County 9-1-1 Center will continue to operate as the backup and overflow PSAP for the METCAD 9-1-1 Center. Vermilion County 9-1-1 will back-up and take overflow calls from METCAD 9-1-1 Center in the event of a system fail that renders the agency unable to function as an E911 center.

FINANCIAL INFORMATION

Annual recurring 9-1-1 network costs
prior to modification $ N/A

Projected annual
recurring 9-1-1 network costs after
modification $ N/A

Installation cost of the project $ N/A

Anticipated annual revenues $ N/A

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:

N/A

COMMUNITIES SERVED

Provide a list of all communities to be served by the proposed 9-1-1 System. Please include the name of the community and the official mailing address including street address, city and zip code.

USE ADDITIONAL SHEETS AS NECESSARY

City, Town or Village	Street Address, City, Zip Code
Bondville	P.O. Box 87, Bondville, Illinois 61815
Broadlands	110 S. Lincoln St, Broadlands, Illinois 61816
Champaign	102 N. Neil St, Champaign, Illinois 61820
Dewey	N/A (61840)
Fisher	100 E. School St, Fisher, Illinois 61843
Flatville	N/A
Foosland	P.O. Box 46, Foosland, Illinois 61845
Gifford	2296 County Road 3000 North, Gifford, Illinois 61847
Homer	500 E. Second St, Homer, Illinois 61849
Ivesdale	P.O. Box 109, Ivesdale, Illinois 61851
Longview	Village Hall, Longview, Illinois 61852
Ludlow	202 N. Locust St, Ludlow, Illinois 60949
Mahomet	503 E. Main St, Mahomet, Illinois 61853
Ogden	100 W. Main St, Ogden, Illinois 61859
Penfield	N/A (61862)
Pesotum	103 E. Lincoln St, Pesotum, Illinois 61863
Philo	127 W. Washington, Philo, Illinois 61864
Rantoul	333 S. Tanner St, Rantoul, Illinois 61866
Royal	101 E. Main St, P.O. Box 159, Royal, IL 61871
Sadorus	P.O. Box 109, Sadorus, Illinois 61872
Savoy	611 N. Dunlap Ave, Savoy, Illinois 61874
Seymour	N/A (61875)
Sidney	P.O. Box 77, Sidney, Illinois 61877
St. Joseph	207 E. Lincoln, P.O. Box 716, St. Joseph, Illinois 61873
Thomasboro	101 W. Main St, P.O. Box 488, Thomasboro, Illinois 61878

COMMUNITIES SERVED

Provide a list of all communities to be served by the proposed 9-1-1 System. Please include the name of the community and the official mailing address including street address, city and zip code.

USE ADDITIONAL SHEETS AS NECESSARY

City, Town or Village	Street Address, City, Zip Code
Tolono	507 W. Strong St, P.O. Box 667, Tolono, Illinois 61880
Urbana	400 S. Vine St, Urbana, Illinois 61801

PARTICIPATING AGENCIES

Provide a list of public safety agencies (Police, Fire, EMS etc.) that are to be dispatched by the 9-1-1 System. Each Agencies land area(s) in square miles and estimated population which will have access to the proposed 9-1-1 System. Do not forget to include County Sheriff's jurisdiction and Illinois State Police Districts. Each agency that appears on this list should also have signed a call handling agreement.

9-1-1 Participant Agencies	Street Address, City, Zip Code	Administrative Telephone No.	Direct Dispatch	Transfer	Call Relay
Advanced Medical Transport	408 S. Neil St, Champaign, IL 61820	(217) 337-2911	X	X	X
Arrow Ambulance/Carle	210 E. University Ave, Champaign, IL 61820	(217) 356-1659	X	X	X
Bondville Fire Department	101 W. Chestnut St, Bondville, IL 61815	(217) 863-2585	X		
Broadlands Fire Department	104 W. State St, Broadlands, IL 61816	(217) 834-3341	X		
Carroll Fire Protection District	1811 N. Brownfield Rd, Urbana, IL 61801	(217) 367-6925	X		
Champaign Co. Sheriff's Office	204 E. Main St, Urbana, IL 61801	(217) 384-1201	X		
Champaign Co. EMA	1905 E. Main St, Urbana, IL 61802	(217) 384-3826	X		
Champaign Fire Department	307 S. Randolph St, Champaign, IL 61820	(217) 403-7200	X		
Champaign Police Department	82 E. University Ave, Champaign, IL 61820	(217) 351-4545	X		
Cornbelt Fire Protection Dist.	506 E. Main St, Mahomet, IL 61853	(217) 586-3380	X		
Eastern Prairie Fire Prot. Dist.	424 Wilbur Ave, Champaign, IL 61820	(217) 356-8830	X		
Edge Scott Fire Prot. District	201 N. Smith Rd, Urbana, IL 61802	(217) 328-1911	X		
Fisher Police Department	108 Front St, Fisher, IL 61843	(217) 897-1184	X		
Gifford Fire Protection District	404 N. Main St, Gifford, IL 61847	(217) 568-7112	X		
Gifford Police Department	104 E. Center St, Gifford, IL 61847	(217) 568-7256	X		
Homer Fire Protection District	501 N. Main St, Homer, IL 61849	(217) 896-2171	X		
Homer Police Department	500 E. 2nd St, Homer, IL 16849	(217) 896-2396	X		
Illinois State Police District 10	611 S. Chestnut St, Pesotum, IL 61863	(217) 867-2050			X
Ivesdale Fire Protection District	406 3rd St, Ivesdale, IL 61851	(217) 564-2330	X		
Longview Fire Protection Dist.	112 E. Logan St, Longview, IL 61852	(217) 834-3012	X		
Ludlow Fire Protection District	200 S. Chestnut St, Ludlow, IL 61949	(217) 396-4853	X		
Ludlow Police Department	202 E. Thomas St, Ludlow, IL 61949	(217) 396-7341	X		
Mahomet Police Department	303 E. Oak St, Mahomet, IL 61853	(217) 586-5533	X		
Ogden Fire Protection Dist.	105 S. West Ave, Ogden, IL 61859	(217) 582-2345	X		
Pesotum Fire Prot. District	103 W. Lincoln St, Pesotum, IL 61863	(217) 867-2414	X		

PARTICIPATING AGENCIES

Provide a list of public safety agencies (Police, Fire, EMS etc.) that are to be dispatched by the 9-1-1 System. Each Agencies land area(s) in square miles and estimated population which will have access to the proposed 9-1-1 System. Do not forget to include County Sheriff's jurisdiction and Illinois State Police Districts. Each agency that appears on this list should also have signed a call handling agreement.

9-1-1 Participant Agencies	Street Address, City, Zip Code	Administrative Telephone No.	Direct Dispatch	Transfer	Call Relay
Philo Fire Protection District	110 E. Washington St, Philo, IL 61864	(217) 684-2160	X		
Rantoul Fire Department	101 E. Grove Ave, Rantoul, IL 61866	(217) 892-8401	X		
Rantoul Police Department	109 E. Grove Ave, Rantoul, IL 61866	(217) 892-2103	X		
Royal Fire Protection District	108 Railroad St, Royal, IL 61871	(217) 583-3287	X		
Sadorus Fire Prot. District	404 N. West St, Sadorus, IL 61872	(217) 598-2525	X		
Sangamon Valley Fire Pr. Dst.	104 E. Sangamon St, Fisher, IL 61843	(217) 897-6250	X		
Savoy Fire Department	106 W. Tamaras Ave, Savoy, IL 61874	(217) 359-5814	X		
Seymour Fire Corporation	304 Main St, Seymour, IL 61875	(217) 687-5810	X		
Sidney Fire Protection District	302 S. David St, Sidney, IL 61877	(217) 688-2617	X		
St Joseph-Stanton Fire Pr Dist.	228 E. Warren St, St. Joseph, IL 61873	(217) 469-7398	X		
Thomasboro Fire Prot. District	101 N. Church St, Thomasboro, IL 61878	(217) 643-7201	X		
Thomasboro Police Dept.	606 W. Central Ave, Thomasboro, IL 61878	(217) 643-2089	X		
Tolono Fire Department	214 N. Bourne St, Tolono, IL 61880	(217) 485-5533	X		
Tolono Police Department	205 E. Main St, Tolono, IL 61880	(217) 485-8040	X		
University of Illinois Police Dep	1110 W. Springfield Ave, Urbana, IL 61801	(217) 333-1216	X		
Urbana Fire Department	400 S. Vine St, Urbana, IL 61801	(217) 384-2420	X		
Urbana Police Department	400 S. Vine St, Urbana, IL 61801	(217) 384-3826	X		
Willard Airport Fire Department	11 Airport Rd, Savoy, IL 61874	(217) 244-8754	X		

ADJACENT AGENCIES LIST

Provide a list of public safety agencies and existing 9-1-1Systems 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
Douglas County Sheriff's Office	920 S. Washington St, Tuscola, Il 61953	(217) 253-2913
Edgar County Sheriff's Office	228 N. Central Ave, Paris, IL 61944	(217) 465-4168
Ford County Sheriff's Office	235 N. American St, Paxton, IL 60957	(217) 379-2324
Illinois State Police District 21	951 E. US HWY 45, Ashkum, IL 60911	(815) 698-2332
McLean County Sheriff's Office	104 W. Front St, Bloomington, IL 61701	(309) 888-5030
Piatt County Sheriff's Office	1216 Raymond Rd, Monticello, IL 61856	(217) 762-5761
Vermilion County Sheriff's Office	2 South St, Danville, IL 61832	(217) 442-0000

CARRIER LISTING
(Wireline, Wireless, VoIP)

Provide a list of each carrier that will be involved in the proposed system.

(USE ADDITIONAL SHEETS AS NECESSARY)

CARRIERS	STREET ADDRESS, CITY, ZIP CODE	TELEPHONE NUMBER
AT&T (wireline and VoIP)	One AT&T Way, Bedminster, NJ 07921	(877) 450-1990
AT&T Mobility (wireless)	16331 NE 72nd Way, Redmond, WA 98052	(800) 635-6840
CenturyLink (VoIP)	100 Century Link Dr., Monroe, LA 71203	(800) 357-0911
Frontier (wireline)	211 E. North St. Greensburg, IN 47240	(877) 245-3511
i3 (VoIP)	3001 W. White Oaks Dr., Springfield, IL 62704	(217) 331-0043
Sprint (wireless)	6591 Irvine Center Dr., Ste 100, Irvine, CA 92618	(866) 398-3284
T-Mobile (wireless)	12920 SE 38th St., Bellevue, WA 98006	(888) 662-4662
Xfinity (VoIP)	1701 JFK Blvd. Philadelphia, PA 19103	(215) 286-1700
US Cellular (wireless)	8410 West Bryn Mawr Ave, Ste 700, Chicago, IL 60631	(630) 875-8270
Verizon (wireline and wireless)	1120 Sanctuary Pkwy, Suite 150, Alpharetta, GA 30004	(800) 451-5242
Volo (VoIP)	3310 N. Cunningham Ave. Urbana, IL 61802	(217) 850-1996
Variety of other VoIP providers		

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).

This is the minimum testing procedure to ensure that METCAD 9-1-1 Center has fully funtional hardware and configurations.

For actual migration, all needed partied will assemble at the agreed upon start time. AT&T will verify that there are call takers logged into the ESInet profile. Baseline pre-testing will be completed. Go ahead/proceed will be asked for. All traffic will be switched to the ESInet profile. Verification testing will be completed.

Once the site is migrated, the back-up to Vermilion County will be tested, as well as overflow, failure and database.

Also, see attached Test Plan Description.

2) List wireline exchanges to be tested.

AT&T and Frontier

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

AT&T Mobility, Verizon, Sprint, T-Mobile, Xfinity

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