## Contents

1. Introduction ........................................................................................................................................ 1
2. Enterprise Geospatial Database Management System (“EGDMS”) ................................................. 1
   2.1. EGDMS One-Time Services ..................................................................................................... 2
   2.2. Ongoing EGDMS Services ..................................................................................................... 2
   2.3. NG9-1-1 GIS Data Standards and Schema .............................................................................. 2
   2.4. Training ..................................................................................................................................... 2
   2.5. Access to ALI and MSAG Data ................................................................................................. 3
3. Transitional Data Management Service (“TDMS”) ............................................................................ 3
   3.1. One-Time GIS-derived MSAG (“geoMSAG”) Replacement Services ....................................... 3
   3.2. Ongoing TDMS .......................................................................................................................... 3
   3.3. EGDMS ..................................................................................................................................... 4
   3.4. GIS Director ............................................................................................................................... 4
   3.5. Data Requirements for the Implementation of TDMS ............................................................... 4
   3.6. Required RCL Fields for geoMSAG Replacement .................................................................... 4
4. MapSAG® GIS Data Management System ....................................................................................... 5
   4.1. MapSAG Versions ..................................................................................................................... 6
   4.2. MapSAG License Types ........................................................................................................... 6
   4.3. MapSAG System Requirements ............................................................................................... 6
   4.4. MapSAG Implementation and Support ..................................................................................... 7
   4.5. End Customer Responsibilities ................................................................................................. 7
5. GIS Data and Professional Services ................................................................................................. 7
   5.1. Ad-Hoc RCL to ALI Comparison Report ................................................................................... 7
   5.2. E9-1-1 GIS Data Analysis and Reports .................................................................................... 8
   5.3. NG9-1-1 GIS Data Assessment and Report ............................................................................. 8
6. NG9-1-1 GIS Managed Services ...................................................................................................... 9
   6.1. NG9-1-1 GIS Onboarding ......................................................................................................... 9
   6.2. Premium NG9-1-1 GIS Onboarding ........................................................................................ 10
   6.3. Ongoing NG9-1-1 GIS Managed Services ............................................................................. 10
   6.4. Ongoing NG9-1-1 GIS Managed Services with TDMS ........................................................... 10
1. Introduction

This Service Guide describes Intrado’s Next Generation 9-1-1 ("NG9-1-1") GIS products (collectively, "Products") and services (collectively, "Services").

The National Emergency Number Association’s ("NENA") i3 specification includes GIS as a foundational element of NG9-1-1 architecture. In NG9-1-1, locally-sourced GIS spatial data forms the basis for 9-1-1 location validation, call routing, and map display rather than the tabular data used in ALI and Master Street Address Guide ("MSAG") databases. GIS spatial data is the core of NG9-1-1.

With GIS spatial data at the center of NG9-1-1, locally sourced GIS data must be accurate, comply with i3 standards, and must be continuously maintained by the local or regional GIS authority (referred to as a “GIS Authority”). i3 GIS data must meet legacy system database requirements and, in many cases, meet additional local, regional, and state requirements for public safety and other GIS data users.

Intrado’s GIS services division has extensive experience working with GIS and public safety agencies across the nation to create, validate, synchronize, and provide ongoing management of GIS data used in 9-1-1 and NG9-1-1 operations. Intrado offers a broad range of NG9-1-1 GIS data management solutions and GIS data professional services to organizations and agencies, which manage 9-1-1, and GIS data, regardless of whether the end customer is contracted with Intrado to provide core NG9-1-1 routing services or if those services are sourced independently.

2. Enterprise Geospatial Database Management System ("EGDMS")

EGDMS is a fully hosted and secure online service used by individual or multiple GIS data sources for GIS data provisioning and for continuously receiving detailed data quality reports and associated error/warning shapefiles. EGDMS also provides automatic data standardization and coalescing between participating agencies.

When using Intrado NG9-1-1 core services, EGDMS serves as the NENA Spatial Interface, provisioning the Emergency Services Network ("ESInet") functional elements including Emergency Call Routing Function ("ECRF") and Location Validation Function ("LVF").

EGDMS provides a secure GIS data upload and validation portal, automated data validations and reports, and includes training on application navigation, and GIS data validation report interpretation.

In areas where Intrado manages the ALI database directly or on behalf of the Local Exchange Carrier ("LEC"), EGDMS provides the ability for users to automatically initiate ALI to Road Center Line ("RCL") and/or ALI to address point GIS data comparisons and match rate reports.

EGDMS GIS data validation services include critical error detection and data warnings. Critical errors are errors, which impact call routing and/or validation, such as overlapping RCL features. Data warnings are not as serious as critical errors but Intrado strongly recommends that data warnings also be corrected by Customer.

The EGDMS portal provides:

- Secure file transfer via the Intrado Integrated User Portal via secure two-factor authentication
- Support for popular GIS file formats including geodatabase and shapefile
- Automated schema change detection and error notification
- Browser based attribute field mapping configuration driven by the GIS Authority
- Automated email notifications for upload and processing status
- NG9-1-1 GIS data compliancy checks
- Validation report retrieval
- Validations against address points, RCLs, and boundary layers
- Streamlined ALI to RCL and ALI to address point comparisons and reporting
- MSAG to RCL comparison reporting

EGDMS allows the authoritative GIS data to be maintained by Customer using Customer’s native schema.
2.1. EGDMS One-Time Services

Intrado will provide the following EGDMS implementation services:

- EGDMS kickoff meeting
- EGDMS overview, user training (webinar), and field mapping training (webinar)
- EGDMS report interpretation & error correction consultation training (webinar)
- ALI to GIS report review and error correction consultation training (webinar)
- Limited EGDMS deployment support

EGDMS one-time services are provided to PSAPs and/or GIS Authorities responsible for managing the jurisdiction’s GIS data and deploying EGDMS. EGDMS one-time services billing is based on the population to be serviced by the GIS Authority. If Intrado is contracted to provide one-time EGDMS services to multiple GIS Authorities billed to a single entity, pricing is not based on the aggregate population of the entity to be billed, but will be calculated for each individual GIS Authority based on the population serviced by each GIS Authority.

2.2. Ongoing EGDMS Services

The EGDMS includes proprietary delta detection tools. This allow users to submit full, complete GIS databases as opposed to generating and uploading added, changed, or deleted features through the tool. EGDMS is an on-demand service, enabling Customer to submit updates as often as changes are made to the underlying GIS data.

EGDMS supports standard Customer data formats such as shapefile or file geodatabase formats without. Data updates, which are processed and validated by EGDMS, are automatically provisioned to the regional or state level database.

Ongoing EGDMS services are provided to GIS Authorities responsible for managing the jurisdiction’s GIS data and using EGDMS after it has been deployed. Ongoing EGDMS billing is based on the population to be serviced by the GIS Authority. In the event Intrado is contracted to provide ongoing EGDMS to multiple GIS Authorities billed to a single entity, pricing is not based on the aggregate population of the entity to be billed, but will be calculated for each individual GIS Authority submitting data through EGDMS based on the population serviced by each GIS Authority.

2.3. NG9-1-1 GIS Data Standards and Schema

The EGDMS database schema meets the requirements of NG9-1-1 GIS data standards. 9-1-1 GIS data may be managed in different formats and schemas and by different entities at multiple levels of government. The key functionality of the EGDMS portal is the schema field mapping tools and GIS data interrogator. The schema field mapping tools allow users to configure custom database field mappings and update them when necessary.

Upon successful data transmission, the GIS data interrogator extracts the data from its compressed format and reads the contents of the geodatabase or shape files. The data interrogator automatically validates that the data contents are valid, in the correct format, and include the required attribute fields as mapped and stored within Customer’s schema field mapping configuration template. Discrepancies or schema changes for mapped fields will trigger automatic notification to the data provider, alerting them that action is required. If the schema was changed and saved fields are missing or its properties have changed, the data provider can make the necessary changes immediately. This allows each data source to maintain its own native database formats and schemas and make changes when necessary within the EGDMS portal.

Users can configure schema field mappings and correct errors using the EGDMS field mapping tools. Schema validation includes automated data type and field length warnings and/or errors.

2.4. Training

EGDMS and TDMS deployment includes two training sessions. These sessions are conducted remotely via webinar and last two hours per session. Each session is limited to five students.
2.5. Access to ALI and MSAG Data

Intrado may require access to the underlying ALI and MSAG databases of the applicable LEC to provide certain EGDMS services. Customer will cooperate with Intrado and the applicable LEC to obtain permission for Intrado to access such databases.

3. Transitional Data Management Service ("TDMS")

TDMS enables Customer to upload GIS RCLs data and updates. Changes within the RCL data are identified automatically and updates to Customer’s applicable Master Street Address Guide ("MSAG") are made per Customer’s separate Automatic Location Information ("ALI") Data Management contract.

Intrado’s TDMS reduces the amount of the work for both 9-1-1 coordinators and the GIS Authorities that make frequent edits to its RCL data, and keeps these changes automatically synchronized with the MSAG.

TDMS delivers the following benefits:

- Operational Efficiency
  - TDMS provides 9-1-1 address management using GIS RCLs instead of traditional MSAG data, eliminating the need to synchronize and maintain synchronization between disparate GIS and MSAG databases.
- Improved Data Accuracy
  - TDMS provides continuous RCL to MSAG and ALI synchronization.
- No Changes Required for OSPs (Carriers)
  - TDMS supports legacy OSP provisioning and ALI database management.
- Improves i3 Readiness
  - TDMS helps facilitate the transition to NG9-1-1 by keeping the GIS RCL data synchronized with the MSAG and ALI.
- Supports i3 Interim Routing
  - TDMS significantly streamlines deployment to Intrado’s i3 core routing services.

3.1. One-Time GIS-derived MSAG ("geoMSAG") Replacement Services

The One-Time geoMSAG Replacement Services ("geoMSAG Services") provide 9-1-1 and GIS Authorities with:

- One GIS RCL-to-ALI data match rate report
- Validations of the RCL layer with a corresponding critical error report
- Creation of a geoMSAG load file from Customer’s GIS RCL data once an agreed upon RCL-to-ALI data match rate had been reached
- Replacement of the hosted tabular MSAG with geoMSAG once the agreed upon match rate has been achieved

TDMS one-time services are provided to GIS Authorities responsible for managing the jurisdiction’s GIS data and engaging Intrado to deploy TDMS. One-time services billing is based on the population to be serviced by the GIS Authority. In the event Intrado is contracted to provide one-time TDMS services to multiple GIS Authorities billed to a single entity, pricing is not based on the aggregate population of the entity to be billed but will be calculated for each individual GIS Authority based on the population serviced by each GIS Authority.

3.2. Ongoing TDMS

Ongoing TDMS provides Customer access to purpose built tools and portals to upload and validate RCL data and to identify and report GIS data discrepancies for error resolution.

Ongoing TDMS enables 9-1-1 address validation and management to be performed against Customer’s geoMSAG, which can be updated as often as changes are made to the underlying RCL data. Following the completion of the one-time geoMSAG replacement, the RCL data becomes the master data set and tabular MSAGs are derived from the RCL data, going forward.
The monthly recurring fees for TDMS cover ongoing GIS validation services and ongoing geoMSAG processing services. Once TDMS is implemented, Customer will no longer use MSAG CRs for making MSAG updates and instead make updates to the geoMSAG by submitting RCL updates using Intrado’s EGDMMS. Ongoing TDMS includes use of Intrado’s EGDMMS and GIS Director systems and services.

Ongoing TDMS is provided to GIS Authorities responsible for managing the jurisdiction’s GIS data after the solution has been deployed. Ongoing TDMS billing is based on the population to be serviced by the GIS Authority. In the event Intrado is contracted to provide ongoing TDMS to multiple GIS Authorities billed to a single entity, pricing is not based on the aggregate population of the entity to be billed but will be calculated for each individual GIS Authority Intrado has engaged to deliver TDMS based on the population serviced by each GIS Authority.

### 3.3. EGDMS

Ongoing TDMS also includes use of Intrado’s EGDMS.

### 3.4. GIS Director

Ongoing TDMS includes access to Intrado’s GIS Director application. GIS Director is a hosted map-based user interface for discrepancy and error reporting as well as resolution facilitation. GIS Director is the next-generation interface replacement for 9-1-1 NET®. TDMS implementation includes training for GIS Director.

### 3.5. Data Requirements for the Implementation of TDMS

Implementation of TDMS and ongoing TDMS requires the following:

- ALI data must be managed by Intrado or a NG9-1-1 system provider partnered with Intrado.
- Intrado must manage the MSAG for the area of interest.
- Intrado requires a 98% match rate between the ALI and RCL data as a condition for implementation.
- Intrado requires that all Intrado-identified EGDMS critical errors be resolved.
- Customer’s GIS data must contain the required data fields and attributes.
  - Please refer to Table 1 for a list of required fields and attribute examples.
- The geographic area covered by the RCL data must be equal to or larger than the area covered by the MSAG.
- MSAG records not covered by the RCL data will be omitted from the geoMSAG product or other derived products.

### 3.6. Required RCL Fields for geoMSAG Replacement

Table 1 includes the required RCL fields for geoMSAG replacement and ongoing TDMS.

Please note this list includes only those fields required for the implementation of TDMS and the geoMSAG replacement; it does not include all i3/NG9-1-1 required fields.

<table>
<thead>
<tr>
<th>Descriptive Name</th>
<th>Example</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCL Unique ID</td>
<td><a href="mailto:13575@county.st.us">13575@county.st.us</a></td>
<td>A</td>
</tr>
<tr>
<td>Left From Address</td>
<td>101</td>
<td>N</td>
</tr>
<tr>
<td>Left To Address</td>
<td>199</td>
<td>N</td>
</tr>
<tr>
<td>Right From Address</td>
<td>102</td>
<td>N</td>
</tr>
<tr>
<td>Right To Address</td>
<td>198</td>
<td>N</td>
</tr>
<tr>
<td>Street Name Pre Directional*</td>
<td>S</td>
<td>A</td>
</tr>
<tr>
<td>Street Name*</td>
<td>Main</td>
<td>A</td>
</tr>
<tr>
<td>Descriptive Name</td>
<td>Example</td>
<td>Type</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>------------</td>
<td>------</td>
</tr>
<tr>
<td>Street Name Post Type*</td>
<td>ST</td>
<td>A</td>
</tr>
<tr>
<td>Street Post Directional*</td>
<td>N</td>
<td>A</td>
</tr>
<tr>
<td>ESN Left</td>
<td>356</td>
<td>A</td>
</tr>
<tr>
<td>ESN Right</td>
<td>356</td>
<td>A</td>
</tr>
<tr>
<td>MSAG Community Name Left</td>
<td>Smithville</td>
<td>A</td>
</tr>
<tr>
<td>MSAG Community Name Right</td>
<td>Smithville</td>
<td>A</td>
</tr>
<tr>
<td>County ID Left**</td>
<td>1234</td>
<td>A</td>
</tr>
<tr>
<td>County ID Right**</td>
<td>1234</td>
<td>A</td>
</tr>
<tr>
<td>Entity Left**</td>
<td>HA1</td>
<td>A</td>
</tr>
<tr>
<td>Entity Right**</td>
<td>HA1</td>
<td>A</td>
</tr>
</tbody>
</table>

*Street name elements should be parsed and abbreviated to match existing / legacy ALI and MSAG format.

**Entity is only required if more than one selective router is present within the region. County ID is only required if there is more than one County in the region.

A = Alphanumeric text / string field

N = Number field

Note: For ongoing services, if any of the fields listed above or associated attributes are not available in the RCL data, Intrado can discuss options and alternatives available to Customer.

4. MapSAG® GIS Data Management System

MapSAG integrates closely with ESRI’s ArcGIS® for Desktop to streamline GIS data maintenance and accuracy.

MapSAG enables the synchronization of MSAG and GIS data. MapSAG delivers GIS data maintenance tools including:

- street and structure editing
- street, structure, and response boundary validations
- MSAG and ALI compare and synchronization tools
- easy to use reporting tools

Street and structure editing tools simplify common tasks by pre-populating attributes, accelerating the data management process, and reducing the potential for errors.

MapSAG validations use over 30 proprietary algorithms to analyze GIS data to locate errors. MapSAG then presents the errors in an easy-to-use format, which enables the streamlined correction of the errors through tools specifically designed for the error type being corrected.

Reporting tools enable generation of reports in Adobe PDF format. Reports are generated on validations and MSAG/ALI compares. Users may customize reports by adding specific elements such as an agency logo, custom titles, and customized headers and footers.

MapSAG enables Customer to create and maintain accurate 9-1-1 GIS data and to synchronize the GIS and 9-1-1 databases.

MapSAG is installed locally, at Customer’s location, and operates through an interface within ESRI’s ArcGIS Desktop (ArcView®, ArcEditor, or ArcInfo®) product. Various toolbars are available for accessing the available tools and features. The functionality that resides in the ArcGIS Desktop framework remains available while using MapSAG, including editing, drawing, layouts, and/or spatial queries.
Using MapSAG and ArcGIS Desktop, new GIS data records (streets, structures, polygons, etc.) can be input into Customer’s GIS data through multiple methods including field GPS, on-screen digitizing, import, and auto-generation. GIS data is stored in an ESRI format. MapSAG supports ArcGIS Desktop through ArcGIS Desktop 10.5 and requires access to a file geodatabase or an Enterprise Geodatabase through ArcGIS Server (“ArcSDE”).

4.1. MapSAG Versions

Beginning with release 6.4, MapSAG is offered in four versions, as described below. Each version is designed to accommodate specific GIS data management requirements and functionality. These range from editing and data maintenance to integration with Intrado’s map display system and synchronization of GIS data with MSAG and ALI data. Customer may upgrade from one version to another, adding functions and features as GIS data management needs evolve toward i3 migration.

4.1.1. MapSAG Professional

MapSAG Professional combines all features and functions provided in MapSAG Edit, Data Exchange, and 9-1-1 Sync into a single GIS data management platform configured for GIS power users.

4.1.2. MapSAG Edit

MapSAG Edit includes the primary tools for editing and maintaining accurate GIS data. MapSAG’s Data validation tools, combined with its powerful and easy to use editing tools, enable GIS professionals to reduce errors in the data set and save time managing GIS data.

4.1.3. MapSAG Data Exchange

MapSAG Data Exchange includes all features and functions provided in MapSAG Edit and adds the Data Exchange Center. The Data Exchange Center provides simplified tools enabling users to exchange data with Intrado’s MapFlex® PSAP mapping system. Data Exchange enables MapFlex to be updated directly from MapSAG without exporting and copying files between systems. Additionally, discrepancies identified by 9-1-1 call takers and dispatchers can be flagged through MapFlex and reported to the MapSAG user to locate and correct within the GIS data set. This functionality is available in MapSAG release 6.4. Future enhancements to MapSAG’s Data Exchange Center will include an interface to Intrado’s EGDMS for use with NG9-1-1 and TDMS.

4.1.4. MapSAG 9-1-1 Sync

MapSAG 9-1-1 Sync includes all features and functions provided in MapSAG Edit and adds 9-1-1 Sync tools which enable the synchronization of MSAG and ALI data with GIS data. The synchronization of MSAG and ALI data is considered an important first step to achieving i3 success. MapSAG delivers the tools and step-by-step processes to make this difficult task easier.

4.2. MapSAG License Types

4.2.1. Single User and Concurrent Use MapSAG Licensing

All releases and versions of MapSAG are available in two licensing options, Single User and Concurrent Use. The Single User license is installed on a single workstation and can be used full-time on that workstation. A Concurrent Use license can be shared by up to three MapSAG users but only one workstation at a time can use the license.

4.3. MapSAG System Requirements

Intrado does not provide workstation or server equipment for this application and is only supported on Microsoft Windows based platforms. MapSAG supports published ESRI hardware and software requirements for Microsoft Windows systems. For Customer using ArcGIS for Server, MapSAG supports only Microsoft SQL and Oracle databases.

MapSAG is highly configurable and is designed to work with most end customer GIS data. The data must be in ESRI format such as Geodatabase, File Geodatabase, or ArcGIS for Server (SDE). A Intrado GIS
professional will review the data format and communicate any changes necessary for the deployment of MapSAG.

The most current version of MapSAG requires ESRI ArcGIS version 10.4.x or 10.5.x. If a site is running a down-level version of ArcGIS software, Customer must upgrade prior to deployment of MapSAG or Intrado must be notified of end customer’s ESRI software release version and request a version of MapSAG which is compatible with Customer’s ArcGIS software.

Down-level versions of MapSAG provided to accommodate Customers with older versions of ArcGIS software are billed at the same rate as MapSAG Professional, and may not include all features and functionality offered in the most current MapSAG Professional version.

4.4. MapSAG Implementation and Support

MapSAG will be installed on end customer systems remotely by a Intrado GIS professional. Implementation of MapSAG includes user training delivered by a Intrado GIS trainer. Training can be conducted remotely via webinar or onsite at end customer location. Onsite training will include additional travel fees for the Intrado GIS trainer. Additional training may be purchased by end customer desiring periodic refresher training or training for new users following system implementation.

New MapSAG systems include one year of Annual Support and Maintenance services. This provides telephone support for all users during normal business hours and software updates (including patches and updates of major and minor releases). Starting in year two, Customer will be required to renew its support and maintenance services to maintain access to support and software updates. Support and maintenance renewals may be purchased annually or prepaid for multiple years.

Intrado will provide MapSAG software, remote installation, and configuration of the MapSAG software on Customer-provided workstations, and onsite or remote MapSAG user training.

Additional training sessions following system implementation may be purchased separately if an agency requires additional user training. Additional training will be performed by a Intrado GIS trainer.

4.5. End Customer Responsibilities

Each Customer deploying MapSAG will be responsible for providing the hardware and additional software necessary for MapSAG installation and operation, including the proper ArcGIS license(s).

MapSAG is an add-on to ESRI ArcGIS for Desktop and requires an active ArcGIS for Desktop license at each MapSAG-enabled workstation. End customer is responsible for acquiring and maintaining the necessary ESRI licensing. At the customer’s request, Intrado can facilitate acquiring the necessary ESRI licensing.

Each Customer requiring MapSAG training will be responsible for providing a suitable training facility and the equipment required for delivering MapSAG training.

5. GIS Data and Professional Services

In addition to TDMS and EGDMS, Intrado offers additional GIS data and professional services to assist 9-1-1 and GIS data Authorities assess the fitness of GIS data for use in E9-1-1 and NG9-1-1. These may be purchased and performed separately and may be included, as noted, within the TDMS and EGDMS offerings.

5.1. Ad-Hoc RCL to ALI Comparison Report

This is provided as a one-time service and delivers a comprehensive analysis of end customer’s RCL data and end customer provided ALI data managed for the jurisdiction.

Using GIS and 9-1-1 data, Intrado will run QA/QC validations between the 9-1-1 ALI data and the RCL GIS data layer. Intrado uses proprietary 9-1-1 GIS data validation tools to determine conformance to GIS schema requirements and perform QA/QC for critical errors.
A report will be created and provided to end customer identifying the ALI-to-RCL match rate and critical errors which would prevent data from being suitable for use in NG9-1-1 call routing.

Intrado will perform the data analysis and assessment, develop detailed reports of findings, and communicate these findings and recommendations to end customer.

5.1.1. End Customer Responsibilities

End customer will be required to provide Intrado with GIS and 9-1-1 data in order for Intrado to perform the quoted GIS Data analysis.

5.2. E9-1-1 GIS Data Analysis and Reports

This service provides a comprehensive analysis of end customer GIS data and in-depth reports of errors found. Analysis will be performed on layers, which impact 9-1-1, including:

- Street Centerlines
- Address Points
- Response Boundaries (ESN, Law, Fire, EMS)

Intrado will perform an analytical comparison of the ALI (subscriber records) and MSAG to the RCL GIS data.

Intrado will perform the data analysis and assessment and communicate our findings to end customer.

5.2.1. End Customer Responsibilities

End customer will be required to provide Intrado with GIS and 9-1-1 data in order for Intrado to perform the quoted E9-1-1 GIS Data analysis.

5.3. NG9-1-1 GIS Data Assessment and Report

This is provided as a one-time service and delivers a comprehensive analysis of the GIS Authority’s existing GIS and 9-1-1 data (MSAG and ALI) in preparation for migration to NG9-1-1.

Intrado will perform an in-depth analysis on the GIS data layers required to implement NG9-1-1. This analysis is followed by detailed reports of Intrado’s findings and recommendations for the steps needed to achieve full i3 GIS data readiness.

After Intrado presents the report findings and recommendations, the jurisdiction or GIS Authority may elect to manage the data directly or contract with Intrado for additional GIS data professional services, solutions, and support.

Intrado will perform the data analysis and assessment, develop detailed reports of findings, and communicate these findings and recommendations to end customer.

The NG9-1-1 GIS data analysis will be performed on and between the following layers:

- RCL
- Address Points
- PSAP Boundary Layer
- Emergency Service Boundary Layers(s)
- Provisioning Boundary Layer
- ALI-to-GIS and MSAG-to-GIS comparisons

The report delivered to end customer will contain:

- GIS data readiness process
- Documented data standards
- GIS data validation reports
- Data analysis recommendations
- Reference documentation for i3
5.3.1. **End Customer Responsibilities**

End customer will be required to provide Intrado with GIS and 9-1-1 data in order for Intrado to perform the quoted GIS Data analysis.

5.3.1.1. Required GIS and 9-1-1 Data

- RCL & MSAG community boundaries OR RCL with left/right MSAG community attribution
- ALI and MSAG databases for the geographic area covered by each GIS database
- ALI database records must contain addressing elements and ESN
- (note: personal information such as phone number or name is not required)
- MSAG database in NENA 2.1 format (preferred)

5.3.1.2. Preferred GIS Data

- Site structure address points
- Emergency response boundaries (Law, Fire, EMS, ESZ/ESN, Provisioning, PSAP)

6. **NG9-1-1 GIS Managed Services**

Intrado’s NG9-1-1 managed services support implementation of NG9-1-1 geospatial location validation and call routing.

NG9-1-1 GIS managed services are tailored specifically to meet the GIS data onboarding and ongoing needs of each end customer / GIS Authority. NG9-1-1 GIS managed services are scalable to support single-PSAP or local authority deployments up to the largest regional and state NG9-1-1 implementations.

6.1. **NG9-1-1 GIS Onboarding**

Intrado’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.

Intrado 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 spatial interface, and defining its features and functionality. NG9-1-1 GIS onboarding services establish communication between the end customer, Intrado, and the NG9-1-1 service provider throughout the GIS onboarding phase and EGDMS implementation.

NG9-1-1 GIS onboarding includes EGDMS setup and the following services:

- 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 & 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

NG9-1-1 GIS onboarding includes up to 50 hours of GIS consultation services delivered by a Intrado GIS professional ("i3 GIS Coach"). End customers requiring additional time, support or project management may be required to purchase premium NG9-1-1 GIS onboarding.

Each EGDMS training session is limited to five students.

NG9-1-1 GIS onboarding services will be billed up front upon initiation of the project. NG9-1-1 GIS onboarding services will be determined to be complete following the first successful provisioning of Customer GIS data into the ECRF.
6.2. Premium NG9-1-1 GIS Onboarding

Intrado’s premium NG9-1-1 GIS onboarding builds on the services provided in NG9-1-1 GIS onboarding and is highly recommended to all end customers which have answered “no” to any of Intrado’s NG9-1-1 GIS data readiness questions or end customers that would benefit from additional hands-on GIS project management and i3 GIS coaching provided by GIS professionals through the initial GIS onboarding, implementation of EGDMS, and the NG9-1-1 deployment.

Premium NG9-1-1 GIS onboarding includes the following additional services:

- NG9-1-1 GIS data assessment and report
- Assignment of a GIS technical project manager
- Additional NG9-1-1 GIS consultation services beyond 100 hours (up to one year)
- Additional GIS data testing and remediation
- Additional ALI to GIS reports
- Additional comprehensive i3 GIS Q&A support

Premium NG9-1-1 GIS onboarding services include up to one year of combined project management, i3 GIS Coach consultation, and system Q&A/go-live support.

Premium NG9-1-1 onboarding services will be billed up front upon initiation of the project. Premium NG9-1-1 GIS onboarding services will be determined to be complete following the first successful provisioning of Customer GIS data into the ECRF.

6.3. Ongoing NG9-1-1 GIS Managed Services

Intrado offers ongoing NG9-1-1 GIS data managed services after the NG9-1-1 system goes live.

Ongoing NG9-1-1 GIS managed services include the following:

- Named technical GIS project manager
  - GIS data submission monitoring
  - Monthly progress reporting
- Named i3 GIS Coach
  - NG9-1-1 GIS data management consultation
  - GIS data layer and schema mapping assistance
  - GIS data troubleshooting for call routing issues
  - SI report interpretation and error resolution
  - Boundary conflict remediation
- Periodic ALI to GIS reporting and assistance to improve the match rate
- Geodatabase extract and provisioning
- EGDMS refresher training (up to four sessions per year)

6.4. Ongoing NG9-1-1 GIS Managed Services with TDMS

Intrado offers ongoing NG9-1-1 GIS managed services to Customer implementing TDMS.

Ongoing NG9-1-1 GIS managed services with TDMS include ongoing NG9-1-1 GIS managed services and delivers additional support for TDMS, including ongoing validations of RCL layer data with critical error reporting and the ongoing management of a GIS-based MSAG load from GIS RCL data (the geoMSAG).

Ongoing NG9-1-1 GIS managed services with TDMS do not replace standalone TDMS pricing when TDMS is implemented separately from a NG9-1-1 solution.

Ongoing NG9-1-1 GIS managed services with TDMS may be purchased concurrently with NG9-1-1 GIS managed services, may be priced as an option within the NG9-1-1 solution, or may be purchased following the implementation of NG9-1-1 GIS managed services.