

Response Matrix

Solicitation No: GEN2129421P1, Next Generation 911	Vendor Name
	AT&T
Functionality Checklist Matrix	
	<i>Vendor's Response</i>
General Technical Requirements	
SN - Security/Notifications	
SN009 STIR/SHAKEN: The NG911 Service Provider should implement STIR/SHAKEN and pass information including attestation to the CHE. The NG911 Service Provider shall describe how this has been accomplished in other locations with VIPER 7.	<p>Complies.</p> <p>AT&T fully complies with the requirement to implement STIR/SHAKEN and pass attestation information to the CHE. This functionality is supported in environments using VIPER 7 and has been successfully deployed in multiple jurisdictions.</p> <p>The STIR/SHAKEN protocols are implemented within the NGCS core services and operate bidirectionally:</p> <ul style="list-style-type: none"> • Inbound Calls: The NGCS validates the caller's identity using a trust chain and appends a signed SIP header that is passed to the VIPER CHE. This ensures that the CHE receives verified caller identity and attestation information. • Outbound Calls: The PSAP's identity is similarly validated and signed before the call leaves the system.
SN010.b: The NG911 Service Provider should provide transactional logging information for each functional element (i.e., Emergency Services Routing Proxy [ESRP], Legacy Network Gateway [LNG], BCF, PRF, Location Validation Function [LVF], Legacy Selective Router Gateway [LSRG], Spatial Interface [SI], and Emergency Call Routing Function [ECRF]). The transactional database logs for 911 calls should include calling number, SIP header information, routing destination, call or record process success/failures, transfers, ALI database transactions, and alternate routing, which includes call counts. The log retention period should be a minimum of thirty (30) calendar days.	Complies.
SN011 System Logging Repositories: The NG911 Service Provider should provide transactional logging repositories at two different data centers for each functional element (i.e., ESRP, LNG, BCF, PRF, LVF, LSRG, SI, and ECRF). The log retention period should be a minimum of thirty (30) calendar days.	Complies.

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<p>SN012 System Log Retrieval: The NG911 Service Provider should provide a user-friendly portal to retrieve transactional logs in near realtime for each functional element (i.e., ESRP, LNG, BCF, PRF, LVF, LSRG, SI, and ECRF). The NG911 Service Provider should provide a process to retrieve the logs.</p>	<p>Complies.</p> <p>AT&T's Customer Management Portal (CMP) provides authorized users access to functional element transactional logs through CDRs that are searchable by date/timestamp, ANI/pANI, Call Type, Route Choice, ECRF to ESN Fallback as well as media type (voice, text, RTT, TTY). AT&T's CMP includes both an online user guide as well as instructor-led training to assist the PSAPs in how to search for CDRs. Additionally, through the call trace tool, individual functional element logs can be viewed.</p> <p>The Customer Management Portal – PSAP CDR View was redacted by AT&T.</p>
<p>SN013 Security Information and Event Manager (SIEM): The NG911 Service Provider should integrate with the County's SIEM Splunk Tool (when deployed) for onsite logging events. The log retention period should be a minimum of 30 calendar days. The NG911 Service Provider should provide the County access to the logs of other systems and devices in the NG911 System for tracking the calls and issues. The log retention period should be a minimum of thirty (30) calendar days.</p>	<p>Complies.</p>
<p>SN017 User Notifications and Communications: The NG911 Service Provider should have a system that performs outward notifications and updates of customer tickets through phone, email, and text. The NG911 Service Provider shall notify the County via the contact methods provided of all NG911 Service Provider infrastructure failures and/or outages within 15 minutes of discovery. For all outages, the NG911 Service Provider must also contact the 911 Coordinator via phone.</p>	<p>Complies.</p>
<p>SN020 TDOS and DDOS Prevention: The NG911 Service Provider should implement hardware, software, and training to identify, respond, and prevent TDOS and DDOS attacks as a part of the proposed NG911 System. The NG911 Service Provider shall describe the process to identify respond and prevent TDOS and DDOS attack.</p>	<p>Complies.</p> <p>AT&T leverages a comprehensive security posture to identify, respond to, and prevent TDOS (Telephony Denial of Service) and DDOS (Distributed Denial of Service) attacks. Our advanced defense-in-depth approach incorporates enterprise-grade hardware and software solutions, including intrusion detection/prevention, real-time traffic analysis, and automated mitigation technologies. AT&T's security personnel are extensively trained in both proactive and reactive measures, supported by documented processes for continuous monitoring, rapid incident response, and regular system audits. We will provide detailed documentation describing our detection, response, and prevention methodologies as part of the proposal package.</p> <p>Some information was redacted by AT&T for this requirement.</p>

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<p>SR-IN003 Multiple POIs: SR-IN003.b The NG911 Service Provider should provide at least two POIs within 100 miles of the Broward County border. Having local and national POIs will provide OSPs with interconnection choices.</p> <p>The NG911 Service Provider shall list the locations of all POIs that will be used.</p>	<p>No Response.</p>
SR-GI NG911 Processing	
<p>SR-GI013 SI Provisioning: The NG911 Service Provider should pull GIS data from the County GIS data repository rather than require the County to push (upload) GIS data to the SI. The data pull can be automated by the NG911 Service Provider or scheduled by the County. The NG911 Service provider shall describe the process used and how the County's preference can be integrated into the proposed NG911 System.</p>	<p>Complies.</p> <p>The proposed NG911 solution supports pull-based GIS data provisioning from the County's GIS data repository. This approach eliminates the need for the County to manually push updates. The NG911 Service Provider offers two integration options:</p> <ul style="list-style-type: none"> • Automated Pull: A scheduled, secure data retrieval process that syncs with the County's update cadence. • County-Scheduled Pull: The County can define specific intervals or triggers for data synchronization. <p>This flexibility ensures the County's preferences are fully supported. The system is compatible with Esri geodatabases and includes validation tools to ensure data integrity before ingestion.</p> <p>AT&T will work with Broward to establish the desired data flow of GIS data to the AT&T managed SI. Although the industry standard is to push the data from the GIS authority, there are multiple options that can be offered for AT&T to pull data from an accessible database. AT&T looks forward to receiving detailed requirements and capabilities from the county to jointly develop a solution that best fits Broward's needs.</p>
DAT – Data processing	

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<p>DAT001.b: The NG911 Service Provider should describe the GIS upload process to include the access, steps, and ease of use.</p>	<p>Complies</p> <p>AT&T provides the NENA Spatial Interface (SI) as a function of the 9-1-1 Enterprise Geospatial Database Management System (9-1-1EGDMS). The SI is a fully hosted, managed service that encompasses all necessary processes to receive GIS data from a single source. Data can be submitted in a GIS database managed by a vendor or by the authority itself. The SI provides data validation, error reporting, and provisioning to the Emergency Services Network (ESInet) functional elements including Emergency Call Routing Function (ECRF) and Location Validation Function (LVF).</p> <p>The SI provides:</p> <ul style="list-style-type: none"> • NG9-1-1 GIS data compliancy checks • Ongoing GIS data accuracy validation (QA/QC) • GIS data error reporting • Provisioning to i3 systems (ECRF/LVF) <p>The SI undergoes data quality and data integrity checks that ensures that the data complies with all applicable requirements of STA-010.3f and the NG9-1-1 GIS Data Model. Any updates to the GIS data within the ECRF, whether to correct errors within the current data set or enhance it for any other reason, will be uploaded through the Spatial Interface.</p> <p>GIS provisioning is performed through the Spatial Interface, which has the additional ability to perform GIS validations, including validations to ensure routing integrity. The QA/QC processes provided during validation steps in the SI will prevent any unwanted data being provisioned in the ECRF that may introduce ambiguity in the data that would prevent the ECRF from being able to make a definitive response to certain requests. A change control system is established to monitor and manage data discrepancies and to track data change requirements. Validated GIS updates are normalized and applied to the ECRF production instances in a manner that preserves availability and coordinates with other ESInet scheduled updates and activities.</p> <p>Since there is not yet an established standard for the Spatial Interface to provision ECRFs with GIS data, internal or external, the mechanism for provisioning must be negotiated between AT&T, as the Spatial Interface provider, and non-AT&T ECRF providers. Provisioning of the LVF is identical to the ECRF provisioning. It is simply another provisioning target of the Spatial Interface. As such, it will always contain the same GIS data as the ECRF.</p> <p>The GIS upload process is designed to be user-friendly, secure, and transparent. Key features include:</p> <ul style="list-style-type: none"> • Web-based Portal: Authenticated users can upload GIS files via a secure browser interface. • Step-by-Step Workflow: The portal guides users through file selection, schema validation, and submission. <p>Automated Validation: Uploaded data is checked against predefined schemas and standards (e.g., NENA i3), with error reports provided for any discrepancies.</p> <p>Audit Trail</p> <p>All uploads are logged with timestamps and user credentials for traceability. The 9-1-1 Enterprise Geospatial Database Management System (9-1-1 EGDMS) is a web application that serves as the front-end user interface for the NENA Spatial Interface (SI). We have included AT&T Appendix I - AT&T 9-1-1 EGDMS User Guide as a reference to section 3.6 GIS. In addition, we can provide NG9-1-1 GIS Onboarding services, which delivers services, training, and support needed to successfully deploy NG9-1-1 GIS data within the EGDMS prior to NG9-1-1 go-live. AT&T will provide the EGDMS system access, account creation, remote training, and assistance with the initial GIS data upload and field mapping configuration. Two levels of NG9-1-1 GIS Onboarding are available to end customers.</p> <p>AT&T's NG9-1-1 GIS onboarding delivers the essential services, training, and support needed to successfully deploy NG9-1-1 GIS data and EGDMS within a NG9-1-1 environment. AT&T will provide web-based training and setup of the EGDMS system and assist with the initial GIS data load, clarifying the role of EGDMS as the NENA Spatial Interface, and defining its features and functionality. NG9-1-1 GIS onboarding services establish communication between the GIS Authority, the i3 GIS coach, and the NG9-1-1 service provider throughout the GIS onboarding phase and EGDMS implementation.</p> <p>NG9-1-1 GIS onboarding includes EGDMS setup and the following services:</p> <ul style="list-style-type: none"> • Assignment of an i3 GIS Coach • NG9-1-1 GIS onboarding kickoff meeting • EGDMS overview, user training, and field mapping training (web-based) • EGDMS report interpretation and error correction consultation training (web-based) • ALI-to-GIS report review and error correction consultation training (web-based) • GIS data testing and remediation • General NG9-1-1 GIS Q&A support • EGDMS and NG9-1-1 GIS go-live support <p style="color: red;">The "EGDMS Overview" was redacted by AT&T.</p>

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<p>DAT003.b: The NG911 Service Provider should describe the process to manage PRF routing plans.</p>	<p>Complies.</p> <p>The NG911 Service Provider offers a dedicated portal for managing PRF (Policy Routing Function) routing plans. This includes:</p> <ul style="list-style-type: none"> • Role-Based Access: County-authorized users can view, edit, and approve routing plans. • Version Control: Changes are tracked with rollback capabilities. • Visualization Tools: Dashboards help visualize routing logic and coverage areas. <p>The AT&T ESInet™ i3 policy routing will provide Broward with extensive flexibility to define and update standard and alternate routing policies. PSAPs can modify routing policies, set priorities, and modify their operational state. Routing policies can be defined as recurring or one-time. The rules-based routing proxy includes the following elements:</p> <ul style="list-style-type: none"> • A repository of PSAP-defined routing policies. • Customer Management Portal – A feature-rich web tool that allows PSAPs to view their routing policies and operational status (normal, abandoned, back-up). All routing policy changes are automatically verified for syntactical and logical prior to activation in production. Secure user access is provided via the Customer portal. <p>The following types of routing policies are supported:</p> <ul style="list-style-type: none"> • Abandonment/Night Service Routing – The abandonment policy is engaged whenever the terminating ESRP (PSAP) operational state is defined as 'Abandoned'. The PSAP operational state may be modified by contacting the AT&T NOC, triggered via a device installed at the PSAP, or modified online. • Overflow Routing – The overflow routing policy is applied during overflow scenarios when a PSAP is receiving more calls than its occupied workstations can accommodate. When PSAP CPE is unreachable or responds with an error/busy, the ESRP engages the primary PSAP's overflow routing policy. Similarly, the alternating routing policy will be invoked if the terminating ESRP call handling system does not accept the SIP invite or for a ring-no-answer timeout. • Diversion Routing – The diversion routing policy is applied whenever the PSAP opts to engage alternate diversion routing rules. The PSAP operational state may be modified to engage the diversion routing policy by contacting the AT&T NOC or online. • Special Event Routing – Special event routing is a special type of diversion routing policy that is applied during a scheduled time window. If a PSAP jurisdiction contains venues that host events that may warrant dedicated call handling (mobile command center or dedicated resources at the PSAP), special event polygons can be pre-provisioned. <p>AT&T will provide a feature-rich management portal for the PSAPs to view their policies. Policies have attributes such as active/inactive, one-time or recurring time window, priority, or a set of destination(s) to send the call to, and call distribution method as examples. Abandonment, Overflow, and Diversion policies can be configured to use any of the following policies.</p> <ul style="list-style-type: none"> • Geographically – The system can be configured to send abandonment calls to different alternate PSAPs based on the geographic location of the calling party within the primary PSAP's jurisdiction. Geographic abandonment or alternate routing polygons can be pre-provisioned via the SI or submitted dynamically. • Hierarchically – The system can be configured to cascade a call to up to nine consecutive, alternate PSAPs. • Load-balanced – The system can be configured to distribute calls between PSAPs. <p>All policies loaded by the customer are held in a test state (non-active) until the customer confirms that all test calls using the policies perform as expected.</p> <p>The diagram below illustrates the location of the ESRP/PRF functional components and the interfaces with other i3 solution elements.</p> <p style="color: red;">The "ESRP/PRF Functional Components" diagram was redacted by AT&T.</p> <p>Real World Example - 9-1-1's Response to Hurricane Helene in North Carolina</p> <p>AT&T's largest experience of alternate routing to destinations across multiple PSAPs was during the 2024 Hurricane Helene disaster in North Carolina. During this catastrophic event, AT&T was able to successfully alternate route calls throughout the County for PSAPs impacted by the hurricane. This included routing calls from PSAPs in the western portion of the County to PSAPs on the eastern portion that were not impacted. The flexibility of the route lists allowed the County to update these specifically for this event and in a timely fashion in order to allow for PSAPs to failover to PSAPs they do not normally utilize. Please see Figure 12 & Figure 13 on page 88 for the North Carolina Abandonment Routing During Hurricane Helene.</p>

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SR-CR Call Routing	
<p>SR-CR003.b: The NG911 Service Provider should work with the County to design all the rules, policies, and algorithms that will be available to route calls similar to the routing groups currently in place. Describe how this process will be accomplished.</p>	<p>Complies.</p> <p>The proposed system supports routing calls using:</p> <ul style="list-style-type: none"> • Call labels/tags compatible with VIPER CHE for function-specific routing. • Distribution rules that replicate current routing group logic. • Additional circuits where needed to maintain redundancy and load balancing 2. <p>Routing is managed via the PRF and ESRP (Emergency Services Routing Proxy), ensuring seamless delivery to the correct PSAP or ring group. i3 routing allows for all existing legacy alternate/default routing logic to remain the same while adding additional capability (PRF) for unique or custom situations. AT&T follows i3 standards for routing URIs, history info, and PSAP special queues which allows for enhanced capability when deciding when, what type and the priority of calls being answered by the PSAP. Prior to PSAP configuration, the AT&T project manager will walk through these capabilities and define the preferences of Broward. Prior to go live, during the ORT (operational readiness testing) each scenario will be fully tested and approved by the PSAP before enabled in the live PSAP environment.</p>
<p>SR-CR004 Distribution of Calls to PSAPs: The NG911 Service Provider should route calls similar to the routing groups currently in place, including call labels/tags required by the CHE for various call functions and distribution rules currently in place. The NG911 Service Provider should describe the method that is proposed to route calls similar to the routing groups currently in place, such as additional circuits, call labels/tags, or setting distribution rules.</p>	<p>Complies.</p> <p>The proposed system supports routing calls using:</p> <ul style="list-style-type: none"> • Call labels/tags compatible with VIPER CHE for function-specific routing. • Distribution rules that replicate current routing group logic. • Additional circuits where needed to maintain redundancy and load balancing. <p>Routing is managed via the PRF and ESRP (Emergency Services Routing Proxy), ensuring seamless delivery to the correct PSAP or ring group. i3 routing allows for all existing legacy alternate/default routing logic to remain the same while adding additional capability (PRF) for unique or custom situations. AT&T follows i3 standards for routing URIs, history info, and PSAP special queues which allows enhanced capability when deciding when, what type and the priority of calls being answered by the PSAP. Prior to PSAP configuration, the AT&T project manager will walk through these capabilities and define the preferences of Broward. Prior to go-live, during the ORT (operational readiness testing) each scenario will be fully tested and approved by the PSAP before enabled in the live PSAP environment.</p>

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<p>SR-CR006.b Call Distribution: All calls should be routed based on data received. The NG911 Service Provider should develop procedures and processes to distribute calls to the hosts in the Regional and Non-Regional environments. Please provide examples of how this was done for other implementations.</p>	<p>Complies.</p> <p>Routing decisions are dynamically made using:</p> <ul style="list-style-type: none"> • Location data from LIS and ECRF queries. • Service URNs and policy rules from the PRF. <p>This process has been completed and deployed in over a thousand Multimode/Hosted/Cloud PSAP CPE environments deployed in the AT&T Infrastructure. Notable examples include, Miami-Dade (FL), Palm Beach (FL), Fairfax County (VA), Washington DC, and Charlotte-Mecklenburg PD (NC).</p> <ul style="list-style-type: none"> • These five PSAPs alone cover over 6M in population. <p>Although the majority of PSAPs choose to distribute calls using a load balanced methodology – a primary/secondary distribution can be applied if desired. The AT&T infrastructure will also adjust distribution of calls based on network stability and performance. The AT&T solution is built on the basic principle of "no single point of failure." AT&T utilizes a fully redundant, multi-path, multi-protocol network linking all AT&T NG9-11/AT&T 9-1-1 Network elements and PSAPs. Within each redundant node, there are redundant network elements. Failover within the system occurs automatically with no manual intervention. AT&T network connectivity handoffs enter each facility (minimum of two) via diverse facility transport paths and diverse points of interconnection.</p> <p>The proposed ESInet is a Quality of Service (QoS)-managed private IP network which can prioritize any type of IP traffic, voice, data, and multi-media. The solution uses QoS and VLANs between data centers and PSAPs to prioritize and protect the data/traffic. Quality of Service in the AT&T ESInet network is performed through packet marking with Differentiated Services Code Point (DSCP) on ingress to the ESInet switch ports. In some cases, the voice equipment manages its own marking, and the router/switch honors these QoS settings. In others, the router/switch will override the DSCP marking with a more appropriate setting.</p> <p>The audio stream Real Time Protocol (RTP) is marked with "Expedited Forwarding," the highest class of service available, so that it is treated like real-time media (e.g., voice). This is typically mapped to a priority queue. Signaling packets (SIP or Media Gateway Control Protocol (MGCP) are placed in another queue, which will typically have a small but firmly reserved portion of bandwidth.</p>
<p>SR-CR008 Regional PSAP Routing: The CHE has been implemented to provide advanced routing capabilities. These capabilities are expected to remain. Regional PSAP routing should include:</p> <ul style="list-style-type: none"> • Ability for all calls to be load-balanced across the three hosts similar to how it is balanced today • Ability for the VIPER load balancers to distribute calls to the VIPER servers regardless of the proper PSAP • Ability for the VIPER CHE to distribute calls to all PSAPs regardless of the proper PSAP • Ability of the VIPER CHE to identify the proper PSAP and distribute to the proper PSAP when needed <p>(CAD failure operations) The NG911 Service Provider should describe the system that is proposed and how these capabilities will be accomplished.</p>	<p>Complies.</p> <p>The AT&T ESInet solution prefers to treat a load balanced CPE system just as what is required and described by Broward. There are a few reasons for this.</p> <ul style="list-style-type: none"> • To properly distribute the call load over equal equipment endpoints • To properly distribute the load over various network paths • To continually verify all paths for viability. <p>AT&T will work with Broward to implement a solution that best accomplishes Broward's requirements, while incorporating critical configurations and lessons learned while successfully deploying the solution over the last eight years.</p> <p>The AT&T ESInet NGCS core elements have been developed with Broward's exact requirements in mind. The AT&T core elements allow for equal distribution, not only between VIPER endpoints, but also within the core system itself. Some information was redacted by AT&T.</p>

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<p>SR-CR009 Non-Regional PSAP Routing: Non-Regional PSAP routing should include:</p> <ul style="list-style-type: none"> • Ability for all calls to be load-balanced across the three hosts similar to how it is balanced today • Ability for the VIPER load balancers to distribute calls to the VIPER servers regardless of the proper PSAP • Ability for the VIPER CHE to distribute calls to the proper PSAP <p>The NG911 Service Provider should describe the system that is proposed and how these requirements will be accomplished.</p>	<p>Complies.</p> <p>The AT&T ESInet solution prefers to treat a load balanced CPE system just as what is required and described by Broward. There are a few reasons for this</p> <ul style="list-style-type: none"> • To properly distribute the call load over equal equipment endpoints • To properly distribute the load over various network paths • To continually verify all paths for viability. <p>AT&T will work with Broward to implement a solution that best accomplishes Broward's requirements, while incorporating critical configurations and lessons learned while successfully deploying the solution over the last eight years.</p> <p>The AT&T ESInet NGCS core elements have been developed with Broward's exact requirements in mind. The AT&T core elements allow for equal distribution, not only between VIPER endpoints, but also within the core system itself. Some information was redacted by AT&T.</p>

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<p>SR-CR010.b Host Routing: The NG911 Service Provider should develop procedures and processes to distribute calls to the hosts in each environment for the following predetermined emergency scenarios at a minimum:</p> <ul style="list-style-type: none"> • Loss of primary route to a host load balancer • Loss of primary and secondary route to a host load balancer • Loss of all routes to a single host in a single environment • Loss of all routes to two hosts in a single environment • Abandonment of a PSAP • Abandonment of a single PSAP with transfer to another environment • Abandonment of two PSAPs with transfer to another environment • Loss of single environment • Use of out-of-county PSAPs as backup PSAPs <p>The NG911 Service Provider should describe how each scenario above can be processed by the proposed system with limited or no human intervention.</p>	<p>Complies.</p> <p>The system includes automated failover and rerouting for scenarios such as:</p> <ul style="list-style-type: none"> • Loss of primary/secondary routes. • Host or environment failure. • PSAP abandonment and transfer to alternate environments. • Use of out-of-county PSAPs as backups. <p>These are handled via preconfigured PRF policies and ESRP logic with minimal human intervention. During the ORT testing, each of these scenarios are fully tested, validated, and signed off from the PSAP. AT&T will provide an extensive test plan showing the hundreds of scenarios tested/validated during the prelive PSAP testing.</p> <p>Below are additional descriptions of alternate/default routing that is available to Broward County</p> <ul style="list-style-type: none"> • Abandonment/Night Service Routing – The abandonment policy is engaged whenever the terminating ESRP (PSAP) operational state is defined as ‘Abandoned’. The PSAP operational state may be modified by contacting the AT&T NOC, triggered via a device installed at the PSAP, or modified online. • Overflow Routing – The overflow routing policy is applied during overflow scenarios when a PSAP is receiving more calls than its occupied workstations can accommodate. Upon reaching the designated call capacity for the call type, cumulative calls, or if the target is unreachable, the ESRP engages the primary PSAP’s overflow routing policy. Similarly, the alternating routing policy will be invoked if the terminating ESRP call handling system does not accept the SIP invite or for a ring-no-answer timeout. • Diversion Routing – The diversion routing policy is applied whenever the PSAP opts to engage alternate diversion routing rules. The PSAP operational state may be modified to engage the diversion routing policy by contacting the AT&T NOC or online. • Special Event Routing – Special event routing is a special type of diversion routing policy that is applied during a scheduled time window. If a PSAP jurisdiction contains venues that host events that may warrant dedicated call handling (mobile command center or dedicated resources at the PSAP), special event polygons can be pre-provisioned. <p>AT&T will provide a feature-rich management portal for the PSAPs to view their policies. Policies have attributes such as active/inactive, one-time or recurring time window, priority, or a set of destination(s) to send the call to, and call distribution method as examples.</p> <p>Abandonment, Overflow, and Diversion policies can be configured to use any of the following policies.</p> <ul style="list-style-type: none"> • Geographically – The system can be configured to send alternate and abandonment calls to different PSAPs based on the geographic location of the calling party within the primary PSAP’s jurisdiction. Geographic abandonment or alternate routing polygons can be pre-provisioned via the SI or submitted dynamically. • Hierarchically – The system can be configured to cascade a call to up to nine consecutive, alternate PSAPs. • Load-balanced – The system can be configured to distribute calls between PSAPs. <p>Abandonment routing is the one configuration that is not an “automated” routing policy. Since all calls will route alternately if the PSAP is unavailable, abandonment routing is a configuration designed to allow for unique routing in the specific scenario that the PSAP “wants” to enable it. It can take the same path as typical alternate routing, or it can have separate routing rules defining what needs to be done in that specific “abandonment” scenario. Activation of the abandonment route can occur in one of 3 ways.</p> <ol style="list-style-type: none"> 1. A Call to the AT&T Res Center <ul style="list-style-type: none"> o In this scenario, a verified Broward representative would contact the AT&T Res Center at which point the configuration would be activated. 2. Customer Management Portal configuration access <ul style="list-style-type: none"> o AT&T can allow for verified PSAP personnel to activate the abandonment via the Customer Management Portal. 3. A PSAP Abandonment Device (PAD) located at the VIPER Host CPE <ul style="list-style-type: none"> o The PAD acts more like a traditional make-busy switch. It is a physical device with a physical switch. When utilized, abandonment routing will immediately take effect. <p>AT&T ESInet policy routing function performance was proven during Hurricane Helene in the State of North Carolina last September. At the height of the storm, 19 PSAPs in the western part of the state had 911 calls rerouting to 23 partner PSAPs, ensuring callers could reach a trained telecommunicator.</p>

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<p>SR-CR011 Geofencing: Geofencing and routing calls to specific call takers/positions/queues/ring groups are needed as part of the County's requirements. The NG911 Service Provider should ensure selected positions, PSAPs, or resources can be dynamically removed from receiving non-incident/event 911 calls. The NG911 Service Provider should describe the process, signaling, or tagging that would be used in the proposed NG911 System to accomplish this requirement.</p>	<p>Complies.</p> <p>The i3 solution for geofencing describes a unique PSAP URI which will be utilized when indicating a specific group or groups for the CPE call takers. The AT&T ESInet allows for various GIS scenarios that can be configured to use a PSAP URI to indicate this type of specific group on the PSAP call taking side. The most common groups that utilize GIS/Geofencing are</p> <ul style="list-style-type: none"> • Call Type • Call Times • Special Event Routing (Parade, Rock Concert, Seasonal Festival, Car Racing) <p>Each of these scenarios have been deployed within the AT&T ESInet. AT&T looks forward to utilizing its superior GIS routing capabilities to better serve Broward's citizens. Below is more detail on what capabilities the AT&T ESInet system has for GIS/Geofencing alternate routing scenarios.</p> <ul style="list-style-type: none"> • Abandonment/Night Service Routing – The abandonment policy is engaged whenever the terminating ESRP (PSAP) operational state is defined as 'Abandoned'. The PSAP operational state may be modified by contacting the AT&T NOC, triggered via a device installed at the PSAP, or modified online. • Overflow Routing – The overflow routing policy is applied during overflow scenarios when a PSAP is receiving more calls than its occupied workstations can accommodate. Upon reaching the designated call capacity for the call type, cumulative calls, or if the target is unreachable, the ESRP engages the primary PSAP's overflow routing policy. Similarly, the alternating routing policy will be invoked if the terminating ESRP call handling system does not accept the SIP invite or for a ring-no-answer timeout. • Diversion Routing – The diversion routing policy is applied whenever the PSAP opts to engage alternate diversion routing rules. The PSAP operational state may be modified to engage the diversion routing policy by contacting the AT&T NOC or online. • Special Event Routing – Special event routing is a special type of diversion routing policy that is applied during a scheduled time window. If a PSAP jurisdiction contains venues that host events that may warrant dedicated call handling (mobile command center or dedicated resources at the PSAP), special event polygons can be pre-provisioned. <p>AT&T will provide a feature-rich management portal for the PSAPs to view their policies. Policies have attributes such as active/inactive, one-time or recurring time window, priority, or a set of destination(s) to send the call to, and call distribution method as examples.</p> <p>Abandonment, Overflow, and Diversion policies can be configured to use any of the following policies.</p> <ul style="list-style-type: none"> • Geographically – The system can be configured to send abandonment calls to different alternate PSAPs based on the geographic location of the calling party within the primary PSAP's jurisdiction. Geographic abandonment or alternate routing polygons can be pre-provisioned via the SI or submitted dynamically. • Hierarchically – The system can be configured to cascade a call to up to nine consecutive, alternate PSAPs. • Load-balanced – The system can be configured to distribute calls between PSAPs. <p>The AT&T ECRF can be loaded with any number of polygon layers for multiple purposes. Polygon sets can be created, validated and provisioned for anticipated overload, backup routing, abandonment, special event and other routing scenarios as desired. Each would be provisioned with a unique URN. Using optional advanced PRF functions, when the ECRF returns a PSAP URI for routing, the PRF will evaluate it for special policy routing rules. The PSAP policy can direct the ESRP to query the ECRF again with the URN prescribed within the policy (e.g. geospatially distributed abandonment polygons which spread the abandonment load to multiple PSAPs depending on call location). Using the caller's location and the prescribed URN, the ESRP will query the ECRF, which will return the URI associated with the new URN and the location provided in the query.</p>

Response Matrix

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AT&T	
Functionality Checklist Matrix	
SR-NR Network Redundancy and Resiliency	
<p>SR-NR007 All Circuits Used: To ensure all connectivity is always available, all primary circuits should be used in normal operation to process traffic. Secondary and tertiary circuits should be active daily. The active secondary and tertiary circuits will demonstrate that the circuits are available and can support live traffic. The NG911 Service Provider should describe the method that will be used to accomplish this requirement and describe any types or specific circuits that may not be used in normal operation and why.</p>	<p>Complies.</p> <p>The proposed NG911 solution ensures that all primary, secondary, and tertiary circuits are active and exercised daily to support live traffic. This approach validates circuit availability and performance in real-time.</p> <ul style="list-style-type: none"> • Primary Circuits: Used continuously for standard traffic flow. • Secondary/Tertiary Circuits: Although de-prioritized, these circuits carry traffic daily to demonstrate operational readiness and load balancing. <p>Any exceptions—such as circuits reserved for disaster recovery or legacy interconnects—are documented and justified based on operational design and PSAP-specific needs.</p>
<p>SR-NR008.b: The NG911 Service Provider should describe the monitoring methods and the process to provide notifications to the County when circuits are unavailable.</p>	<p>Complies.</p> <p>The AT&T ESInet fully managed service includes a 9-1-1 Resolution Center and network monitoring facility dedicated solely to monitoring and managing 9-1-1 processes and system elements. The AT&T 9-1-1 Resolution Center is staffed 24 hours a day, seven days a week, 365 days a year to actively monitor and manage the AT&T ESInet associated services and connectivity. Multiple network management components monitor network elements, IP paths, packet rates, packet loss, retransmission, and other IP network metrics 24x7x365. These components generate alarms to system operators if the reliable delivery of calls or data is threatened. Active application monitoring and alerting complement traditional network management. The AT&T ESInet application elements also report network failures as detected by their application messaging activity, some of which is specific to managing the availability and integrity of the solution.</p> <p>All network elements are monitored at the AT&T ESInet NOC, including LNGs, ESRPs, ECRFs, BCFs, and PSAP site equipment.</p> <p>The NOC monitors and tracks net flow statistics and performs packet level capture and forensics at the AT&T ESInet core sites. There are currently two varieties of monitoring systems in use at the NOC. One provides a “single pane of glass” for network and system status. This provides SNMP trap and syslog receiver capabilities. These systems also provide ICMP and SNMP trending and threshold alarming. The second type of system provides packet capture, display, and troubleshooting capabilities. When a potential or actual customer-affecting issue is defined and determined to be an incident, the Incident Administration team is engaged by the AT&T ESInet NOC. The team uses established processes that are ISO 9001:2015-compliant for immediate escalation, notification, resolution, and reporting.</p> <ul style="list-style-type: none"> • AT&T will provide 24x7x365 logging and monitoring of the network supporting the County. For security purposes, AT&T does not allow outside vendor/customer access to monitoring equipment. AT&T will provide real-time reporting capabilities as well as access to the AT&T ESInet NOC for real-time updates on network and equipment health. AT&T provides 24x7x3657 monitoring and Denial of Service mitigation tools. • AT&T monitors the core network for traffic anomalies and shared resource consumption thresholds to protect the core network and preserve the performance of other customers. • AT&T monitors and audits all aspects of the network for threats from a variety of sources. NetFlow statistics and packet level capture and forensics are continuously performed. In addition, network hosts and security infrastructure provide logging through a centralized Security Information and Event Management (SIEM) solution, providing real-time analysis, event correlation, and alerts across the AT&T ESInet environment. This capability assists in troubleshooting and anomaly resolution as well as providing assurance of reliable performance. Information Security personnel have devised profiles of common events from given systems so that they can tune detection to focus on unusual activity, avoid false positives, more rapidly identify anomalies, and prevent overwhelming analysts with insignificant alerts. <ul style="list-style-type: none"> • Remote monitoring of network and computer performance is conducted to provide statistical data on the number of alarms received and reported based on severity. The AT&T ESInet NOC uses monitoring tools to capture the elements of a complex end-to-end service environment, such as network elements, computer systems, databases, and the applications themselves. NOC staff can monitor the complex dependencies among these managed elements and alert the appropriate group for interpretation. This provides a method to immediately notify designated personnel of any system failures. <ul style="list-style-type: none"> • The following are key highlights for the notification system: <ul style="list-style-type: none"> • The five state levels are as indicated: Critical, Major, Minor, Warning, and Normal • We provide notification by email and SMS • Notification levels are defined by the supporting entity • In the event of an outage, AT&T applies immediate and sustained effort, 7x24, until a final resolution is in place. We use all reasonable efforts to provide a temporary workaround within an agreed upon time frame of the issue being detected. If a temporary workaround solution is provided, we provide an action plan to be mutually agreed upon for the final resolution. We continue resolution activity until full service is restored. The primary objective of an incident is to mitigate impact. The Incident Commander and Incident Administrator are able to call upon whatever resources are required to identify and restore functionality.

Response Matrix

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	AT&T
Functionality Checklist Matrix	
NG911 Call Delivery	
SR-DL 911 Call Egress/Call Delivery to All PSAPs	
<p>SR-DL001 Call Egress/Call-Delivery Circuits: The NG911 Service Provider should provide the call egress/call-delivery circuits and associated infrastructure to meet the following requirements:</p> <ul style="list-style-type: none"> • Diverse entrance facilities for core sites • Diverse entrance facilities to all call-handling host locations that the County deploys, whether local, remote data center, or cloud-based • No single point of failure • Use open standards • IPv4 and IPv6 dual protocol stacks • Border Gateway Protocol (BGP) utilizing bidirectional forwarding detection • Multicast routing and switching • Quality of service (QoS) marking using Differentiated Service Code Point (DSCP) to ensure the highest voice quality for all 911 calls • Have a network traffic convergence of less than 54 milliseconds (ms) • Maintain an MOS of 4.0 or better at the handoff to the CHE 	<p>Complies.</p> <p>Core sites include redundant network transport and redundant network interfacing elements to ensure optimal operation and availability. Network interfacing elements include switches, routers, SBCs, firewalls, and other security devices. AT&T has designed the host connections with diverse access paths utilizing existing dual entrances at all Broward County locations. As the industry's adoption has evolved and new threats emerged, it is recommended to deploy two diverse circuits to each Host site. Diversity can only be achieved by fully engineering the entire physical and logical paths to the customer sites. Multi-vendor network solutions may not guarantee actual diversity. Particularly if the vendors are leasing common conduit at any point in the delivery path. While there may be two separate carriers providing circuits to the end point, if there is a cable cut at any point where the two carriers are sharing a common leased conduit, all ESInet service to the host would be severed.</p> <p>AT&T's proposal includes two AVPN connections per Host that have been engineered with Access Path Diversity and will take advantage of the County's existing dual entrances to the facilities. The dual AVPN circuits per Host will terminate on two separate managed and monitored routers. In addition, AT&T has looked further into the network and designed these network services to utilize diverse Serving Wire Centers, Layer 2 and Layer 3 POPs, thus providing the greatest level of resiliency offered.</p> <p>The information for the Diversity Scenario for North Regional Host was redacted by AT&T.</p>
<p>SR-DL004 Abandonment Switches: The NG911 Service Provider should provision one or more abandonment switches at each PSAP, which, when activated, will automatically reroute calls to the pre-defined alternate endpoint for that PSAP based on the required routing configurations used today. Strict administrative policies and procedures will be put in place by the County. The NG911 Service Provider should describe how abandonment switches will be used in the proposed NG911 System.</p>	<p>AT&T Response: Complies..</p> <p>Abandonment is a routing policy that is pre-determined with the PSAP. Since all calls will route alternately if the PSAP is unavailable, abandonment routing is a configuration designed to allow for unique routing in the specific scenario that the PSAP "wants" to enable it. It can take the same path as typical alternate routing, or it can have separate routing rules defining what needs to be done in that specific "abandonment" scenario.</p> <p>Activation of the abandonment route can occur in one of three ways.</p> <ol style="list-style-type: none"> 1. Customer Management Portal Configuration Access: AT&T can allow for verified PSAP personnel to activate the abandonment via the Customer Management Portal. 2. A PSAP Abandonment Device (PAD): located at the VIPER CPE and/or remote PSAP location. The PAD acts more like a traditional make-busy switch. It is a physical device with a physical switch. When utilized, abandonment routing will immediately take effect. 3. A Call to the AT&T Res Center: In this scenario, a verified Broward representative would contact the AT&T Res Center at which point the configuration would be activated.

Response Matrix

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Functionality Checklist Matrix	
<p>SR-DL005.b Policy Based Rules Tool: The NG911 Service Provider should describe the functions of the policy based rules tool and types of rules that can be provisioned by the PSAP, County, and NG911 Service Provider.</p>	<p>Complies.</p> <p>The AT&T NG911 system includes a policy-based rules engine that allows the County, PSAPs, and AT&T to define routing and handling logic. Rules can be provisioned for:</p> <ul style="list-style-type: none"> • Time-of-day routing • Call type prioritization • Jurisdictional boundaries • Alternate routing during outages <p>These rules are managed via a secure web interface with role-based access controls.</p> <p>AT&T ESInet i3 policy routing will provide Broward County with extensive flexibility to define and update standard and alternate routing policies. PSAPs can modify routing policies, set priorities, and modify their operational state. Routing policies can be defined as recurring or one-time. The rules-based routing proxy includes the following elements.</p> <ul style="list-style-type: none"> • A repository of PSAP-defined routing policies. • Customer Management Portal – A feature-rich web tool that allows PSAPs to view their routing policies and operational status (normal, abandoned, back-up). All routing policy changes are automatically verified for syntactical and logical prior to activation in production. Secure user access is provided via the Customer portal. <p>The following types of routing policies are supported:</p> <ul style="list-style-type: none"> • Abandonment/Night Service Routing – The abandonment policy is engaged whenever the terminating ESRP (PSAP) operational state is defined as 'Abandoned'. The PSAP operational state may be modified by contacting the AT&T NOC, triggered via a device installed at the PSAP, or modified online. • Overflow Routing – The overflow routing policy is applied during overflow scenarios when a PSAP is receiving more calls than its occupied workstations can accommodate. Upon reaching the designated call capacity for the call type, cumulative calls, or if the target is unreachable, the ESRP engages the primary PSAP's overflow routing policy. Similarly, the alternating routing policy will be invoked if the terminating ESRP call handling system does not accept the SIP invite or for a ring-no-answer timeout. • Diversion Routing – The diversion routing policy is applied whenever the PSAP opts to engage alternate diversion routing rules. The PSAP operational state may be modified to engage the diversion routing policy by contacting the AT&T NOC or online. • Special Event Routing – Special event routing is a special type of diversion routing policy that is applied during a scheduled time window. If a PSAP jurisdiction contains venues that host events that may warrant dedicated call handling (mobile command center or dedicated resources at the PSAP), special event polygons can be pre-provisioned. <p>AT&T will provide a feature-rich management portal for the PSAPs to view their policies. Policies have attributes such as active/inactive, one-time or recurring time window, priority, or a set of destination(s) to send the call to, and call distribution method as examples.</p>

Response Matrix

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Functionality Checklist Matrix	
	<ul style="list-style-type: none"> Abandonment, Overflow, and Diversion policies can be configured to use any of the following policies. Geographically – The system can be configured to send abandonment calls to different alternate PSAPs based on the geographic location of the calling party within the primary PSAP's jurisdiction. Geographic abandonment or alternate routing polygons can be pre-provisioned via the SI or submitted dynamically. Hierarchically – The system can be configured to cascade a call to up to nine consecutive, alternate PSAPs. Load-balanced – The system can be configured to distribute calls between PSAPs. All policies loaded by the customer are held in a test state (non-active) until the customer confirms that all test calls using the policies perform as expected.
<p>SR-DL006 Emergency Incident Data Object (EIDO): The NGCS and ESInet should support the exchange of EIDO over the ESInet between PSAPs and across NNIs to neighboring jurisdictions. The NG911 Service Provider should describe any actions by the County or CHE vendor to accomplish this requirement.</p>	<p>Complies.</p> <p>AT&T's NGCS and ESInet support EIDO exchange across NNIs, enabling seamless data sharing between PSAPs and neighboring jurisdictions. The County and CHE vendors must ensure:</p> <ul style="list-style-type: none"> EIDO schema compliance Secure API integration Coordination of endpoint configurations <p>AT&T provides onboarding support and validation tools to assist with implementation.</p>
<p>SR-DL007 EIDO Access: The NGCS and ESInet should support access from other jurisdictions to the EIDO message servers deployed in the County's Regional and Non-Regional environments to exchange data. The NG911 Service Provider should describe any actions by the County or CHE vendor to accomplish this requirement.</p>	<p>Complies.</p> <p>EIDO message servers deployed in both Regional and Non-Regional environments are accessible to authorized external jurisdictions. Access is controlled via OAuth2/SAML-based SSO, and data exchange is encrypted using TLS 1.3. The County and CHE vendors must configure firewall rules and endpoint permissions to enable secure access.</p>
<p>SR-DL014.b: As part of the call delivery monitoring, the following situations should result in a trouble ticket being generated automatically for dispatch and resolution, and a notification to the County:</p> <ul style="list-style-type: none"> Call delivery between Functional Elements causes an error processing should generate an alarm. When all calls are not able to be delivered to the PSAP, the NG911 Service Provider generates an alarm and notifies the appropriate parties at the County as well as the field personnel to confirm that alternate routing is activated. When there is a failure to deliver the 911 call, the alternate call routing plans are automatically used to route the calls. In the event the NG911 alternate routes are not available, the calls are routed to an alternate public switched telephone network (PSTN) path using a 10-digit number associated with the destination PSAP. If the primary path is unavailable, the calls should be routed to the backup 10-digit number. The logging of such routing should be available to the County. <p>The NG911 Service Provider should provide examples of how these will be managed and performed in the proposed solution.</p>	<p>Complies.</p> <p>AT&T provides 24X7 monitoring of the functional elements within the NGCS, the network within the NGCS, and the equipment located on site at the PSAP CPE host. There are multiple levels of alarming resulting from normal call processing. Some are "acceptable" errors, such as a busy system or an SRDB fallback routing decision. In any case that a call could not be delivered to a primary PSAP due to an equipment or network failure, trouble tickets are created, and an incident team is established to immediately investigate and resolve the issue.</p> <p>If primary PSAP endpoints are unavailable, the AT&T system has multiple alternate routes established to seamlessly re-route a call. These routes are established with the PSAP prior to go live, and can be modified, real time, by the AT&T Res Center, and (with proper permission) the PSAP through the AT&T Customer Management Portal (CMP). Standard alternate routes can include alternate 911 PSAP delivery (a neighboring PSAP or Operations center) via the AT&T ESInet, or a PSTN route designated by the PSAP.</p> <p>An example of a typical configuration would include a primary PSAP route associated to an alternate PSAP. If that alternate PSAP is down/busy, configurations allow for the call to be further routed to a dialable PSTN. PSAPs typically use a phone bank/PBX non-associated directly to the PSAP CPE in case of a total CPE failure.</p> <p>Other examples include additional routes to a specified GIS area for alternate or abandonment re-routing, rerouting due to time of day or special events, and re-routing to the same physical PSAP with an alternate URI for prioritization.</p>

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Functionality Checklist Matrix	
<p>SR-DL015 Call Queuing: The NG911 Service Provider should provide call queuing at the network level. If the network is unable to deliver the calls to the PSAP due to increased volume, the calls should be queued and tracked at the network level. The NG911 System should be able to process two hundred (200) calls simultaneously for each environment (Regional and Non-Regional).</p>	<p>Complies.</p> <p>AT&T will provision all Broward environments to accept (at a minimum) 200 simultaneous calls. There are multiple options and a combination of configurations between the AT&T core elements and the VIPER 7 for an individual PSAP to accept, queue or reject calls coming into the VIPER 7 T-ESRP/CPE. These configurations include (but are not limited to)</p> <ul style="list-style-type: none"> - Ring No Answer timer - Call capacity Management on VIPER per SIP trunk - Use of Alternate Primary PSAP SIP URIs for prioritization - Alternate and/or Default routing PSAP route lists. - PSAP Use of VIPER IVR/Call Queues <p>AT&T looks forward to working with Broward County to determine the configurations on both systems that will work best to enhance the caller/call taker experience and desired call flow outcome.</p>

Response Matrix

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Functionality Checklist Matrix	
NG911 Call Delivery	
SR-CP Call Processing	
SR-CP003 Call Processing by Type: The NG911 Service Provider should be able to process and deliver wireline, wireless, VoIP, text (RTT, Short Message Service [SMS], Rich Communication Services [RCS], Message Session Relay Protocol [MSRP], Instant Messaging [IM]), and Multimedia Service (MMS) calls/requests for emergency response seamlessly. The system should support the use of Telecommunications Device for Deaf (TDD) and TTY.	Complies.
SR-CP004 Caller Location Information: The NG911 Service Provider should provide the location information for each 911 call at the handheld device level for call routing and call processing.	Complies.
SR-CP005 NGCS Media Recording: The NG911 Service Provider should provide call and media recording in the NGCS. The PSAP and other County staff should have access to the recordings.	Complies.
SR-IT Interfaces	

Response Matrix

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Functionality Checklist Matrix	
SR-IT003 Multimedia Sessions: The NG911 Service Provider should interface the wireless providers to be capable of delivering multimedia such as video and pictures as a part of the proposed NG911 System. Deployment of this function to the PSAP will be determined on an individual PSAP basis.	Complies.
RPT- Report	
RPT001 Single Reporting Platform: The NG911 Service Provider should provide a single reporting platform that can be configured based on each user's role, unique USERID, and access permissions. The portal should support at least sixty (60) users.	Complies.

Response Matrix

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Functionality Checklist Matrix	
<p>RPT002.b: The reporting platform for the PSAPs should include, at a minimum the following reports:</p> <ul style="list-style-type: none"> • Date and time stamp • Call delivery time (hh:mm:ss) • Call answer time (hh:mm:ss) • Call disconnect time (hh:mm:ss) • Call duration (hh:mm:ss) • Average call duration (hh:mm:ss) • Average call answer time (hh:mm:ss) • Seizure time (hh:mm:ss) • Call volumes by call type • Alternate-routed calls • Text-to-911 instances • Abandoned calls • Call volume by hour • Call volume by day of the week • Individual call information • Summary of call volumes • Call transfers/bridges • Call conferences • Agent availability • Call volumes by OSP • Repeat callers • Routing method (e.g., geospatial, Federal Information Processing Standard [FIPS]/emergency service number [ESN], default, etc.) <p>The NG911 Service Provider should provide a list of all available reports and provide at least three report examples.</p>	<p>Complies.</p> <p>AT&T's standard reporting suite provides the following reports through a web-based interface, the Customer Management Portal (CMP).</p> <ul style="list-style-type: none"> • Event Count Reports per Hour. Provides metrics for total calls by hour for a day, week or month. • Event Count by Routing Reason and Destination. Provides metrics for total calls in which the Customer PSAP participated as the Primary versus Alternate route per route type(ESN and GIS), broken out by hour for day, week, or month. • Event Count by Type. Provides metrics for total calls by call type (wireless, wireline, VoIP) broken out by hour for day, week, or month. • Event Count by Incoming Trunk Group. Provides metrics for total calls by trunk group with an hourly breakout. • Bridge Call Summary. Provides metrics for calls bridged in or out by bridge type (fixed, selective, manual). Call details are available for each bridged call. • Routing Database Processing. Provides a breakout of initial calls where the Customer PSAP was Primary by selectively routed versus default routed with a No Record Found (NRF) breakout. • Event Setup Time. Provides statistics on the time to route and deliver calls where the Customer PSAP is Primary, including the minimum, maximum, median and average times • Event Count Reports per Hour. Provides metrics for total calls in which Customer's PSAP participated by hour for a day, week or month <p>The AT&T tool gives users the ability to drill down and capture additional contextual information that can be used to more efficiently manage ongoing 911 operations.</p> <p>Users can also download raw data from the standard reports web portal to create customized reports and data and trend analysis. AT&T gives 911 officials the ability to convert static data into actionable information anywhere and at any time.</p> <p>In addition to the standard reporting suite, AT&T provides access to CDR data for every PSAP. This is available through the CMP and allows the PSAP to pull specific, detailed information for every call. The PSAP can export this information into a data file and manipulate/create their own reports as they see fit.</p> <p>The CMP also allows for detailed call trace information on a per call basis. This includes, but is not limited to, callback number, individual NGCS element time stamps, GPS fix type, address, and X/Y information with Radius Value processing. Below are three examples of standard call reports and screenshots of the CDR Export tool as well as the Call Trace tool.</p> <p>The information for the "Event Counts by Hour Report" was redacted by AT&T.</p>
<p>RPT003.a: The NG911 Service Provider should provide a dashboard and portal for access by County staff and others as approved by the County to run the below SLA reports. All reports should be able to run for specific dates and times.</p>	<p>Complies.</p>

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<p>RPT003.b The reporting platform for County staff should include at a minimum:</p> <ul style="list-style-type: none"> • Call processing time between elements (hh:mm:ss) • Payload processing time (hh:mm:ss) • Calls per circuit • Call distribution to PSAP circuits • Circuit utilization from OSP • Circuit utilization to PSAP • All NGCS element usage volumes (all elements used in the NG911 Service Provider's NG911 System) • End-to-end call-flow analysis • Event by incoming IP address • NOC-to-NOC reporting, trouble reporting, and tracking • Root cause analyses • Service availability for each component including ESInet segments • Monitoring, alarming, and logging • MOS <p>The NG911 Service Provider should provide a list of all available reports and provide at least three report examples.</p>	<p>Complies.</p> <p>AT&T's standard reporting suite provides the following reports through a web-based interface.</p> <ul style="list-style-type: none"> • Event Count Reports per Hour. Provides metrics for total calls by hour for a day, week or month. • Event Count by Routing Reason and Destination. Provides metrics for total calls in which the Customer PSAP participated as the Primary versus Alternate route per route type, broken out by hour for day, week, or month. • Event Count by Type. Provides metrics for total calls by call type (wireless, wireline, VoIP) broken out by hour for day, week, or month. • Event Count by Incoming Trunk Group. Provides metrics for total calls by trunk group with an hourly breakout. • Bridge Call Summary. Provides metrics for calls bridged in or out by bridge type (fixed, selective, manual). Call details are available for each bridged call. • Routing Database Processing. Provides a breakout of initial calls where the Customer PSAP was Primary by selectively routed versus default routed with a No Record Found (NRF) breakout. • Event Setup Time. Provides statistics on the time to route and deliver calls where the Customer PSAP is Primary, including the minimum, maximum, median and average times. • Event Count Reports per Hour. Provides metrics for total calls in which Customer's PSAP participated by hour for a day, week or month. <p>The AT&T tool gives users the ability to drill down and capture additional contextual information that can be used to more efficiently manage ongoing 9-1-1 operations. Users can create customized reports and perform real-time data and trend analysis, including graphing, based on daily data updates. AT&T gives 911 officials the ability to convert static data into actionable information anywhere and at any time. In addition to the standard reporting suite, AT&T provides access to CDR data for every PSAP. This is available through the Customer Management Portal (CMP) and allows the PSAP to pull specific, detailed information for every call. The PSAP can export this information into a data file and manipulate/create their own reports as they see fit.</p> <p>The CMP also allows for detailed call trace information on a per call basis. This includes, but is not limited to, Callback number, s007A, individual NGCS element time stamps, GPS fix type, address and X/Y information with Radius Value, processing. In RTP – Reports, #2 RPT002.b, above, are three examples of standard call reports, and screenshots of the CDR Export Tool as well as the Call Trace tool.</p> <p>The AT&T ESInet Executive Dashboard displays Circuit-specific PSAP-related network statistics including, but not limited to MOS, Circuit Utilization, Round Trip Time, and Packet Loss. Below are examples of that Dashboard and available statistics.</p> <p>The information for the "Service Availability", "MOS Score", "List Call Detail Records", and "Call Trace" was redacted by AT&T.</p>
<p>RPT004 Access to logs via Reporting Platform:</p> <p>The NG911 Service Provider should provide access to the system logs using the existing platform or another similar platform. This should include:</p> <ul style="list-style-type: none"> • Transactional database log associated with each SIP header and URI, and additional information provided to access by the County • Retrieval of log information should include calling number, SIP header information, call destination, successful, failures, transfers, ALI database transactions, and alternate routed calls (e.g., default, PSTN gateway, special processing, or overflow), which includes call counts • Log retrieval should be available by groups of calls (e.g., 911 versus non-emergency) and date range of calls. 	<p>Complies.</p> <p>AT&T will ensure access to system logs through the existing platform or a similar platform, meeting the following requirements:</p> <ul style="list-style-type: none"> • Transactional Database Logs: Logs will include detailed information associated with each SIP header and URI, along with additional data accessible by the County. • Comprehensive Call Data Retrieval: Logs will capture critical call information, including calling number, SIP header details, call destination, call outcomes (successful, failures, transfers), ALI database transactions, and alternate routed calls (e.g., default, PSTN gateway, special processing, or overflow). Call counts will also be included. • Filtering and Grouping: Log retrieval will allow filtering by groups of calls (e.g., 911 versus nonemergency) and by specific date ranges. This logging capability ensures that Broward County has the tools necessary to monitor, analyze, and manage its NG911 system effectively.

Response Matrix

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	AT&T
Functionality Checklist Matrix	
<p>RPT005 Real Time System Monitoring: The NG911 Service Provider should provide access to real time system monitoring to the County using the existing platform or another similar platform. The platform should provide real time web-based monitoring of County traffic into the System at the functional element level and facilities (network connections). The status should be updated every 15 seconds, which includes, active, slow response, and failures.</p>	<p>Complies.</p> <p>Real-time monitoring is available via a web-based dashboard. Please see the screenshot of System Monitoring from the Executive Network Dashboard.</p> <p>The information for the "System Monitoring - Executive Network Dashboard" was redacted by AT&T.</p>

Response Matrix

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	Motorola Solutions
	<i>Vendor's Response</i>
General Technical Requirements	
SN - Security/Notifications	
<p>SN009 STIR/SHAKEN: The NG911 Service Provider should implement STIR/SHAKEN and pass information including attestation to the CHE. The NG911 Service Provider shall describe how this has been accomplished in other locations with VIPER 7.</p>	<p><i>Complies.</i></p> <p>The call routing service from Motorola will support STIR/ SHAKEN facing OSPs that remit 911 calls to our network in the 1s t quarter of 2026.</p> <p>Our call routing service will pass through STIR/ SHAKEN information provided by the OSPs in locations with VIPER 7 and other call handling solutions.</p>
<p>SN010.b: The NG911 Service Provider should provide transactional logging information for each functional element (i.e., Emergency Services Routing Proxy [ESRP], Legacy Network Gateway [LNG], BCF, PRF, Location Validation Function [LVF], Legacy Selective Router Gateway [LSRG], Spatial Interface [SI], and Emergency Call Routing Function [ECRF]). The transactional database logs for 911 calls should include calling number, SIP header information, routing destination, call or record process success/failures, transfers, ALI database transactions, and alternate routing, which includes call counts. The log retention period should be a minimum of thirty (30) calendar days.</p>	<p><i>Complies.</i></p>
<p>SN011 System Logging Repositories: The NG911 Service Provider should provide transactional logging repositories at two different data centers for each functional element (i.e., ESRP, LNG, BCF, PRF, LVF, LSRG, SI, and ECRF). The log retention period should be a minimum of thirty (30) calendar days.</p>	<p><i>Complies.</i></p>

Response Matrix

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<p>SN012 System Log Retrieval: The NG911 Service Provider should provide a user-friendly portal to retrieve transactional logs in near realtime for each functional element (i.e., ESRP, LNG, BCF, PRF, LVF, LSRG, SI, and ECRF). The NG911 Service Provider should provide a process to retrieve the logs.</p>	<p>Complies.</p> <p>Authorized personnel with the applicable credentials can access the web-based reporting system to run reports associated with transactional logging in near real-time as i3 events are sent from functional elements as they occur without having to wait until call disconnect.</p>
<p>SN013 Security Information and Event Manager (SIEM): The NG911 Service Provider should integrate with the County's SIEM Splunk Tool (when deployed) for onsite logging events. The log retention period should be a minimum of 30 calendar days. The NG911 Service Provider should provide the County access to the logs of other systems and devices in the NG911 System for tracking the calls and issues. The log retention period should be a minimum of thirty (30) calendar days.</p>	<p>Complies.</p>
<p>SN017 User Notifications and Communications: The NG911 Service Provider should have a system that performs outward notifications and updates of customer tickets through phone, email, and text. The NG911 Service Provider shall notify the County via the contact methods provided of all NG911 Service Provider infrastructure failures and/or outages within 15 minutes of discovery. For all outages, the NG911 Service Provider must also contact the 911 Coordinator via phone.</p>	<p>Complies.</p>
<p>SN020 TDOS and DDOS Prevention: The NG911 Service Provider should implement hardware, software, and training to identify, respond, and prevent TDOS and DDOS attacks as a part of the proposed NG911 System. The NG911 Service Provider shall describe the process to identify respond and prevent TDOS and DDOS attack.</p>	<p>Complies.</p> <p>Motorola addresses TDoS and DDoS attacks with a multi-layered approach that includes technical measures, operational strategies, and robust monitoring.</p> <p>Our NG9-1-1 system integrates protection through:</p> <ul style="list-style-type: none"> • Core Principles : Call authentication and validation, call routing intelligence, traffic management, real-time monitoring and response, capacity planning and scaling, SIEM, regular security assessments , network-level mitigation, firewall protection, intrusion detection/ prevention, traffic scrubbing, and rate limiting. • Response Mechanisms : Our call routing service can react to confidence levels in incoming calls to identify and differentially route potential malicious traffic. Our Network & Security Operations Center (NSOC) provides 24/7 surveillance and rapid response to issues , including TDoS and DDoS attacks . • Security Posture: Our system hardening is based on NENA NG-SEC standards and DoD J ITC Information Assurance (IA) certifications . <p>We employ a principle of least privilege, adhere to a "deny-all" firewall posture, and incorporate CSRIC Best Practices, ISO 27001, 31000, NIST SP 800-30, 800-53, and the NIST Cybersecurity Framework.</p> <ul style="list-style-type: none"> • System Resilience: The NG9-1-1 system is engineered with no single point of failure, utilizing multiple layers of redundancy across three cloud availability regions (diversified across at least two cloud providers and multiple availability zones). Redundant network paths from different carriers and dynamic routing protocols provide rapid failure detection and automatic failover.

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<p>SR-IN003 Multiple POIs: SR-IN003.b The NG911 Service Provider should provide at least two POIs within 100 miles of the Broward County border. Having local and national POIs will provide OSPs with interconnection choices.</p> <p>The NG911 Service Provider shall list the locations of all POIs that will be used.</p>	<p>No Response.</p>
SR-GI NG911 Processing	
<p>SR-GI013 SI Provisioning: The NG911 Service Provider should pull GIS data from the County GIS data repository rather than require the County to push (upload) GIS data to the SI. The data pull can be automated by the NG911 Service Provider or scheduled by the County. The NG911 Service provider shall describe the process used and how the County's preference can be integrated into the proposed NG911 System.</p>	<p>Complies.</p> <p>The County's GIS data already resides within our Spatial Interface, as the County has already invested in a GIS project with Motorola. Therefore, that GIS data can be directly provisioned to the ECRF and LVF without any changes to the County's processes.</p> <p>We are intimately knowledgeable of the County and Cities' maintenance and upload processes as well as the reporting of errors within the GIS and property appraiser's datasets.</p>
DAT – Data processing	

Response Matrix

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	Motorola Solutions
DAT001.b: The NG911 Service Provider should describe the GIS upload process to include the access, steps, and ease of use.	<p>Complies.</p> <p>The current process is zipping a File Geodatabase and uploading it using sFTP which requires credentials for access. In the near future a Web Portal will provide the same capability with a much more user-friendly interface.</p> <p>The Spatial Interface will also have the capability to accept other ancillary layers and reformat outputs supporting other mapping systems such as CAD and PSAP mapping applications.</p>

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	Motorola Solutions
DAT003.b: The NG911 Service Provider should describe the process to manage PRF routing plans.	<p>Complies.</p> <p>Our Customer Web Portal (CWP) serves as a central interface for managing and monitoring the call routing service, including PRF. Authorized users, such as PSAP personnel, can view, modify, and customize PRF functions and rules. The activation and deactivation of PSAP abandonment strategies, which are part of policy routing, are also accomplished via the CWP by properly credentialed users. The CWP provides real-time visibility into the health and performance of the call routing service and ESInet network, showing PSAP status and policy route deviations.</p> <p>These rules can be configured based on various factors, including call type (wireline, wireless, VoIP), caller location, originating service provider (OSP) of the trunk, or trunk group (While the LNG is still in use).</p> <p>For example, the City of Baltimore has utilized special event routing for large art festivals and the recent APCO conference, with geo-fencing established to route 9-1-1 calls to a local command post on scene.</p>

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	Motorola Solutions
SR-CR Call Routing	
<p>SR-CR003.b: The NG911 Service Provider should work with the County to design all the rules, policies, and algorithms that will be available to route calls similar to the routing groups currently in place. Describe how this process will be accomplished.</p>	<p>Complies .</p> <p>During deployment, our project managers and system engineers collaboratively work with PSAP personnel to develop custom policy routing rules tailored to the PSAP's operational requirements .</p> <p>This includes supporting call transfers , selective transfer agencies , and alternate, overflow, and abandonment routing.</p>
<p>SR-CR004 Distribution of Calls to PSAPs: The NG911 Service Provider should route calls similar to the routing groups currently in place, including call labels/tags required by the CHE for various call functions and distribution rules currently in place. The NG911 Service Provider should describe the method that is proposed to route calls similar to the routing groups currently in place, such as additional circuits, call labels/tags, or setting distribution rules.</p>	<p>Complies .</p> <p>Motorola provisions the PSAP configurations in the Router Service based on information gathered during policy routing meetings . This ensures that existing routing logic is captured and applied in the new system.</p> <p>The PRF is capable of providing relevant flags , such as a "call-diverted flag," to alternate routing destinations , as defined in the NENA i3 standard. This effectively acts as a call label or tag, indicating that a call has been rerouted by policy. Motorola ensures that call handling Automatic Call Distribution (ACD) rules and NGCS Policy Routing Function (PRF) rules work in conjunction with each other. This means that if the Call Routing Service cannot deliver a call to the primary designated PSAP, it can be presented to another PSAP, a specific queue, or other destinations, depending on the ACD rules already established by the PSAP .</p>

Response Matrix

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	<p>Motorola Solutions</p>
<p>SR-CR006.b Call Distribution: All calls should be routed based on data received. The NG911 Service Provider should develop procedures and processes to distribute calls to the hosts in the Regional and Non-Regional environments. Please provide examples of how this was done for other implementation.</p>	<p>Complies .</p> <p>For all implementations , Motorola provisions the PSAP configurations in the Router Service based on information gathered during policy routing meetings . This ensures that existing routing logic is captured along with new capabilities and applied in the new system.</p> <p>A key aspect of supporting existing call functions and distribution rules is the ability to map Emergency Services URIs (ESURIs). Customers have configured their CHE to map these ESURIs to specific VDNs (Voice Dialing Numbers), queues , or other internal distribution mechanisms as required to support their normal operating procedures .</p> <p>Policy Routing Rules (PRR) can be set to deliver calls to the PSAP Host servers based on the ESURI if the Load Balancers cannot be reached for any reason.</p> <p>All of our customers have PRRs set for rerouting under conditions of abandonment, inability to connect, and overflow. They are routed to a new SIPURI (ESInet) or TelURI (10-digit dialing). Most route to adjacent agencies , not to another part of the same system. Some route to various agencies based on the geographic location of the call.</p>
<p>SR-CR008 Regional PSAP Routing: The CHE has been implemented to provide advanced routing capabilities. These capabilities are expected to remain. Regional PSAP routing should include:</p> <ul style="list-style-type: none"> • Ability for all calls to be load-balanced across the three hosts similar to how it is balanced today • Ability for the VIPER load balancers to distribute calls to the VIPER servers regardless of the proper PSAP • Ability for the VIPER CHE to distribute calls to all PSAPs regardless of the proper PSAP • Ability of the VIPER CHE to identify the proper PSAP and distribute to the proper PSAP when needed <p>(CAD failure operations) The NG911 Service Provider should describe the system that is proposed and how these capabilities will be accomplished.</p>	<p>Complies.</p> <p>The existing VIPER routing capabilities can be retained, but may have to be adjusted as we move from TDM call delivery from the OSPs into i3 call delivery which no longer has designated trunks. The ESURI will be used by VIPER as well as other information carried within the SIP header to determine the best route for that call to take within the CHE.</p> <p>The following information is included within an i3 call:</p> <ul style="list-style-type: none"> • ProviderInfo • CallInfo • SubscriberInfo • DeviceInfo <p>The information contained in these header blocks can be used to determine VIPER's proper distribution of the call. Other labels /Tags will be available such as a reroute notice if the original PSAP was not available.</p>

Response Matrix

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<p>SR-CR009 Non-Regional PSAP Routing: Non-Regional PSAP routing should include:</p> <ul style="list-style-type: none">• Ability for all calls to be load-balanced across the three hosts similar to how it is balanced today• Ability for the VIPER load balancers to distribute calls to the VIPER servers regardless of the proper PSAP• Ability for the VIPER CHE to distribute calls to the proper PSAP <p>The NG911 Service Provider should describe the system that is proposed and how these requirements will be accomplished.</p>	<p>Complies.</p> <p>The existing VIPER routing capabilities can be retained, but may have to be adjusted as we move from TDM call delivery from the OSPs into i3 call delivery which no longer has designated trunks. The ESURI will be used by VIPER as well as other information carried within the SIP header to determine the best route for that call to take within the CHE.</p> <p>The following information is included within an i3 call:</p> <ul style="list-style-type: none">• ProviderInfo• ServiceInfo• SubscriberInfo• DeviceInfo <p>The information contained in these header blocks can be used to determine VIPER's proper distribution of the call. Other labels/Tags will be available such as a reroute notice if the original PSAP was not available.</p>

Response Matrix

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	Motorola Solutions
<p>SR-CR010.b Host Routing: The NG911 Service Provider should develop procedures and processes to distribute calls to the hosts in each environment for the following predetermined emergency scenarios at a minimum:</p> <ul style="list-style-type: none">• Loss of primary route to a host load balancer• Loss of primary and secondary route to a host load balancer• Loss of all routes to a single host in a single environment• Loss of all routes to two hosts in a single environment• Abandonment of a PSAP• Abandonment of a single PSAP with transfer to another environment• Abandonment of two PSAPs with transfer to another environment• Loss of single environment• Use of out-of-county PSAPs as backup PSAPs <p>The NG911 Service Provider should describe how each scenario above can be processed by the proposed system with limited or no human intervention.</p>	<p>Complies.</p> <p>We will set up call flow meetings with the PSAPs to ensure continuity of business under each of these listed conditions regarding loss of route(s) to host(s) or PSAP(s).</p> <p>Motorola will establish baseline Policy Routing Rules based on Broward County's desire to maintain and enhance the resiliency of the current routing capabilities . The PRF acts in a hierarchical fashion and allows for many alternate route solutions based on multiple criteria.</p> <p>NGCS provides much more flexibility in defining those routing rules when, as with the service for Broward, Geospatial routing is incorporated in the route determination.</p>

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	Motorola Solutions
<p>SR-CR011 Geofencing: Geofencing and routing calls to specific call takers/positions/queues/ring groups are needed as part of the County's requirements. The NG911 Service Provider should ensure selected positions, PSAPs, or resources can be dynamically removed from receiving non-incident/event 911 calls. The NG911 Service Provider should describe the process, signaling, or tagging that would be used in the proposed NG911 System to accomplish this requirement.</p>	<p>Complies.</p> <p>Unique URIs can be used to send to a specific PSAP queue, and upon PRF enablement by the PSAP, can be redirected to another PSAP (e.g., Mobile Command Center) or PSAP queue for separate handling. For dynamic geofencing, a set of unique URIs associated with unique queues should be defined and implemented together so that call takers are already in the new queue when the PRF is enabled. The City of Baltimore has utilized special event routing for large art festivals and the recent APCO conference, with geo-fencing established to route 9-1-1 calls to a local command post on scene.</p>

Response Matrix

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	Motorola Solutions
SR-NR Network Redundancy and Resiliency	
<p>SR-NR007 All Circuits Used: To ensure all connectivity is always available, all primary circuits should be used in normal operation to process traffic. Secondary and tertiary circuits should be active daily. The active secondary and tertiary circuits will demonstrate that the circuits are available and can support live traffic. The NG911 Service Provider should describe the method that will be used to accomplish this requirement and describe any types or specific circuits that may not be used in normal operation and why.</p>	<p>Complies.</p> <p>All circuits will be active all the time as we are using High Availability SD WAN edge devices for the PSAP's ESInet connectivity. There will be no need for a failover plan from one circuit to another.</p> <p>Whether it is MPLS, Commercial Managed Broadband, LTE, and/or LEO Satellite, all paths will be maintained in an active state.</p>
<p>SR-NR008.b: The NG911 Service Provider should describe the monitoring methods and the process to provide notifications to the County when circuits are unavailable.</p>	<p>Complies.</p> <p>Motorola provides a comprehensive approach to circuit outage notifications and network management for NG9-1-1 services, designed to ensure rapid response, transparent reporting, and high system availability.</p> <p>Here's how Motorola addresses circuit downtime notifications:</p> <ul style="list-style-type: none"> • Proactive Monitoring and Automated Alarming <ul style="list-style-type: none"> ◦ Motorola's dedicated Network Security Operations Center (NSOC) actively and continuously monitors all network, computing, and software elements of the call routing service and ESInet infrastructure 24x7x365. This monitoring system includes probes actively polling the ESInet infrastructure. ◦ Event and performance metrics are forwarded to the NSOC for real-time analysis and historical trend identification. ◦ If a probe becomes unreachable or an issue is detected, a trouble ticket is automatically generated in the Service Management System, logging detailed event information. These alarms are correlated and presented as incidents within NSOC dashboards for immediate response. • Multi-Level Notification System <ul style="list-style-type: none"> ◦ Notifications are supported through multiple channels , including phone calls , email, and SMS text messages . ◦ Motorola's Service Management System provides auto-generated notifications based on defined thresholds , such as the severity of an issue, activity type (e.g., change authorization request, pre-scheduled maintenance), or a threshold breach on a network or component. • Rapid Response and Communication Timelines <ul style="list-style-type: none"> ◦ For Critical (Severity Level 1) incidents , defined as significant degradation or total loss of critical functionality with no workaround, Motorola aims to provide notification within 15 minutes . For these critical issues , hourly updates are provided. ◦ For High (Severity Level 2) incidents , involving significant degradation where a workaround may be available, notification is provided within 30 minutes , with updates every two hours. ◦ Updates for Critical and High incidents will include the nature of the outage, its best known cause, geographic scope ,estimated time for repairs , and other useful management information.

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	Motorola Solutions
NG911 Call Delivery	
SR-DL 911 Call Egress/Call Delivery to All PSAPs	
<p>SR-DL001 Call Egress/Call-Delivery Circuits: The NG911 Service Provider should provide the call egress/call-delivery circuits and associated infrastructure to meet the following requirements:</p> <ul style="list-style-type: none"> • Diverse entrance facilities for core sites • Diverse entrance facilities to all call-handling host locations that the County deploys, whether local, remote data center, or cloud-based • No single point of failure • Use open standards • IPv4 and IPv6 dual protocol stacks • Border Gateway Protocol (BGP) utilizing bidirectional forwarding detection • Multicast routing and switching • Quality of service (QoS) marking using Differentiated Service Code Point (DSCP) to ensure the highest voice quality for all 911 calls • Have a network traffic convergence of less than 54 milliseconds (ms) • Maintain an MOS of 4.0 or better at the handoff to the CHE 	<p>Complies.</p>
<p>SR-DL004 Abandonment Switches: The NG911 Service Provider should provision one or more abandonment switches at each PSAP, which, when activated, will automatically reroute calls to the pre-defined alternate endpoint for that PSAP based on the required routing configurations used today. Strict administrative policies and procedures will be put in place by the County. The NG911 Service Provider should describe how abandonment switches will be used in the proposed NG911 System.</p>	<p>Motorola Response: Complies.</p> <p>Motorola's Customer Web Portal provides credentialed users the ability to abandon a PSAP from any location.</p> <p>The predefined PRF is active and will reroute those calls to their appropriate destination based on the URI and other pertinent information contained within the SIP Header Blocks.</p>

Response Matrix

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	<p>Motorola Solutions</p>
<p>SR-DL005.b Policy Based Rules Tool: The NG911 Service Provider should describe the functions of the policy based rules tool and types of rules that can be provisioned by the PSAP, County, and NG911 Service Provider.</p>	<p>Complies.</p> <ul style="list-style-type: none"> • Provisioned by authorized personnel from either the PSAP or County: <ul style="list-style-type: none"> o PSAP Abandonment Strategy: Authorized PSAP personnel can activate and deactivate a multi-level PSAP abandonment strategy via the CWP. This includes manual "make-busy" functionality to reroute calls . o Alternate Routing Strategies : PSAP personnel can define alternate routing strategies to redirect calls when the primary PSAP cannot receive them (e.g., during outages or evacuations). This can automatically shift calls to other PSAPs . o Abusive Caller Mitigation: Authorized PSAP and NG9-1-1 staff can enact policy routing configurations to send calls from abusive callers to a predetermined destination, such as an automated attendant, low-priority queue, or a designated PSAP URI. o Policy Routing Customization: PRF rules can be viewed, modified, or customized by PSAP and agency administrators to optimize routing based on their specific operational requirements . o Call Type-Based Routing: Rules can be configured based on call type (e.g., wireline, wireless, VoIP). <p>Policy Rule Definition: PSAPs can participate in the development and approval of the Policy Routing Plan and define routing rules, including primary, alternate, busy, and overflow routing.</p> <ul style="list-style-type: none"> • Provisioned by the NG9-1-1 Service Provider (Motorola): <ul style="list-style-type: none"> o Core Policy Management: Motorola manages the overarching routing of calls through the call routing service, including the ability to re-route calls during outages or based on the call handling status of a PSAP. o Location-Based Routing: The system prioritizes location-based routing using GIS data, but PRRs can include fallbacks like ESN, community, FIPS codes , or trunk groups if geospatial routing is not possible. o OSP and Trunk Group Routing: PRRs can be based on the Originating Service Provider (OSP) or specific trunk groups . o ESRP/PRF Interaction: The Emergency Services Routing Proxy (ESRP) queries the PRF to determine the next hop destination, leveraging queue and service state subscriptions to assess PSAP availability. o Regional Coordination: For customers in a region served by Motorola's call routing service, Motorola ensures a coordinated policy routing configuration to optimize continuity of operations . <p>Integration and Coordination:</p> <ul style="list-style-type: none"> • Motorola's Call Routing Service ensures that its Policy Routing Function (PRF) rules work in conjunction with Call Handling Automatic Call Distribution (ACD) .

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	Motorola Solutions
	<p>(ACD) rules.</p> <ul style="list-style-type: none"> • New routing rules or modifications typically go through a Change Management Process involving the Network & Security Operations Center (NSOC) to ensure all stakeholders are aware and potential impacts are assessed in advance. The Operations Manager is responsible for notifying the PSAP of all planned work that may affect 9-1-1 functionality. • Motorola conducts periodic reviews of policy routing rules to assess their impact on PSAP operations . • Training is provided on PRF policy management, covering how routing rules are used, modified, and how reporting/ logging can optimize them. <p>This comprehensive approach allows Motorola to deliver a highly resilient and adaptable NG9-1-1 solution, minimizing disruptions and maximizing the effectiveness of emergency call management.</p>
<p>SR-DL006 Emergency Incident Data Object (EIDO): The NGCS and ESInet should support the exchange of EIDO over the ESInet between PSAPs and across NNIs to neighboring jurisdictions. The NG911 Service Provider should describe any actions by the County or CHE vendor to accomplish this requirement.</p>	<p>Complies.</p> <p>Motorola's call routing service provides the transport of EIDO to and from the PSAP. With proper credentialing. No action is necessary by the County or CHE vendor to allow transport of EIDO as this is handled by our NNIs with neighboring NGCS providers. PSAP personnel can initiate a transfer of a call with EIDO and allow a subscribe/notify event from a neighboring jurisdiction.</p>
<p>SR-DL007 EIDO Access: The NGCS and ESInet should support access from other jurisdictions to the EIDO message servers deployed in the County's Regional and Non-Regional environments to exchange data. The NG911 Service Provider should describe any actions by the County or CHE vendor to accomplish this requirement.</p>	<p>Complies .</p> <p>Motorola will work with your CHE vendor to preconfigure credentialed access to be able to exchange EIDO packets. The County would be responsible only for the CHE providers' coordination and testing of access and exchange of information.</p>
<p>SR-DL014.b: As part of the call delivery monitoring, the following situations should result in a trouble ticket being generated automatically for dispatch and resolution, and a notification to the County:</p> <ul style="list-style-type: none"> • Call delivery between Functional Elements causes an error processing should generate an alarm. • When all calls are not able to be delivered to the PSAP, the NG911 Service Provider generates an alarm and notifies the appropriate parties at the County as well as the field personnel to confirm that alternate routing is activated. • When there is a failure to deliver the 911 call, the alternate call routing plans are automatically used to route the calls. In the event the NG911 alternate routes are not available, the calls are routed to an alternate public switched telephone network (PSTN) path using a 10-digit number associated with the destination PSAP. If the primary path is unavailable, the calls should be routed to the backup 10-digit number. The logging of such routing should be available to the County. <p>The NG911 Service Provider should provide examples of how these will be managed and performed in the proposed solution.</p>	<p>Complies.</p> <p>As soon as a call cannot reach its intended destination an alarm is generated along with a trouble ticket in ServiceNow. Notifications will be sent according to the agreed upon support plan put in place early in the deployment process.</p> <p>Policy Routing Rules will immediately determine the next predefined hop for that call. The PRRs will be defined early in the deployment phase as well.</p> <p>Calls that are rerouted will be tagged so the receiving PSAP knows that it was not deliverable to its intended PSAP.</p> <p>The predefined routing plans will dictate the call flow for undeliverable calls as mentioned in this requirement; whether it is to an alternate route or 10-digit numbers. These are all automatic. The trouble ticket resolution will be handled by our NSOC according to our SLA agreements.</p>

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SR-DL015 Call Queuing: The NG911 Service Provider should provide call queuing at the network level. If the network is unable to deliver the calls to the PSAP due to increased volume, the calls should be queued and tracked at the network level. The NG911 System should be able to process two hundred (200) calls simultaneously for each environment (Regional and Non-Regional).	<p>Complies.</p> <p>The call routing service does not queue calls in the same way that call handling does . It will always deliver the call to the intended destination, in this case the VIPER load balancers, VIPER Hosts, or next hop according to the Policy Routing Rules predefined by Broward County.</p> <p>The call routing service is sized to meet customer requirements , so we will support the position count plus as many calls that can be queued in VIPER.</p>

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	Motorola Solutions
NG911 Call Delivery	
SR-CP Call Processing	
<p>SR-CP003 Call Processing by Type: The NG911 Service Provider should be able to process and deliver wireline, wireless, VoIP, text (RTT, Short Message Service [SMS], Rich Communication Services [RCS], Message Session Relay Protocol [MSRP], Instant Messaging [IM]), and Multimedia Service (MMS) calls/requests for emergency response seamlessly. The system should support the use of Telecommunications Device for Deaf (TDD) and TTY.</p>	Complies.
<p>SR-CP004 Caller Location Information: The NG911 Service Provider should provide the location information for each 911 call at the handheld device level for call routing and call processing.</p>	Complies.
<p>SR-CP005 NGCS Media Recording: The NG911 Service Provider should provide call and media recording in the NGCS. The PSAP and other County staff should have access to the recordings.</p>	<p>Complies.</p> <p>Call and media recording is typically handled by the call handling system. We provide outputs to a logging recorder, but we do not supply one as part of the standard call routing service.</p> <p>At the County's request, Motorola can provide optional pricing for call and media recording for the County's consideration. It may be more cost-effective for the County to work directly with your current telephony logging recorder vendor to augment that existing solution.</p>
SR-IT Interfaces	

Response Matrix

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SR-IT003 Multimedia Sessions: The NG911 Service Provider should interface the wireless providers to be capable of delivering multimedia such as video and pictures as a part of the proposed NG911 System. Deployment of this function to the PSAP will be determined on an individual PSAP basis.	Complies.
RPT- Report	
RPT001 Single Reporting Platform: The NG911 Service Provider should provide a single reporting platform that can be configured based on each user's role, unique USERID, and access permissions. The portal should support at least sixty (60) users.	Complies with Exception. Motorola has purpose-built platforms for domain -specific applications (e.g., end-to-end call log reporting vs. case management). Each one by itself can support the County's requirements.

Response Matrix

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<p>RPT002.b: The reporting platform for the PSAPs should include, at a minimum the following reports:</p> <ul style="list-style-type: none"> • Date and time stamp • Call delivery time (hh:mm:ss) • Call answer time (hh:mm:ss) • Call disconnect time (hh:mm:ss) • Call duration (hh:mm:ss) • Average call duration (hh:mm:ss) • Average call answer time (hh:mm:ss) • Seizure time (hh:mm:ss) • Call volumes by call type • Alternate-routed calls • Text-to-911 instances • Abandoned calls • Call volume by hour • Call volume by day of the week • Individual call information • Summary of call volumes • Call transfers/bridges • Call conferences • Agent availability • Call volumes by OSP • Repeat callers • Routing method (e.g., geospatial, Federal Information Processing Standard [FIPS]/emergency service number [ESN], default, etc.) <p>The NG911 Service Provider should provide a list of all available reports and provide at least three report examples.</p>	<p>Complies .</p> <p>See Exhibit 1 Sample Reports.</p> <ul style="list-style-type: none"> • Automated Abandoned Callback (AAC) Report • Answer Time Standards • Call Center Statistics • Call Summary • Call Taker Answer Time Statistics • Call Taker Events • Call Time Statistics by Month • Call Volume and Statistics by Call Taker • Call Volume and Statistics by ESN • Call Volume and Statistics by Range of Time • Call Volume and Statistics by Trunk • Call Volume and Statistics by Class of Service • Call Volume by Hour Analysis • Call Volume by Peak Hour • Call Volume by Position • Call Volume by PSAP • Call Volume by Shift • Concurrent 911 Trunk Utilization • Insights On-Demand** • Monthly Position Utilization • Multidimensional Transfer Report • NSI Device Call Volume • Process Time Standards • PSAP Answer Time Standards • PSAP Process Time Standards • Rapid Call Breakdown • Ring Time Statistics • Staffing Module • Summary Reference Sheet • Text Volume • Text Volume by Period <p>** 'Insights On Demand' is the ad-hoc reporting feature of Motorola's Eclipse Analytics reporting solution. This interface allows common language search activities for on-the-fly reporting, drilldowns, QA/QC, investigations , and more.</p>
<p>RPT003.a: The NG911 Service Provider should provide a dashboard and portal for access by County staff and others as approved by the County to run the below SLA reports. All reports should be able to run for specific dates and times.</p>	<p>Complies.</p>

Response Matrix

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	<p>Motorola Solutions</p>
<p>RPT003.b The reporting platform for County staff should include at a minimum:</p> <ul style="list-style-type: none"> • Call processing time between elements (hh:mm:ss) • Payload processing time (hh:mm:ss) • Calls per circuit • Call distribution to PSAP circuits • Circuit utilization from OSP • Circuit utilization to PSAP • All NGCS element usage volumes (all elements used in the NG911 Service Provider's NG911 System) • End-to-end call-flow analysis • Event by incoming IP address • NOC-to-NOC reporting, trouble reporting, and tracking • Root cause analyses • Service availability for each component including ESInet segments • Monitoring, alarming, and logging • MOS <p>The NG911 Service Provider should provide a list of all available reports and provide at least three report examples.</p>	<p>Complies with Exception.</p> <p>See Exhibit 1 Sample Reports.</p> <p>Not all metrics listed in requirement RPT003.b are captured in an IP environment; however, Motorola's reporting platform has generated trunk-like utilization reports even when operating on IP circuits .</p> <p>Motorola provides separate platforms for reporting and real-time monitoring of the solution. The Customer Web Portal provides situational awareness as to system health and alternative routing causality. Each call can be viewed for its associated details .</p> <p>Existing reports :</p> <ul style="list-style-type: none"> • Calls per circuit • Call distribution to PSAP circuits • Circuit utilization from OSP • Circuit utilization to PSAP <p>Many reports could be generated using Motorola's ad-hoc reporting capability. Motorola will work with Broward County to develop the required reports .</p>
<p>RPT004 Access to logs via Reporting Platform:</p> <p>The NG911 Service Provider should provide access to the system logs using the existing platform or another similar platform. This should include:</p> <ul style="list-style-type: none"> • Transactional database log associated with each SIP header and URI, and additional information provided to access by the County • Retrieval of log information should include calling number, SIP header information, call destination, successful, failures, transfers, ALI database transactions, and alternate routed calls (e.g., default, PSTN gateway, special processing, or overflow), which includes call counts • Log retrieval should be available by groups of calls (e.g., 911 versus non-emergency) and date range of calls. 	<p>Complies.</p>

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RPT005 Real Time System Monitoring: The NG911 Service Provider should provide access to real time system monitoring to the County using the existing platform or another similar platform. The platform should provide real time web-based monitoring of County traffic into the System at the functional element level and facilities (network connections). The status should be updated every 15 seconds, which includes, active, slow response, and failures.	Complies.

Response Matrix

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	<i>Vendor's Response</i>
General Technical Requirements	
SN - Security/Notifications	
<p>SN009 STIR/SHAKEN: The NG911 Service Provider should implement STIR/SHAKEN and pass information including attestation to the CHE. The NG911 Service Provider shall describe how this has been accomplished in other locations with VIPER 7.</p>	<p>Complies, Complies with Exception.</p> <p>INdigital is in full compliance for S/S at all SIP based public facing POIs. This assumes that public facing POIs do not have third party legacy TDM interfaces that would not be S/S compliant.</p> <p>INdigital will pass attestation S/S data provided to the NGCS nodes for display by Viper 7, helping to highlight suspicious or spoofed calls. See also: 2.11 page 21; SR-IN007 2.11 page 39; SR-DL003 2.11 page 40; SR-DL009 2.11 page 40; SR-DL011 2.11 page 41; SR-DL012 2.11 page 42; SR-AF002 2.11 page 43; SR-AF003 2.11 page 43; SR-AF004</p> <p>Complies with Exception comment:</p> <p>INdigital has not deployed S/S to the new Viper 7 release. However, Viper 7 documentation highlights that the systems can display the S/S attestation data provided by upstream NGCS systems.</p> <p>We do not anticipate any problems supporting this standards based interface.</p>
<p>SN010.b: The NG911 Service Provider should provide transactional logging information for each functional element (i.e., Emergency Services Routing Proxy [ESRP], Legacy Network Gateway [LNG], BCF, PRF, Location Validation Function [LVF], Legacy Selective Router Gateway [LSRG], Spatial Interface [SI], and Emergency Call Routing Function [ECRF]). The transactional database logs for 911 calls should include calling number, SIP header information, routing destination, call or record process success/failures, transfers, ALI database transactions, and alternate routing, which includes call counts. The log retention period should be a minimum of thirty (30) calendar days.</p>	<p>Complies.</p> <p>INdigital is in full compliance.</p> <p>All NENA Functional Elements (FEs) in the NGCS and EsiNet log to diverse, redundant i3 compliant loggers.</p> <p>The retention period complies, and can be customized as needed.</p>
<p>SN011 System Logging Repositories: The NG911 Service Provider should provide transactional logging repositories at two different data centers for each functional element (i.e., ESRP, LNG, BCF, PRF, LVF, LSRG, SI, and ECRF). The log retention period should be a minimum of thirty (30) calendar days.</p>	<p>Complies.</p> <p>All FEs in the NGCS and EsiNet log to diverse, redundant i3 compliant loggers. The retention period complies, and can be customized as needed.</p>

Response Matrix

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<p>SN012 System Log Retrieval: The NG911 Service Provider should provide a user-friendly portal to retrieve transactional logs in near realtime for each functional element (i.e., ESRP, LNG, BCF, PRF, LVF, LSRG, SI, and ECRF). The NG911 Service Provider should provide a process to retrieve the logs.</p>	<p>Complies.</p> <p>All log files are available to properly credentialed individuals authorized by Broward.</p>
<p>SN013 Security Information and Event Manager (SIEM): The NG911 Service Provider should integrate with the County's SIEM Splunk Tool (when deployed) for onsite logging events. The log retention period should be a minimum of 30 calendar days. The NG911 Service Provider should provide the County access to the logs of other systems and devices in the NG911 System for tracking the calls and issues. The log retention period should be a minimum of thirty (30) calendar days.</p>	<p>Complies.</p> <p>Event logs can be delivered to an interconnected County system. INdigital will work with Broward to identify event types and coordinate the secure interconnection. Retention of data stored in the County Splunk tool would depend on the County's configuration. Broward will be provided access to other logging. The retention period of those systems complies, and can be customized as needed.</p>
<p>SN017 User Notifications and Communications: The NG911 Service Provider should have a system that performs outward notifications and updates of customer tickets through phone, email, and text. The NG911 Service Provider shall notify the County via the contact methods provided of all NG911 Service Provider infrastructure failures and/or outages within 15 minutes of discovery. For all outages, the NG911 Service Provider must also contact the 911 Coordinator via phone.</p>	<p>Complies.</p> <p>INdigital's notification protocols and systems fully comply with this requirement and all relevant FCC orders.</p>
<p>SN020 TDOS and DDOS Prevention: The NG911 Service Provider should implement hardware, software, and training to identify, respond, and prevent TDOS and DDOS attacks as a part of the proposed NG911 System. The NG911 Service Provider shall describe the process to identify respond and prevent TDOS and DDOS attack.</p>	<p>Complies.</p> <p>INdigital fully complies.</p> <p>Beyond this, INdigital has implemented extensive advances beyond the industry standards proposed.</p> <p>We have assumed this applies only to 911 calls.</p> <p>Where INdigital is the provider, we can also provide TDOS / DDOS for administrative calls.</p>

Response Matrix

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<p>SR-IN003 Multiple POIs: SR-IN003.b The NG911 Service Provider should provide at least two POIs within 100 miles of the Broward County border. Having local and national POIs will provide OSPs with interconnection choices.</p> <p>The NG911 Service Provider shall list the locations of all POIs that will be used.</p>	<p>Complies.</p> <p>INdigital can establish POIs for interconnection as required at a location in Broward County. We have assumed this is for the convenience of 911 call ingress from MLTS providers located in Broward County. INdigital is currently connected with many OSPs directly at their national level ICA POIs, as well as within Florida. These include: Jacksonville, FL 32256 Winter Haven, FL 33881</p> <p>Regional data centers are located in: * Atlanta, GA 30303 Montgomery, AL 36104 Huntsville, AL 35806 Ladson, SC 29456 Greenville, SC 29607 * Chicago, IL 60607</p> <p>* denotes a national region center</p> <p>Additional POIs are also as specified in 2.11 (a1) SR-IN003a</p>
SR-GI NG911 Processing	
<p>SR-GI013 SI Provisioning: The NG911 Service Provider should pull GIS data from the County GIS data repository rather than require the County to push (upload) GIS data to the SI. The data pull can be automated by the NG911 Service Provider or scheduled by the County. The NG911 Service provider shall describe the process used and how the County's preference can be integrated into the proposed NG911 System.</p>	<p>Complies.</p> <p>INdigital can pull data via SFTP or other Broward approved methods. INdigital supports both automated pull or push methods.</p>
DAT – Data processing	

Response Matrix

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<p>DAT001.b: The NG911 Service Provider should describe the GIS upload process to include the access, steps, and ease of use.</p>	<p>Complies.</p> <p>INdigital can upload data via SFTP or other Broward approved methods. This is proposed as a fully automated upload / download pull / push GIS data exchange process.</p>

Response Matrix

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	Indigital
DAT003.b: The NG911 Service Provider should describe the process to manage PRF routing plans.	<p>Complies.</p> <p>PRF routing can be invoked using:</p> <ol style="list-style-type: none">1. Activation of known predefined conditions or business rules.2. Via authenticated phone call to the NSOC (national service operations center)3. Authentication-secured web access, including polygon-based routing changes.4. Use of MEVO (Message EVolution) service continuity phones with PIN authenticated access.

Response Matrix

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	Indigital
SR-CR Call Routing	
<p>SR-CR003.b: The NG911 Service Provider should work with the County to design all the rules, policies, and algorithms that will be available to route calls similar to the routing groups currently in place. Describe how this process will be accomplished.</p>	<p>Complies .</p> <p>INdigital has extensive experience with complex national, statewide, and regionwide PRF routing methods.</p> <ol style="list-style-type: none"> 1. Activation of known predefined conditions or business rules. 2. Via authenticated phone call to the NSOC (national service operations center) 3. Authentication secured web access, including polygon based routing changes.. 4. On demand customized PRF changes by class or type of service, including customized routing by the calling party's device ID.
<p>SR-CR004 Distribution of Calls to PSAPs: The NG911 Service Provider should route calls similar to the routing groups currently in place, including call labels/tags required by the CHE for various call functions and distribution rules currently in place. The NG911 Service Provider should describe the method that is proposed to route calls similar to the routing groups currently in place, such as additional circuits, call labels/tags, or setting distribution rules.</p>	<p>Complies .</p> <p>INdigital has extensive experience with complex statewide and regionwide PRF routing methods.</p> <p>PRF routing can be invoked using:</p> <ol style="list-style-type: none"> 1. Activation of known predefined conditions or business rules. 2. Via authenticated phone call to the NSOC (national service operations center) 3. Authentication secured web access, including polygon based routing changes.. 4. On demand customized PRF changes by class or type of service, including customized routing by the calling party's device ID. <p>While the procurement did not make the specifics of Broward's current custom PRF known, INdigital has implemented a number of complex routing methods for many of our customers that can meet the requirement.</p>

Response Matrix

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	Indigital
<p>SR-CR006.b Call Distribution: All calls should be routed based on data received. The NG911 Service Provider should develop procedures and processes to distribute calls to the hosts in the Regional and Non-Regional environments. Please provide examples of how this was done for other implementation.</p>	<p>Complies .</p> <p>INdigital has extensive experience with complex statewide and regionwide PRF routing methods. Complex PRF methods involving 'look ahead' call distribution at the network level are in place for many of our customers today.</p> <p>For example, we reference disaster and hurricane readiness that was successfully tested with Charleston County, South Carolina and Collier County, Florida as the most extensive example of multi-state / multi-NG SSP call distribution methods available.</p>
<p>SR-CR008 Regional PSAP Routing: The CHE has been implemented to provide advanced routing capabilities. These capabilities are expected to remain. Regional PSAP routing should include:</p> <ul style="list-style-type: none"> • Ability for all calls to be load-balanced across the three hosts similar to how it is balanced today • Ability for the VIPER load balancers to distribute calls to the VIPER servers regardless of the proper PSAP • Ability for the VIPER CHE to distribute calls to all PSAPs regardless of the proper PSAP • Ability of the VIPER CHE to identify the proper PSAP and distribute to the proper PSAP when needed <p>(CAD failure operations) The NG911 Service Provider should describe the system that is proposed and how these capabilities will be accomplished.</p>	<p>Complies.</p> <p>INdigital has extensive experience with call load balancing in multi-provider regional areas like the ones serving south east Florida. No other company has the depth of experience in competitive service provider environments of this type. In many cases throughout Florida, INdigital is the 'defacto prime hub' for high availability and interoperability.</p> <p>The PRF FE can perform round robin, most idle, first available and weighted target methods. INdigital fully supports all interfaces with VIPER systems both (i3 or RFAI). In addition, the PRF FE fully supports network call queuing at insane levels of performance that meets the needs of the largest PSAP in the US.</p> <p>All of these functions are standard in each of the NGCS nodes that make up the ESiNet. With our business partners, INdigital powers the ESiNets serving many of the largest NG911 installations in North America.</p> <p>We have assumed that Viper 7 now provides the appropriate SIP / Que group signaling to the NG system that will support this requirement.</p> <p>We look forward to meeting this challenge.</p>

Response Matrix

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	Indigital
<p>SR-CR009 Non-Regional PSAP Routing: Non-Regional PSAP routing should include:</p> <ul style="list-style-type: none">• Ability for all calls to be load-balanced across the three hosts similar to how it is balanced today• Ability for the VIPER load balancers to distribute calls to the VIPER servers regardless of the proper PSAP• Ability for the VIPER CHE to distribute calls to the proper PSAP <p>The NG911 Service Provider should describe the system that is proposed and how these requirements will be accomplished.</p>	<p>Complies.</p> <p>Indigital has extensive experience interfacing with complex statewide and nationwide PRF routing environments.</p> <p>There is limited information in the RFP of the specifics of Broward's configuration of the VIPER CHE LBs.</p> <p>Based on our experience in other complex Viper platforms, the proposed solution will comply with the stated requirement - as we have done with many other CHE LBs in ESINets throughout North America.</p>

Response Matrix

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	<p>Indigital</p>
<p>SR-CR010.b Host Routing: The NG911 Service Provider should develop procedures and processes to distribute calls to the hosts in each environment for the following predetermined emergency scenarios at a minimum:</p> <ul style="list-style-type: none"> • Loss of primary route to a host load balancer • Loss of primary and secondary route to a host load balancer • Loss of all routes to a single host in a single environment • Loss of all routes to two hosts in a single environment • Abandonment of a PSAP • Abandonment of a single PSAP with transfer to another environment • Abandonment of two PSAPs with transfer to another environment • Loss of single environment • Use of out-of-county PSAPs as backup PSAPs <p>The NG911 Service Provider should describe how each scenario above can be processed by the proposed system with limited or no human intervention.</p>	<p>Complies.</p> <p>INdigital has extensive capabilities in this area.</p> <p>The proposed PRF FE and the NGCS nodes have full 'snap back' and rerouting capabilities to react to CHE failures. The proposed solution supports a nearly limitless business rule, failure scenario, and destination resource list in the PRF FE to automatically take action when CHE failures occur. INdigital fully complies with and supports all of the use cases set out in the requirement.</p> <p>PRF and NGCS / ESINET capabilities have been extensively tested in regular use with emerging and new protocols; and in disaster continuity operations. We can exceed the county's requirements as well as provide failover support for nearby, out of region or out of state PSAPs.</p> <p>We have publicly demonstrated these use cases in our recent work with the South Carolina Coastal Coalition.</p>

Response Matrix

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<p>SR-CR011 Geofencing: Geofencing and routing calls to specific call takers/positions/queues/ring groups are needed as part of the County's requirements. The NG911 Service Provider should ensure selected positions, PSAPs, or resources can be dynamically removed from receiving non-incident/event 911 calls. The NG911 Service Provider should describe the process, signaling, or tagging that would be used in the proposed NG911 System to accomplish this requirement.</p>	<p>Complies.</p> <p>INdigital's PRF has extensive capability, and support for nearly unlimited que types and customized routing methods.</p> <p>The PRF web interface supports polygon or call type dynamic routing control down to the calling party device identifier.</p>

Response Matrix

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	Indigital
SR-NR Network Redundancy and Resiliency	
<p>SR-NR007 All Circuits Used: To ensure all connectivity is always available, all primary circuits should be used in normal operation to process traffic. Secondary and tertiary circuits should be active daily. The active secondary and tertiary circuits will demonstrate that the circuits are available and can support live traffic. The NG911 Service Provider should describe the method that will be used to accomplish this requirement and describe any types or specific circuits that may not be used in normal operation and why.</p>	<p>Complies.</p> <p>Connectivity is maintained by network configuration parameters and alarmed by the INdigital monitoring systems. LTE, 5G, (all flavors) and Starlink provide IP circuits can all be used as failovers for wireline connections.</p> <p>If primary and secondary connections fail, INdigital will route all calls using these tertiary methods listed above. LTE, 5G and especially Starlink satellite service has been proven reliable in recent hurricanes.</p>
<p>SR-NR008.b: The NG911 Service Provider should describe the monitoring methods and the process to provide notifications to the County when circuits are unavailable.</p>	<p>Complies.</p> <p>INdigital uses System logging protocols and a variety of special-use applications for monitoring. Notifications can be sent via email to the system administrator or designated county staff.</p> <p>Additionally, a monitoring dashboard is available for agency use and is customizable to meet Broward's needs.</p>

Response Matrix

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	Indigital
NG911 Call Delivery	
SR-DL 911 Call Egress/Call Delivery to All PSAPs	
<p>SR-DL001 Call Egress/Call-Delivery Circuits: The NG911 Service Provider should provide the call egress/call-delivery circuits and associated infrastructure to meet the following requirements:</p> <ul style="list-style-type: none"> • Diverse entrance facilities for core sites • Diverse entrance facilities to all call-handling host locations that the County deploys, whether local, remote data center, or cloud-based • No single point of failure • Use open standards • IPv4 and IPv6 dual protocol stacks • Border Gateway Protocol (BGP) utilizing bidirectional forwarding detection • Multicast routing and switching • Quality of service (QoS) marking using Differentiated Service Code Point (DSCP) to ensure the highest voice quality for all 911 calls • Have a network traffic convergence of less than 54 milliseconds (ms) • Maintain an MOS of 4.0 or better at the handoff to the CHE 	<p>Complies.</p> <p>INdigital has proposed carrier diverse - and facility diverse providers at all locations. Physical diversity only is not enough.</p> <p>That was proven in the 2020 Nashville Christmas day bombing that caused a multi-day, 4 state outage. Carrier and transport diversity is the only way to avoid a massive single point of failure like the ones that have triggered outages in Illinois, Kansas, Pennsylvania, Texas, and Wisconsin.</p> <p>All CSRIC, NENA, FCC, and Broward best practices and industry standards will apply. If the use of county networking is applicable, acceptance testing will be performed to assure service quality.</p>
<p>SR-DL004 Abandonment Switches: The NG911 Service Provider should provision one or more abandonment switches at each PSAP, which, when activated, will automatically reroute calls to the pre-defined alternate endpoint for that PSAP based on the required routing configurations used today. Strict administrative policies and procedures will be put in place by the County. The NG911 Service Provider should describe how abandonment switches will be used in the proposed NG911 System.</p>	<p>INdigital Response: Complies.</p> <p>INdigital provides legacy backroom 'make busy' switches. We know the OG when we see it. In addition, an NSOC call or ticket also works. Or - the MEVO service continuity OSB (Optimal Service Button) with a PIN is our most commonly used control point.</p>

Response Matrix

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	Indigital
<p>SR-DL005.b Policy Based Rules Tool: The NG911 Service Provider should describe the functions of the policy based rules tool and types of rules that can be provisioned by the PSAP, County, and NG911 Service Provider.</p>	<p>Complies.</p> <p>At the risk of repeating this, the PRF FE has easy to use 'business rules' that make call re-routing easy to activate and use.</p> <p>Resources can be:</p> <ol style="list-style-type: none">1. Other groups of call takers.2. Other PSAPs - both in and out of region.3. Command or backup centers.4. MEVO phones or cell phones.5. PSAPs within or outside of Florida. <p>With regard to PRF rules, they can be automated business rules, overflow, call type rules, abandoned PSAP.</p> <p>These are just a few examples of PRF options and resources.</p>

Response Matrix

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	Indigital
<p>SR-DL006 Emergency Incident Data Object (EIDO): The NGCS and ESInet should support the exchange of EIDO over the ESInet between PSAPs and across NNIs to neighboring jurisdictions. The NG911 Service Provider should describe any actions by the County or CHE vendor to accomplish this requirement.</p>	<p>Complies.</p> <p>INdigital fully supports EIDO with all CHE / CAD vendors that have implemented this NENA function. The EIDO connection arrangement will either use standards based call payload and data interfaces; or using secure, function specific, IP transport methods. INdigital has SMEs that will interface with and support the CHE or CAD vendor implementing this function.</p>
<p>SR-DL007 EIDO Access: The NGCS and ESInet should support access from other jurisdictions to the EIDO message servers deployed in the County's Regional and Non-Regional environments to exchange data. The NG911 Service Provider should describe any actions by the County or CHE vendor to accomplish this requirement.</p>	<p>Complies.</p> <p>INdigital fully supports EIDO with all CHE / CAD vendors that have implemented this NENA function. The EIDO connection arrangement will either use standards based call payload and data interfaces; or using secure, function specific, IP transport methods. This is needed for EIDO subscribers that are not PSAPs. INdigital has SMEs that will interface with and support the CHE or CAD vendors implementing this function.</p>
<p>SR-DL014.b: As part of the call delivery monitoring, the following situations should result in a trouble ticket being generated automatically for dispatch and resolution, and a notification to the County:</p> <ul style="list-style-type: none"> • Call delivery between Functional Elements causes an error processing should generate an alarm. • When all calls are not able to be delivered to the PSAP, the NG911 Service Provider generates an alarm and notifies the appropriate parties at the County as well as the field personnel to confirm that alternate routing is activated. • When there is a failure to deliver the 911 call, the alternate call routing plans are automatically used to route the calls. In the event the NG911 alternate routes are not available, the calls are routed to an alternate public switched telephone network (PSTN) path using a 10-digit number associated with the destination PSAP. If the primary path is unavailable, the calls should be routed to the backup 10-digit number. The logging of such routing should be available to the County. <p>The NG911 Service Provider should provide examples of how these will be managed and performed in the proposed solution.</p>	<p>Complies.</p> <p>INdigital has an extensive alarming platform that reports if an ESiNet FE falls out of its expected range of performance or processing activity. The NSOC is notified when PRF functions are triggered or activated. NSOC investigation follows. PSAP alarming is consistent with the levels specified by Broward and industry standards (alert, minor, major, catastrophic.) As previously stated, the NGCS nodes can 'snap back' a failing call and re-route using redundant FEs -- or the FE of another NGCS node.</p> <p>All types of PSTN resources and call routing is available as a resource.</p> <p>MEVO phones can operate independently of the PSAPs CHE, key or PBX system, and Broward's dial tone provider. As stated, these actions are performed by the PRF FE of the NGCS node. All call routing actions are recorded by the i3 logging FE subsystem.</p>

Response Matrix

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	Indigital
<p>SR-DL015 Call Queuing: The NG911 Service Provider should provide call queuing at the network level. If the network is unable to deliver the calls to the PSAP due to increased volume, the calls should be queued and tracked at the network level. The NG911 System should be able to process two hundred (200) calls simultaneously for each environment (Regional and Non-Regional).</p>	<p>Complies.</p> <p>Indigital fully supports network queuing and reporting.</p> <p>Each NGCS node (v1.1) has been third party tested to 400,000 busy hour call completions, exceeding this requirement.</p> <p>Each of the current release versions (v2.1), using four SIP:ME (SIP message engines) in a single site redundant configuration can deliver increased peak demand loads using multi-node polygrid architecture.</p> <p>A current production configuration has been tested to deliver 5,000 call queuing capability.</p>

Response Matrix

Solicitation No: GEN2129421P1, Next Generation 911	
	Indigital
NG911 Call Delivery	
SR-CP Call Processing	
<p>SR-CP003 Call Processing by Type: The NG911 Service Provider should be able to process and deliver wireline, wireless, VoIP, text (RTT, Short Message Service [SMS], Rich Communication Services [RCS], Message Session Relay Protocol [MSRP], Instant Messaging [IM]), and Multimedia Service (MMS) calls/requests for emergency response seamlessly. The system should support the use of Telecommunications Device for Deaf (TDD) and TTY.</p>	<p>Complies.</p> <p>INdigital has proposed NGCS services that exceed this requirement. At the 2025 APCO conference, working with our industry leading partners, we demonstrated the ability to fully support all of these protocols, as well as the emerging 3GPP (IMS) to i3 interoperability standards.</p> <p>This demonstrated multi-media as a native service from the wireless device using a direct connection with the wireless provider's publicly available production system. In addition, our TCAPI (text control adaptive programming interface) allows third party providers to access a robust feature set of the fastest growing type of public initiated non voice calls - SMS text.</p>
<p>SR-CP004 Caller Location Information: The NG911 Service Provider should provide the location information for each 911 call at the handheld device level for call routing and call processing.</p>	<p>Complies.</p> <p>This includes OSPs (originating service providers) using legacy tabular database, (NENA i2 VoIP) through NENA i3 PIDFLo capable providers.</p>
<p>SR-CP005 NGCS Media Recording: The NG911 Service Provider should provide call and media recording in the NGCS. The PSAP and other County staff should have access to the recordings.</p>	<p>Complies.</p> <p>While Media Recording is traditionally done by equipment provided by the PSAP so that all content payload is captured and recorded, ESiNet level recording is available. Our assumption of this requirement is that INdigital will provide a secure SIPREC interface from the NGCS data logger to Broward's recording system.</p>
SR-IT Interfaces	

Response Matrix

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<p>SR-IT003 Multimedia Sessions: The NG911 Service Provider should interface the wireless providers to be capable of delivering multimedia such as video and pictures as a part of the proposed NG911 System. Deployment of this function to the PSAP will be determined on an individual PSAP basis.</p>	<p>Complies.</p> <p>As previously stated in SR-CP 1, INdigital recently demonstrated the most advanced IMS to i3 interoperability-based version of the requested function.</p> <p>This comply statement is with the assumption that a compliant CHE or third party provider is deployed at the Broward PSAP.</p>
RPT- Report	
<p>RPT001 Single Reporting Platform: The NG911 Service Provider should provide a single reporting platform that can be configured based on each user's role, unique USERID, and access permissions. The portal should support at least sixty (60) users.</p>	<p>Complies.</p> <p>INdigital has proposed the industry-leading 911Logix platform as part of the response. This platform provides extensive network-based analytics and reporting. It is a proven platform that provides insight far beyond other competitors.</p>

Response Matrix

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<p>RPT002.b: The reporting platform for the PSAPs should include, at a minimum the following reports:</p> <ul style="list-style-type: none"> • Date and time stamp • Call delivery time (hh:mm:ss) • Call answer time (hh:mm:ss) • Call disconnect time (hh:mm:ss) • Call duration (hh:mm:ss) • Average call duration (hh:mm:ss) • Average call answer time (hh:mm:ss) • Seizure time (hh:mm:ss) • Call volumes by call type • Alternate-routed calls • Text-to-911 instances • Abandoned calls • Call volume by hour • Call volume by day of the week • Individual call information • Summary of call volumes • Call transfers/bridges • Call conferences • Agent availability • Call volumes by OSP • Repeat callers • Routing method (e.g., geospatial, Federal Information Processing Standard [FIPS]/emergency service number [ESN], default, etc.) <p>The NG911 Service Provider should provide a list of all available reports and provide at least three report examples.</p>	<p>Complies.</p> <p>All stated use cases are provided in the proposed solution, along with a nearly infinite number of special reports and analytics.</p> <p>A live demo is the easiest way to see this in action, but we have provided the requested information in Attachment (link): 1.04 (a1) Attachment Functionality Checklist RPT-002.b - reporting platform</p>
<p>RPT003.a: The NG911 Service Provider should provide a dashboard and portal for access by County staff and others as approved by the County to run the below SLA reports. All reports should be able to run for specific dates and times.</p>	<p>Complies.</p> <p>The 911Logix platform provides access to the data from any device at any time. The reporting and data collection system provides for secure user ID login and password with the ability to enforce policy compliant passwords and 2FA (two factor) authentication. Password rotation is required at predetermined intervals.</p>

Response Matrix

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<p>RPT003.b The reporting platform for County staff should include at a minimum:</p> <ul style="list-style-type: none"> • Call processing time between elements (hh:mm:ss) • Payload processing time (hh:mm:ss) • Calls per circuit • Call distribution to PSAP circuits • Circuit utilization from OSP • Circuit utilization to PSAP • All NGCS element usage volumes (all elements used in the NG911 Service Provider's NG911 System) • End-to-end call-flow analysis • Event by incoming IP address • NOC-to-NOC reporting, trouble reporting, and tracking • Root cause analyses • Service availability for each component including ESInet segments • Monitoring, alarming, and logging • MOS <p>The NG911 Service Provider should provide a list of all available reports and provide at least three report examples.</p>	<p>Complies.</p> <p>The 911Logix platform exceeds these requirements. A live demo is the easiest way to see this in action, but we have provided the requested information in the list of all available reports are as follows:</p> <ul style="list-style-type: none"> Call Totals Calls by Hour Calls by Hour, By Class of Service Calls by Day of Week Calls by Position Calls by Class of Service Calls by Service Provider Dynamic Call Duration Call Duration by Hour Duration by Second Duration by Class of Service Abandoned Calls Call Flow Short Calls Average Ring Time Ring Time by Hour Ring Time Groups Ring Time Groups by Day Calls by Trunk Calls by Type <p>Examples of these reports found here. 1.04 (a1) Attachment Functionality Checklist RPT-002.b - reporting platform</p>
<p>RPT004 Access to logs via Reporting Platform:</p> <p>The NG911 Service Provider should provide access to the system logs using the existing platform or another similar platform. This should include:</p> <ul style="list-style-type: none"> • Transactional database log associated with each SIP header and URI, and additional information provided to access by the County • Retrieval of log information should include calling number, SIP header information, call destination, successful, failures, transfers, ALI database transactions, and alternate routed calls (e.g., default, PSTN gateway, special processing, or overflow), which includes call counts • Log retrieval should be available by groups of calls (e.g., 911 versus non-emergency) and date range of calls. 	<p>Complies.</p> <p>The 911Logix platform exceeds these requirements, with an advanced reporting tool that allows for the aggregation of numerous sources of data and allows for visualization, reporting and trending of ingress content in a NG911 network. Visualization and reporting from the largest to the smallest of views with the ability to partition and manage content in the appropriate containers for the addressable customer base for NG911. See also: 1.04 (a1) Attachment Functionality Checklist RPT-002.b - reporting platform</p>

Response Matrix

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RPT005 Real Time System Monitoring: The NG911 Service Provider should provide access to real time system monitoring to the County using the existing platform or another similar platform. The platform should provide real time web-based monitoring of County traffic into the System at the functional element level and facilities (network connections). The status should be updated every 15 seconds, which includes, active, slow response, and failures.	<p>Complies.</p> <p>While the name of the existing platform is not stated, we have assumed it is ECaTS. INdigital can support a network activity feed to ECaTS. The 911Logix platform proposed vastly exceeds the capability of this platform, and exceeds these requirements.</p> <p>See also: 1.04 (a1) Attachment Functionality Checklist RPT-002.b - reporting platform</p>