DATAMARK

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INTERNATIONAL

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DATAMARK PROPOSAL

ALACHUA COUNTY, FL

EXHIBIT A: SCOPE OF WORK

This Scope of Work is attached to and made part of the GSA Federal Acquisition Services contract 47QRAA21D008D, between Alachua County and DATAMARK, the public safety division of Michael Baker International, Inc.

This proposal, including the scope of work and cost, is a firm offer valid for 60 days after submission to Alachua County.

This proposal includes Editor services of DATAMARK VEP, Managed Services, and Address Comparison and Evaluation (ACE), described in detail below.

DATAMARK VEP (Validate, Edit, and Provision)

VEP is a cloud-native service for public safety GIS data aggregation, preparation, analysis, and maintenance. VEP provides a highly configurable user-friendly interface for GIS and non-GIS personnel to perform location data validation, editing, and quality control in alignment with NENA Next Generation 9-1-1 (NG9-1-1) data standards and GIS industry best practices. VEP supports data from local and regional GIS data providers and neighboring 9-1-1 authorities.

VEP is designed to support the most current NENA NG9-1-1 GIS Data Model and to provide the flexibility to incorporate custom fields and additional schema requirements from our clients' GIS datasets. As Alachua County implements the NENA NG9-1-1 GIS Data Model, VEP will become an integral service for validating, editing, and aggregating GIS data from multiple sources that will be provisioned into the NG9-1-1 GIS Core Services (NGCS) solution.

DATAMARK's technical team, comprised of experts in NG9-1-1 requirements and public safety data workflows, is ready to support Alachua County by providing:

- Highly configurable GIS data management solutions for novice to expert level GIS users
- Dedicated technical support of the VEP system
- Comprehensive data QC and validations to prepare data for NG9-1-1
- Platform agnostic design supporting existing public safety systems including CAD, CAD mapping, and AVL

Software as a Service (SaaS) Solution

VEP is a true SaaS service that provides end users with a secure, web-based system for collecting, preparing, maintaining GIS data. VEP streamlines and optimizes editing and validation processes for provisioning data in 9-1-1 systems and other systems reliant on accurate, reliable GIS information. VEP requires no additional investment in specialized hardware or software.

Cloud-Native GIS Data Management Software

VEP leverages the benefits of cloud-native application development including on-demand access to powerful computing resources, modern data and application services, and dynamic coordination of development activities. This enables DATAMARK to effectively stay ahead of

changes to industry processes and standards and bring meaningful product innovations to market faster than traditionally developed software platforms.

VEP Software Subscription

VEP is offered in two subscription models, VEP Validator and VEP Editor, to address the broad range of requirements of local, regional, and state GIS stakeholders. Additionally, VEP Aggregator provides purpose-built solutions to regional and state organizations for aggregating and managing consolidated GIS datasets used in legacy 9-1-1, NG9-1-1, and other applications.

VEP Validator

Validation is the process of validating and aggregating GIS, MSAG, and ALI data using VEP's data validations. VEP Validator is used to perform a broad range of validations across dozens of categories, configured for each client's specific GIS data management requirements. Validation results are downloadable as markup tables for use within Alachua County's GIS environment. VEP's validation features are included in all subscription types.

Validator subscription includes Administrator and Validator user roles; the number of users is based on client population. Additional Validator and Administrator users can be added for additional fees. Validator subscription does not include Editor, Observer, or Aggregator functionality. VEP's user roles are defined in detail in the VEP User Roles section, below.

GIS Data Validation

VEP's validation engine includes a comprehensive suite of tools used to validate and aggregate GIS, MSAG and ALI data which meets and exceeds NENA validation standards. The validation engine enables administrators to run unique QC checks on demand, including DATAMARK's unique Fishbone Analysis.

VEP Validator identifies schema inconsistencies and incompleteness and identifies spatial anomalies and discrepancies within the various datasets. VEP's validations evaluate attribute, topological, and spatial accuracy within each layer and performs cross-feature validations. These validations meet and exceed the NENA standards and include additional checks that support GIS industry best practices for quality control assessments. VEP Validator delivers a comprehensive series of reports on anomalies and changes over time.

Fishbone Analysis

VEP's fishbone analysis compares the placed address point to its geolocated location on the road centerline. This process creates a line between the two locations which provides a powerful dataset for analysis. In clean GIS data, this typically resembles a 'fishbone' with no crossed lines. Where lines cross, a potential anomaly may exist in the GIS data. Data with crossed fishbone lines may be marked as an exception in VEP, following review, to avoid being flagged in future validations.

This analysis reveals anomalies such as address points on the wrong side of the road, out of order address points, or a range of other anomalies.

Fishbone analysis will show an address point that maps to multiple road centerlines and shows attributes duplicated on multiple road segments, or where ranges overlap, causing the address point to be placed on both segments.

Where traditional address point comparison methods may produce false positive results, VEP Validator's fishbone analysis draws a line from the address point to where it falls on its street centerline range as shown in the figure below.

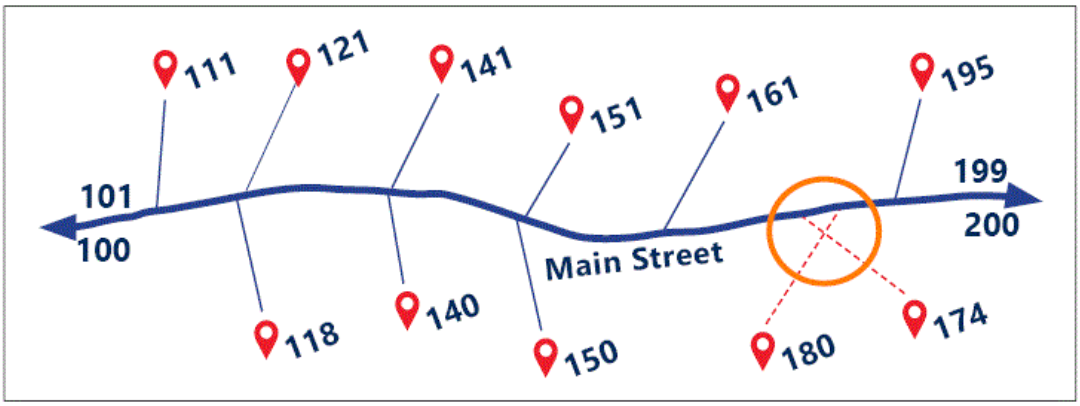

Figure1: Fishbone Analysis

Example: If the address range of Main Street is 100-200, 150 Main Street will draw to the center of that Main Street centerline segment. In clean GIS data, the visual analysis typically resembles a fishbone along the 100-200 range of Main Street. The crossed lines for 174 and 180 Main Street show a potential anomaly in the GIS data to be reviewed and resolved.

VEP Editor

VEP Editor provides a web-based editing interface that enables users to create, maintain, update, validate, and export public safety GIS data. VEP's editing environment includes a comprehensive suite of tools and becomes a force multiplier for GIS departments with limited resources. Editor subscription also includes VEP's Observation features, described below.

Editor subscription includes VEP's validation, editing, and provisioning features. The number of end users who can access the system is based on client population; access for additional Administrator, Editor, Validator, and Observer end users is available for additional fees. VEP's user roles are defined in detail in the VEP User Roles section, below.

Web-Based GIS Editing

VEP Editor's secure web-based editing environment supports experienced GIS users and can be accessed by non-GIS personnel who have been provided with access credentials without requiring separate expensive GIS desktop software, plug-ins, or extensions. This reduces operating costs, reduces the time spent administering standalone GIS solutions, and enables non-GIS users such as dispatchers, fire inspectors, and other authorized personnel to make meaningful contributions to the Client's 9-1-1 and public safety GIS data.

Observation

VEP Editor subscription includes observation features which enable non-editors to drop a point on the map and record observations which will be reviewed and processed by GIS editors. The Observation function's ability to provide GIS data feedback from creates operational transparency, increases communication between public safety and GIS professionals, and improves the quality of the 9-1-1 and NG9-1-1 GIS data in real-time.

Example: A fire engine misrouted to an incorrect location will inform the dispatcher of the routing issue. The dispatcher, who is not a GIS data editor, can use VEP's Observer features to create an observation point and report the routing error. This will send a notification to the GIS authority's GIS data editors, creating an audit trail the editor can use to investigate the issue, resolve any problems in the GIS data, and report how the reported observation was processed.

GIS Data Provisioning with VEP

Editor subscription both includes VEP's GIS data provisioning functions and features. Implementation of VEP includes provisioning to Alachua County's native GIS schema and to the NENA NG9-1-1 GIS schema. VEP is platform-agnostic and capable of provisioning GIS data into currently available Spatial Interface (SI) systems.

VEP's download function offers the ability to effectively field map the default database into a custom schema of choice. This functionality enables the client to support multiple public safety and government enterprise systems without needing to change business practices, systems, and data schemas. Examples of relevant output schemas include:

- CAD systems (to potentially include regional stakeholders')
- Transportation
- Asset Management
- Permitting
- Mobile data collection application

VEP User Roles

Each VEP subscription model provides clients with specific numbers and types of end user subscription. Access to VEP is based on user role and subscription level, to ensure each user of the system has the features, functions, and tools necessary to perform the tasks that meet Alachua County's goals while maintaining security and access control.

VEP user roles are described below:

The **Administrator** role is included in each VEP subscription type and provides users the access to review and approve edits, provisions users and permissions, limits configuration capabilities for display and web service content of the Editor map, and more. This is the highest permission level assigned in the VEP system.

The **Validator** role provides access to VEP's upload, validate, and download functions used to perform data validation and quality control.

The **Editor** role provides access to the VEP dashboard and to the map interface used to perform geometry and attribute edits and validation markups.

The **Observer** role provides access to the map interface to create observations. Observers do not have access to VEP's editing functions.

This proposal includes VEP Editor subscription for the following user roles:

User Role	Number of Users
Administrator	1
Editor	1
Validator / Observer	3

Table 1: User Roles and Number of Users

VEP Software Support

Software support for VEP is included in the annual SaaS subscription and provided through the term of the SaaS Agreement with Alachua County.

VEP's annual subscription includes access to an online support and self-service knowledge center. The DATAMARK VEP Support Center is the first stop for questions about VEP workflow, functionality, and enables users to request support, report issues, and search an online library of videos and articles for information about the system.

DATAMARK VEP Support Center

Alachua County's VEP users will be provided with access to the Support Center through the VEP user interface. The VEP Support Center includes an online support ticket system, a knowledge center to query common issues and system documentation, and a module-based library of user guides, how-to articles, FAQs, video workflow tutorials, and video tips and tricks.

VEP Support Tickets

VEP provides users with secure access to the Support Center ticket system. This system is used to submit, review, and track the status of support tickets. The DATAMARK VEP Technical Support team responds to Support tickets, users can track the status of support tickets directly from the VEP Support Center.

VEP SaaS Agreement

This proposal includes VEP subscription provided to Alachua County for a period of 5 years.

VEP is sold through an annual subscription service and is subject to an annual fee. VEP is provided as a software subscription and contracted through the execution of DATAMARK's SaaS Agreement. The agreement will be automatically renewed unless notice of cancelation is received 60 days before the renewal date.

CLIENT TASKS/RESPONSIBILITES

- Participate in a review of client GIS data field mapping for upload into VEP
- Provide a space, computers, and internet connections for training

DATAMARK DELIVERABLES

- Conduct the review of GIS data field mapping for upload into VEP with Client
- Provide user access to VEP and the knowledge base/ticketing system
- Conduct VEP end-user training

Managed Services

As a participating county within Florida Region 3, Alachua County will provide local NG9-1-1 data to the regional GIS repository. DATAMARK's managed services include ongoing management of VEP Aggregator described below. DATAMARK will ensure participating counties submit data to the regional repository in accordance with a schedule defined by Florida Region 3. DATAMARK's managed services include all activities associated with creating a regional repository and ensuring participating counties have unlimited access to regional GIS data. DATAMARK will perform data aggregation on a weekly basis.

VEP Aggregator

VEP Aggregator provides regional public safety GIS stakeholders with solutions for consolidating GIS data from multiple sources into a single database, performing cross-jurisdictional validations on the aggregated dataset, identifying anomalies in the data, and exporting the dataset. After anomalies are identified, before they are exported, they are sent back to the original jurisdiction for review, correction, and resubmission.

Centralized, regional management and ongoing validation of the aggregated GIS dataset streamlines its use across public safety platforms, including legacy 9-1-1, NG9-1-1, Computer-Aided Dispatch (CAD), and others.

VEP Aggregator does not require the purchase of additional software or tools and includes VEP's validation and provisioning features. Consolidating and synchronizing local and regional databases is a seamless process using Aggregator from the VEP system dashboard. As local jurisdictions submit data into the aggregated dataset, regional GIS administrators supporting the database can use Aggregator to perform to the following tasks:

- Input local GIS data to an aggregated database
- Perform validations focused on boundary, address point, and road centerline data
- Identify anomalies in the data including boundary gaps, overlaps, and other anomalies
- Export aggregated data in the NENA NG9-1-1 GIS schema

Aggregator is provided to regional or statewide GIS stakeholders managing multi-jurisdiction implementations and includes VEP's validation and provisioning features. Aggregator is not meant to replace VEP Validator or Editor for the management of individual local or regional datasets. Clients who currently use VEP to manage local GIS data can efficiently and easily submit their GIS into the aggregated dataset.

- Ensure local GIS data is marked Ready for Aggregation

- Management of the regional GIS data repository
- Perform scheduled data aggregation
- Provide data to participating counties, when requested

Address Comparison and Evaluation (ACE)

The DATAMARK team will perform an Address Comparison and Evaluation (ACE) to compare a master address source to other sources containing address records and identify potentially missing address data. DATAMARK will verify Alachua County address data against highly accurate location data, returning a report of the results and a table of missing addresses with the data.

The team will work with Alachua County to identify which address sources are the best fit for use in the analysis. Alachua County may provide up to five (5) data sources such as parcel or utility databases, waste management records, etc. for the DATAMARK team to compare to their master address dataset. ACE will be supplemented by a commercial list, provided by DATAMARK.

During the ACE, DATAMARK assigns a Weighted Confidence Score to each address in the master address source, based on its recurrence across the supplementary data sources and validation against commercial location data. This score allows us to assess the validity of address candidates identified as missing from the master address database.

After completing the ACE, DATAMARK provides a summary report of the results of the ACE and a table of potentially missing address candidates in tabular or spatial format. This table includes subaddress information (i.e. apartment, suite, etc.) identified in the analysis. DATAMARK will review the table to provide a breakdown of their confidence levels to prioritize investigation and placement within the master address database by Alachua County. Placement of missing address point candidates in the master address database is not included with the ACE service.

CLIENT TASKS/RESPONSIBILITES

- Provide master address database
- Provide up to five (5) spatial or tabular address data sources
- Review ACE results and report of missing address candidates

DATAMARK DELIVERABLES

- Provide report of the ACE process and summary of findings
- Provide feature class or tabular list of potentially missing address candidates, including subaddress data
- Procure additional commercial data to supplement ACE if necessary, following discussions with Client

PROJECT MANAGEMENT

A DATAMARK project manager will be assigned to the implementation of the proposed solution. The project manager will provide hands-on contact with Alachua County and oversee all aspects of the project scope, schedule, and budget.

Project Kickoff

The DATAMARK team will set up the project for budget management and perform internal project startup tasks. The DATAMARK team will conduct a project kickoff meeting with key Alachua County staff overseeing the project and other stakeholders deemed appropriate for the kickoff meeting by Alachua County to establish a solid understanding of the project goals, timeline, and approach. Team members will be introduced at the kickoff meeting, and their project roles and responsibilities will be defined. The project schedule will be presented, with focus on the dates for key milestones, and the project management approach will be discussed. The DATAMARK team, in partnership with Alachua County, will initiate the project and begin execution of the Scope of Work within 15 business days of receiving a fully executed purchase order and/or fully executed contract, as applicable.

Approach

The DATAMARK team will outline the project management approach, techniques, and tools. The project management approach adheres to Michael Baker's practices for managing project finances, contracts, operations, and schedule.

Scope/Schedule/Budget Tracking

The DATAMARK project manager will perform ongoing tracking and monitoring of the scope, schedule, and budget to keep the overall project on track. This involves regular communication to the DATAMARK team on project status to keep the team focused and working efficiently.

Project Reporting

The project manager will provide project status reports to Alachua County on a schedule to be determined during the kickoff meeting.

Project Invoicing

The project manager will provide invoices to Alachua County on a monthly basis or by project milestone, as agreed to with Alachua County.

CLIENT TASKS/RESPONSIBILITES

- Participate in project kickoff meeting
- Review, comment on (as necessary), and approve monthly invoices

DATAMARK TEAM DELIVERABLES

- Project kickoff meeting
- Schedule project status calls and reports with the client
- Deliver invoices to the client

EXHIBIT B: COMPENSATION AND PAYMENT

Annual subscription for software products will begin and be invoiced upon execution of the VEP SaaS agreement.

Service	Year 1	Year 2	Year 3	Year 4	Year 5	Total
VEP Editor Services	$33,500	$35,175	$36,934	$38,780	$40,719	**$185,108**
Managed Services	$21,940	$23,037	$24,189	$25,398	$26,668	**$121,232**
Address Comparison & Evaluation	$29,486	$0	$0	$0	$0	**$29,486**
	$84,926	**$58,212**	**$61,123**	**$64,178**	**$67,387**	**335,826**