Project Agreement

This Project Agreement is made by and between **Scott County** organized under the laws of the state of Iowa and **GeoComm Inc**., a Minnesota corporation with its principal offices at 601 West St. Germain Street, St. Cloud, MN, 56301.

In this agreement the party who is contracting to receive the professional services shall be referred to as "the Customer" and the party who will be providing the services shall be referred to as "GeoComm."

GeoComm has an established background in communications engineering, geographic information systems development, cartography, software development, and professional project management and is willing to provide those services to the Customer based on this background.

The Customer desires to have services provided by GeoComm. Therefore, the parties agree as follows:

Section 1 - Description of Service

Beginning upon contract signing GeoComm will provide the following goods and services (collectively the Services): Refer to the itemized Exhibits herein and made part of this agreement:

- Project Management
- Street Centerline Database
- Address Point Database
- MSAG/ALI Database Development/Update
- Supporting Layers
- Integration Maintenance Plan
- Field Data Collection

Section 2 - Payment

The Customer will pay a fee to GeoComm of **$107,112.00** for services as described in this agreement and provided under this agreement by GeoComm. The Customer agrees to pay GeoComm on the following schedule:

$	21,422.00	20% upon contract signing
$	9,373.00	beginning the first of the month following contract signing and continuing for 8 months
$	10,706.00	10% upon delivery of map data

Section 3 - Late Payment Fee

All invoices issued under this contract shall be submitted to the Customer net 45 days. A 1.5% service charge shall be assessed to all invoices not paid within 45 calendar days from date of invoice.

Section 4 - Expense Reimbursement

GeoComm shall pay all “out-of-pocket” expenses and shall not be entitled to reimbursement from the Customer except by mutual prior agreement.

Section 5 - Performance of Services

GeoComm will work as many hours as is necessary to fulfill its obligations under this agreement.

Section 6 - Standards of Work

GeoComm agrees that the performance of work described in this Agreement and pursuant to this Agreement shall be done in a professional manner and shall conform to employ the care and skill ordinarily used by members of GeoComm’s profession. GeoComm warrants that all equipment and/or software provided under this Agreement shall be new and in good working condition. All packaging and packing shall be in accordance with good commercial practice.

Section 7 - Changes in the Work

The Customer may, at any time by written order, make changes within the general scope of the work including but not limited to, revisions of, additions to, or subtractions from, portions of the work, or changes in method of shipment or packaging and place of delivery.

If any change order causes an increase or decrease in the cost of or time required for the performance of any part of the work under this Agreement, an adjustment based on the exhibits, shall be made in the Agreement price or delivery schedule, or both, and the Agreement shall be modified in writing accordingly.

Section 8 - Excusable Delays

Neither GeoComm nor the Customer shall be responsible for delays or lack of performance resulting from acts beyond the reasonable control of the party or parties.

Section 9 - Taxes

The Customer as a taxing authority may be excluded from paying Federal, State, or Local excises, sales, lease, gross income, service, rental, use, property, occupation, or similar taxes. If GeoComm is required to pay taxes of the Customer, the Customer shall pay to GeoComm the amount of such taxes no later than thirty (30) days after receipt of an invoice.

Section 10 - Limitation of Liability

Except for personal injury or death, the Customer’s total liability under this contract, including but not limited to breach of contract, negligence, warranty, strict liability in tort, or otherwise is limited to the difference between the market price at the time and place for tender of the goods and the unpaid sales price less expenses saved in consequence of the breach by GeoComm. In no event shall the Customer be liable for GeoComm’s incidental or consequential damages to the full extent such may be disclaimed by law.

Section 11 - Termination

Either party, upon thirty (30) days written notice to the other party, may terminate this Agreement for violation of the material terms of this Agreement and failure to cure any deficiency within a reasonable time after notice thereof. In the event of termination for just cause by the Customer, GeoComm shall refund all amounts received to that point. In the event of termination for just cause by GeoComm, the Customer shall forfeit any funds paid and return any software and hardware received.

Section 12 - Relationship of Parties

The parties understand that GeoComm is an independent contractor and not an employee of the Customer. The Customer will not provide fringe benefits, including health insurance benefits, paid vacation, or any other employee benefit for the benefit of GeoComm as a function of this agreement.

Section 13 - Disclosure

GeoComm is required to disclose any outside activities or interests, including ownership or participation in the development of prior inventions, that conflict or may conflict with the best interests of the Customer. Prompt disclosure is required under this paragraph if the activity or interest is related, directly or indirectly, to any activity that GeoComm may be involved with or on behalf of the Customer.

Section 14 - Employees

GeoComm's employees and agents, if any, who perform services for the Customer under this Agreement shall also be bound by the provisions of this agreement.

Section 15 - Injuries

GeoComm acknowledges its obligation to obtain appropriate insurance coverage for the benefit of GeoComm and its employees. GeoComm waives any rights to recover damages from the Customer for any injuries that GeoComm and/or its employees may sustain while performing services under this agreement and that are in any way a result of the negligence of GeoComm or its employees or agents.

Section 16 - Indemnification

GeoComm shall indemnify and hold harmless the Customer against and from all liability, claims, damages, and costs including attorney's fees of every kind and nature and attributable to bodily injury, sickness, disease or death, or to damage or destruction of property resulting from or in any manner arising out of or in connection with the project and the performance of the work under the contract.

Section 17 - Insurance

GeoComm shall obtain liability insurance for both personal injury and property damage. Any policy obtained and maintained under this clause shall provide that it shall not be cancelled, materially changed, or not renewed without thirty days prior notice thereof to the Customer.

Minimum limits for GeoComm liability insurance shall be in the amount of $1,000,000.00 for any number of claims arising out of a single occurrence under a single limit or combined limit or excess umbrella general liability insurance policy. GeoComm shall additionally obtain Worker's Compensation Insurance extending coverage to all its employees.

Section 18 - Data Confidentiality

GeoComm agrees to review, examine, inspect, or obtain Customer data only for the purposes described in this agreement and to at all times hold such information confidential. The obligation to protect the confidentiality of confidential information disclosed to the other party shall extend for a period of five (5) years following disclosure and shall survive early termination of this Agreement.

Section 19 - Records Retention and Availability

GeoComm agrees that the Customer, the State Auditor, or any of their duly authorized representatives at any time during normal business hours and as often as they may reasonably deem necessary shall have access to and the right to examine, audit, excerpt, and transcribe any books, documents, papers, records, etc., which are pertinent to the accounting practices and procedures of GeoComm and involve transactions relating to this Agreement.

GeoComm agrees to maintain these records for a period of three (3) years from the date of termination of this Agreement.

Section 20 – Ownership

It is agreed by and between the parties that all products created as a result of this contract will be the sole property of the Customer. With the exception of the GeoComm's proprietary software products, all products created and delivered under this agreement may be used, altered, and distributed at the Customer's discretion.

Section 21 – Nondiscrimination

During the performance of this contract, GeoComm agrees as follows:

a) GeoComm shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. GeoComm agrees to post in conspicuous places, available to employees and applicants for employment, notices setting the provisions of this nondiscrimination clause.

b) GeoComm, in all solicitations or advertisements for employees placed by or on behalf of GeoComm, shall state that such contractor is an equal opportunity employer.

c) Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

d) GeoComm shall include the provisions of the foregoing paragraphs of this section in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

Section 22 - Drug-Free Workplace to be maintained by the Contractor

During the performance of this contract, GeoComm agrees as follows:

a) GeoComm shall provide a drug-free workplace for all of their employees. GeoComm agrees to post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the workplace and specify the actions that will be taken against employees for violations of this prohibition.

b) GeoComm, in all solicitations or advertisements for employees placed by or on behalf of GeoComm, shall state that such contractor maintains a drug-free workplace.

c) Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

GeoComm shall include the provisions of the foregoing paragraphs of this section in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

Section 23 - Assignment

GeoComm's obligations under this Agreement may not be assigned or transferred to any other person, firm, or corporation without the prior written consent of the Customer.

Section 24 - Notices

All notices required or permitted under this agreement shall be in writing and shall be deemed delivered in person or deposited in the United States mail, postage prepaid, addressed as follows.

Scott County

Ray Weiser, GIS Coordinator
Scott County Administrative Center
600 West 4th Street, Davenport, IA 52801

GeoComm

Stacy Gross, Regional Account Manager
2920 Blackhawk Circle, Bellevue, NE 68123
Phone (402)292-5155 E-mail sgross@geo-comm.com

Either party may change such address from time to time by providing written notice to the other in the manner set forth above.

Section 25- Entire Agreement

This Agreement contains the entire agreement of the parties and there are no other promises or conditions in any other agreement whether oral or written. This agreement supersedes any prior written or oral agreements between the parties.

Section 26 - Amendment

This Agreement may not be modified or amended unless the amendment is made in writing and is signed by both parties.

Section 27 - Severability

If any provision of this Agreement shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. If a court finds that any provision of this agreement is invalid or unenforceable, but that by limiting such provision it becomes valid and enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

Section 28 - Waiver of Contractual Right

The failure of either party to enforce any provision of this Agreement shall not be construed as a waiver or limitation of that party's right to subsequently enforce and compel strict compliance with every provision of this Agreement.

Section 29 - Laws to be Observed

GeoComm shall keep fully informed of all Federal and state laws, all regulations pertaining to the Occupational and Safety Hazards Act (OSHA), all local laws, ordinances and regulations, and all orders and decrees of bodies and tribunals having any jurisdiction or authority, which in any manner affect the conduct of work.

Section 30 - Applicable Law

If there is any dispute concerning this agreement, the laws of the State of Iowa shall apply. Proper venue and jurisdiction for all lawsuits, claims, disputes, and other matters in questions between the parties to this agreement or any breach thereof shall be in the state of Iowa.

For Scott County

By: _____ Date: _____

Signature/Title

For GeoComm

By: _____ Date: _____

Janet Grones/Treasurer

Exhibit - A Contract Pricing for Scott County, Iowa

Itemized listing of products and services to be provided under this agreement:

Fee Description	**Costs**
Coordination/Project Management (§4.2):	$12,715
Street Centerline Database (§4.3):	$11,244
Address Point Database (§4.4 *without* field data collection, §4.4.1.9):	$7,838
MSAG/ALI Database Development/Update (§4.5):	$18,183
Supporting Data Layers (§4. 6):	$8,455
Integration/Maintenance Plan (§ 5):	$15,333
Additional GIS Services – RescueNet CAD Centerline layer Note: This cost does not include breaking of the road centerline at driveway locations.	$8,900
Subtotal	**$82,668**
Field Data Collection (§4.4.1.9):	$24,444
Total Project Fee:	**$107,112**

Notes:

In addition to the bi-monthly status reports developed and provided to Scott County and the regular status conference calls, the Coordination/Project Management cost includes one initial on-site project kickoff meeting. A total of two days has been allocated for the on-site kick-off meeting and related project initiation tasks.

For field data collection, GeoComm anticipates a total of 27 days on-site based on 4,000 sites to be verified. Each trip for fieldwork will be a maximum of 10 days. While on-site for fieldwork, GeoComm will also collect new roads as indicated by 2009 aerials or other Scott County hard copy or digital resources for no additional charge.

The Integration/Maintenance Plan cost does not include the optional GeoLynx DMS software.

1.1 Purpose

The purpose of this section is to provide respondents with sufficient base information to submit proposals meeting minimum requirements, but is not intended to limit a proposal's content or to exclude specific services or capabilities of responding firms. The section covers all major elements of the address data development and coordination scope items. A project planning item, Address Integration and Maintenance Plan is handled separately in § 5 of the RFP.

GeoComm understands.

1.2 Coordination/Project Management

The Consultant will provide coordination to ensure the success of the project. The Consultant will maintain regular contact with the county and prepare periodic progress reports throughout the project and at major milestones. The Consultant will be responsible for making all necessary contacts and arrangements with agencies involved with the addressing project (e.g. local telephone service provider(s), database service provider(s), local governments involved in address assignment, or other related agencies).

In addition to any other necessary or suggested coordination/project management services the Consultant will provide:

4.2.1 Single Point of Contact

The Consultant will assign a single point of contact to serve as the primary project manager and coordinate all aspects of the project.

Stacen Gross, GeoComm Account Manager, will be the primary contact for the Scott County project team. Stacen's contact information follows.

2920 Blackhawk Circle
Bellevue NE 68123
402-292-5155 (Office)
402-321-0817 (Mobile)
402-292-0657 (Fax)
sgross@geo-comm.com

4.2.2 Project Kick off Meeting

Consultant will coordinate a project kick off meeting with all county stakeholders and interested agencies. This shall be held at Scott County facilities and attended by the Consultant in person.

GeoComm is compliant. As is customary with our GIS projects, GeoComm proposes to conduct a project kickoff meeting involving the Scott County project team. The GeoComm Project Team Manager, Kathy Liljequist, will travel to Scott County to attend the project kickoff meeting. This will consist of two on-site project meetings over two days. Scott County should allow four hours each day for the meetings.

The first meeting will kick the project off. The kickoff meeting will occur the first day and is anticipated to last approximately four hours. The focus of this meeting will primarily be to

discuss the overall project scope of work. The meeting will include the following items:

- Introductions
- Overview of the project
- Establish communication process and status report schedule
- Determine timeline restrictions
- Gather Scott County specific information
- Identify objectives (short-term and long-term goals)
- Understand limitations
  - Political (e.g. gain understanding of Scott County's relationship with municipalities)
  - Financial – collect budget, size, personnel, and ongoing maintenance considerations to assist with the decision-making process

The following day, Kathy will spend time meeting with the GIS department(s) and other county and municipality staffs to determine what resources are available for this project. The purpose of the second meeting will be to focus on collection of resources to be used throughout this project. The GeoComm team will coordinate with Scott County and available municipalities to acquire resources and information that will be useful in completing this project successfully in an efficient manner.

4.2.3 Telco/Database Provider Coordination

Consultant will coordinate with the telephone company/database provider as necessary to synchronize MSAG/ALI/GIS databases, test data transfer solutions and update the ALI/MSAG databases.

GeoComm recognizes the significance of establishing a working relationship with other organizations throughout the project such as the individual local telephone companies, as well as the Scott County database provider, Qwest-Intrado. This coordination will primarily be in reference to updates needed in the MSAG and ALI database.

4.2.4 Bi-Monthly Progress Reports

Consultant will prepare bi-monthly progress reports to Scott County with project updates, completion statistics, county responsibilities, and similar pertinent project information to ensure good communication and adequate project planning/scheduling.

GeoComm is compliant. GeoComm will provide frequent hard copy and digital status updates. At a minimum, the project status reports will be delivered to Scott County bi-monthly, or every other month. These status reports will detail the overall progress of the project along with other important details and information such as:

- Areas completed including map(s)
- Products and digital files delivered
- Meetings held, planned, or needed
- Issues/problems encountered or anticipated
- Production goals for the next reporting period
- Schedule review

During regular, even weekly conference calls, these items, as well as any other project elements, will be discussed. GeoComm will communicate frequently with Scott County to

provide project status and to maintain ongoing communication among project team members.

In addition to conference calls and status reports, GeoComm uses several other methods to communicate project status to the team. To ensure the highest level of ongoing project communication, GeoComm will not only utilize regular conference calls and status reports but will also use online technology (Web meetings and a project Web portal). GeoComm understands ongoing communication is beneficial for successful project completion.

If desired, GeoComm will configure and host a password-protected Web portal, accessed via the Internet, to serve as a data gateway and project management tool. This Web portal will include items to ensure timely data sharing and all necessary communication for this project.

Items included are:

- a documentation library
- schedules
- the ability to post data files
- tracking data delivery status
- project status reports

Specifically, this project management Web portal will be used for continued communication and uploading and downloading data throughout the project. These features allow easier access to data and offer enhanced communication among project members.

An advanced feature of the Web portal is the ability to set up multiple security groups. With password protection and cascading security groups, administrators control information accessible to individual users or groups of users. For example, all key stakeholders, determined by Scott County, will be able to view all elements on the Web portal, where a GIS Specialist may only be able to view the GIS data elements.

4.2.5 Milestone Reports

The Consultant will prepare milestone reports to accompany significant project deliverables or major tasks elements, which should include a task/deliverable summary, and any applicable quality control metrics or metadata.

GeoComm is compliant. GeoComm will provide Scott County with reports after a particular milestone in the project has been met. The milestones will be identified and agreed upon by GeoComm and Scott County during contract negotiations. The bi-monthly project reports will detail completed and upcoming milestones along with additional status updates relevant to the overall project. These status reports, with tasks and milestones, will assist in keeping the Scott County project team aware of project status at all times.

4.2. 6 Address Integration and Maintenance Plan Site Visit

Site visit to gather data and stakeholder input in support of the Address Integration and Maintenance Plan (§5), particularly with respect to the task of address assignment and information workflows between Scott County and the various jurisdictions responsible for assigning addresses.

GeoComm specializes in listening first, then designing practical solutions. Our consultants are equipped to drive the successful completion of analysis and development of acceptable Address Assignment and GIS Maintenance Workflows based on consensus building and general project understanding. GeoComm has assisted many counties in establishing Standard Operating Procedures (SOP) for maintaining their addressing and GIS map data. GeoComm has established a sound approach so the development process which maximizes the county's resources with minimal effect while maintaining industry standards.

From day one, GeoComm will begin working on the SOP development for Scott County. GeoComm will schedule an on-site meeting by our GIS Consultant to gather needed information to develop a SOP for Scott County to maintain the GIS map data, MSAG, ALI database, and addresses. GeoComm will begin gathering information on current addressing procedures and resources for Scott County. Our consultant will meet with Scott County's key personnel who will be involved in assisting with GIS map data, MSAG, ALI database, and address maintenance. This process will include conversations, and in some cases, in person meetings with those responsible for address assignment. GeoComm understands that there are currently 17 entities providing address assignment in Scott County. The processes of the entities will be reviewed and recommendations for standard addressing and workflows will be provided to Scott County upon completion of the maintenance can SOP development portion of this project.

The consultant will analyze information and provide a preliminary copy of the SOP as workflows in Microsoft Visio format. The SOP will include items such as:

- New address processes
- GIS map data update processes
- MSAG and ALI database update processes

Once the county has sufficient time to review the preliminary documentation, a working Web session will be set up with key county personnel to discuss and adjust the preliminary SOP diagrams. This process will also assist in identifying training program recommendations specifically for Scott County based on user needs that will lead to the development of an Acceptance Test Plan (ATP) and final training agenda.

The Visio diagrams will provide Scott County with a maintenance plan that is easy to implement and adjust to current and future needs.

4.2.7 Project Wrap-up/Training/Implementation

The Consultant will conduct a site visit at or near project completion to summarize project results including QA/QC metrics, present recommendations of the Address Implementation and Maintenance Plan and provide any required training and/or implementation services.

To wrap up the project, GeoComm will provide the following QA/QC metrics:

- Summary of maintenance and quality control procedures
- Analysis results
- NENA industry standards for database and MSAG maintenance

Success of the SOP development relies heavily on the training component. The training of the data workflow and new SOP will cover the following items:

- Address assignment process
- Interdepartmental communication for maintenance processes
- NENA Standards
- GIS and database synchronization fundamentals
- Evaluation and adjustment of processes
- Identification of training needs

Over the course of the project the GIS Consultant will work closely with Scott County personnel in clearly identifying the needs of the county on each of these elements. Following the completion of the SOPs, GeoComm's consultant will return to Scott County to present the workflows and SOP recommendations. This second site visit will conclude the SOP maintenance portion of the contract.

GeoComm will provide Scott County with documents, Visio diagrams, PowerPoint, and other training materials as part of the training deliverables. Similar to the software training, GeoComm will work with Scott County to develop an ATP for the training course. This ATP will be used as a guide to ensure that the necessary elements are covered.

Standard Operating Procedure Training Plan

Course Title	Staff	Duration	Class Size	Number of Sessions
Standard Operating Procedure Training	Users	4 hours	2	1

Notes: The number of training sessions may be revised in contract negotiations based on the availability and location of trainees.
SOP development includes two site visits by our GIS consultant.

1.3 Address Street Centerline Feature

The Consultant will develop a street centerline containing 100 % of the existing streets within Scott County. Address attributes will be assigned and verified against MSAG/ALI databases and designed to support geocoding and routing applications. Where appropriate, street centerline features will be coincident with related layers such as the Emergency Service Zones (polygon layer). Quality control procedures will be implemented to ensure a very high degree of accuracy. The County will review deliverables for compliance with project specifications.

GeoComm is compliant. GeoComm will develop street centerline layer using in-house and fieldwork methods to ensure a complete street centerline layer for Scott County and all municipalities within the county.

The street centerline layer will be as accurate and complete as the resources provided and the results of conducting fieldwork for 4,000 sites. The street centerline layer will follow Emergency Service Zones (ESZ) boundaries where needed and all street segments that cross an ESZ boundary will be split.

GeoComm will use a street centerline layer which is already developed for Scott County as the starting point for this project. This street centerline layer will be modified and enhanced to ensure the resulting final street centerline layer is free of geometry and attribution errors and includes the elements as proposed under the following the requirements in this section.

The street centerline layer developed by GeoComm will pass through numerous Quality Assurance/Quality Control (QA/QC) measures prior to project completion. Some of the QA/QC audits that will be completed on the street centerline layer include:

- Address Range Audit
- Topology Audit
- Missing Attribute Audit
- Road Name Audit
- Length Audit

4.3.1 Physical Feature Characteristics

4.3.1.1 Data delivered as feature class (ESRI v9.3 File GDB format) in Iowa State Plane South, NAD 8 3 (HARN 9 6 adjustment) with units in U.S. Feet.

GeoComm is compliant. The street centerline layer developed and enhanced by GeoComm will provided to Scott County as an ESRI feature class in a an ESRI geodatabase. The GIS data layers will be projected in Iowa State Plane South, NAD 83 (HARN 96 adjustment) with units in U.S. feet.

4.3.1.2 Road features represent a complete road inventory (regardless of road class).

GeoComm is compliant. The final street centerline layer will include all roads within Scott County and municipalities in the county. The street segments will be attributed with appropriate codes depicting the road class. A resource depicting the road classes and desired codes must be provided by Scott County.

4.3.1.3 Topologically correct features (lines meet exactly, no overshoots/undershoots, no duplicate features, no extraneous nodes, etc).

GeoComm is compliant. Using a series of QA/QC topology audits GeoComm will identify any topological errors in the street centerline layer. Audits will help to identify

- duplicate road segments
- overshoots/undershoots
- true intersections where roads are not broken
- boundaries (municipal and ESZ boundaries) where roads are not broken
- overpasses and underpasses where roads are broken but should not be
- incorrect line direction

After identifying errors, GeoComm will update the street centerline to ensure it is topologically correct.

4.3.1.4 Curves are tangent and represented as true arcs.

GeoComm is compliant. GeoComm will develop and/or update existing street centerlines to ensure curves are tangent and represented as true arcs.

4.3.1.5 Break features at jurisdictional boundaries (municipal boundaries, Emergency Service Zones).

GeoComm is compliant. GeoComm will break and snap street segments where necessary to create topological accuracy and proper location of 9-1-1 addresses.

Street centerlines will be broken at:

- emergency service zone boundaries
- municipal boundaries

Breaking roads at these locations helps to ensure addresses locate in the correct community and correct ESZ boundary.

4.3.1. 6 Addressable street centerlines broken at intersections with other addressable street centerlines.

GeoComm is compliant. GeoComm will break and snap street segments where necessary to create topological accuracy and proper location of 9-1-1 addresses at true intersections. Street centerlines will be broken at true intersections but they will not be broken at overpasses or underpasses since vehicles may not be able to be routed to turn onto the intersecting roads of overpasses and underpasses

Breaking roads at true intersections helps to ensure addresses locate on the correct side of an intersection.

4.3.1.7 Non-addressed street features such as alleys, driveways, commercial access roads, roads in parks or cemeteries, trails and similar minor road class objects will be snapped to vertices at intersection with addressable street centerline features but will NOT force a break.

GeoComm is compliant. Features that will be included in the street centerline layer such as alleys, driveways, and commercial access roads, roads in parks or cemeteries, trails and similar minor road class objects will have ends nodes snapped to vertices at the intersection of other addressable street centerline features. GeoComm understands that breaking street centerline features at these intersections is not necessary.

4.3.1.8 Features built to support proper routing (Connectivity considerations for bridges/tunnels, turn-around points on divided highways, etc).

GeoComm is compliant. Street centerline features will not be broken where there is an underpass or overpass because dispatchers would not be able to have an emergency service vehicle turn directly onto these underpasses and overpasses from an intersecting street.

In addition, GeoComm will develop additional point features to depict elements such as bridges/tunnels and turn-around points on divided highways.

4.3.1.9 Streets drawn in direction of increasing address range.

GeoComm is compliant. All final street centerline segments will be digitized to depict the direction of address range increase or, on one-way streets, the direction in which traffic flows.

4.3.1.10 Features constructed as 3D poly-lines.

GeoComm will deliver GIS data with needed attributes and characteristics to provide a locatable 9-1-1 address for Scott County. The proposal does not include providing a z coordinate, which can be provided for an additional cost.

4.3.1.11 Capture missing road segments via photo interpretation from 2005/2009 orthophotos or GPS according to NENA GIS Data Collection and Maintenance Standards NENA §02- 014.

GeoComm will add new or missing roads utilizing a variety of resources, such as aerials, plat maps, GPS, or parcel right of way. GeoComm will overlay the initial street centerline over the 2005/2009 orthophotos to determine if road geometry is accurate. If street centerlines need to be adjusted to aerial images, GeoComm will adjust them to the aerial images at a zoom level of 1:386 feet for all of Scott County. Street centerlines that appear to be missing will be added to the final street centerline by digitizing them from aerial images at the same zoom level.

New roads that are not included on the aerial images can be provided by Scott County on hard copy or digital resources for incorporation into the final street centerline layer.

While conducting fieldwork for the requested 4,000 sites, GeoComm will also field collect new roads as indicated by the aerials at no additional charge.

After the street centerline layer is spatially enhanced it will be updated by GIS Specialists to be used in a dispatch GIS mapping system for locating wireline E9-1-1 calls and for routing.

4.3.2 Feature Data Attributes

4.3.2.1 Data developed to NENA Standard Data Formats for ALI Data Exchange & GIS Mapping, NENA-§22.3A of 02-010.

GeoComm is compliant. GeoComm will add the following fields to the street centerline layer and attribute required fields with information based on resources provided by Scott County.

Only fields where information is provided will be attributed.

Name	Label	Field Type	Field Length	Data Description
Segment ID	SID	Long Integer	10	Unique Road Segment ID number
Left Add Low	LLO	Long Integer	10	Lowest address on left side of street in ascending order, theoretical range
Left Add High	LHI	Long Integer	10	Highest address on left side of street in ascending order, theoretical range
Right Add Low	RLO	Long Integer	10	Lowest address on right side of street in ascending order, theoretical range
Right Add High	RHI	Long Integer	10	Highest address on right side of street in ascending order, theoretical range

Name	Label	Field Type	Field Length	Data Description
Left Add Low Physical	PLLO	Long Integer	10	Lowest address on left side of street in ascending order, physical range
Left Add High Physical	PLHI	Long Integer	10	Highest address on left side of street in ascending order, physical range
Right Add Low Physical	PRLO	Long Integer	10	Lowest address on right side of street in ascending order, physical range
Right Add High Physical	PRHI	Long Integer	10	Highest address on right side of street in ascending order, physical range
Pre Modifier	PRM	Text	12	
Prefix Directional	PRD	Text	2	Leading street direction prefix. Valid Entries: N S E W NE NW SE SW
Street Name	STN	Text	60	Valid service address of the Calling Party Number
Street Suffix	STS	Text	4	Valid Street abbreviation, as defined by the US Postal Service Publication 28, Appendix C. (e.g. AVE)
Post Directional	POD	Text	2	Trailing street direction suffix. Valid Entries: N S E W NE NW SE SW
Road Class	ROC	Text	3	Road Class as defined by the USGS National Mapping Product Standard for 1:24,000-scale and 1:25,000- scale Quadrangle Map Products. http://rockyweb.cr.usgs.gov/nmpstds/acrodocs/qmaps/5psym202.pdf
One-way	ONW	Text	1	One way road classification. Blank = No X = Opposite Direction of arc Y = In direction of arc
MSAG Community Name Left	MCL	Text	35	Valid service community name as identified by the MSAG on the left side of the street
MSAG Community Name Right	MCR	Text	35	Valid service community name as identified by the MSAG on the right side of the street
County ID Left	COL	Long Integer	5	County Identification code (usually the FIPS code) on the left side of the street in ascending order. *Note: County Identification field is used to identify the county of call origination. The Committee recommends use of the FIPS code assigned to each county by the U.S. Census Bureau*
County ID Right	COR	Long Integer	5	County Identification code (usually the FIPS code) on the right side of the street in ascending order. *Note: County Identification field is used to identify the county of call origination. The Committee recommends use of the FIPS code assigned to each county by the U.S. Census Bureau*
Source Agency	SOD	Short Integer	5	Agency that last updated the record
Date Updated	DLU	Date	10	Date of last update Format: CCYY-MM-DD
ESN Left	ESL	Text	5	Emergency service number on the left side of the street
ESN Right	ESR	Text	5	Emergency service number on the right side of the street
ZIP Left	ZSL	Long Integer	5	Valid ZIP code on the left side of the street
ZIP Right	ZSR	Long Integer	5	Valid ZIP code on the right side of the street
Federal Functional Classification	FED	Short Integer	1	This field indicates the state functional classification of the road segment
Road Exists	RDX	Text	1	Indication of whether road is built (exists) or simply platted
Route Code	RTE	Short Integer	1	This field indicates whether the segment is part of a road system
Speed Limit	MPH	Short Integer	2	Impedance field (speed in MPH) for routing purposes
Elevation From	ELF	Short Integer	1	Elevation value at start of segment (for routing purposes only)
Elevation To	ELT	Short Integer	1	Elevation value at end of segment (for routing purposes only)
Flag	FLAG	Text	10	Identification of addressing issues to be flagged using one or more error codes

Name	Label	Field Type	Field Length	Data Description
Notes	NOTE	Text	255	Discretionary notes field to store additional special or circumstantial information about the feature

4.3.2.2 Address ranges developed for both theoretical and physical address ranges.

GeoComm is compliant. GeoComm will incorporate both the theoretical and physical address ranges in each street centerline segment as determined from the resources provided by Scott County. GeoComm will work with Scott County to determine

4.3.2.3 Additional data fields: Please see "Attachment D – Street Centerline Sample Data Structure". The fields displayed in Attachment D contain NENA standard fields and additional data fields to support QA/QC, routing and other county addressing needs. Fields with blue shading are not NENA standard. This is not a mature data model with relationships, behaviors and other advanced features, but does provide a register of attributes required for the Scott County addressing project. The attributes may be subject to change based on Consultant recommendation or further county review.

GeoComm understands. GeoComm will add all NENA standard and county requested fields into the street centerline layer. Fields that will be attributed for each street segment depends on data availability and resources provided by Scott County.

4.3.2.4 Road name alias table or similar solution will be developed and incorporated into the street centerline data model (though this is not represented in Attachment D).

GeoComm is compliant. GeoComm will create an alias table and link it to the street centerline layer. Street name alias' must be provided on hard copy or digital resources from Scott County for this table to be developed.

4.3.2.5 Where appropriate, default, domain values, split rules or other advanced behaviors will be incorporated into the data model.
GeoComm is compliant.

4.3.3 Quality Assurance/Quality Control Procedures

The Consultant will implement effective QA/QC procedures to ensure consistent and reliable street centerline address data development and verification. Be sure to describe your particular QA/QC methods with regard to street centerline address feature/attribute development in the RFP response.

Quality control is an integral part of all our projects. GeoComm utilizes documented internal processes to assure the highest quality of deliverables are developed and documented. GeoComm proposes to complete several in-depth project quality assurance/quality control (QA/QC) steps to ensure the map data is accurate.

GeoComm understands it is crucial to proactively identify and correct data errors before problems are realized during an emergency 9-1-1 call in a communications center. That is why, over the years, GeoComm has developed and implemented a structured QA/QC curriculum as well as a variety of tools to assist in these processes. The QA/QC curriculum currently consists of several audits for various layers. In addition to the audits performed, GeoComm GIS specialists understand the importance of quality data and continuously review it throughout the development of the GIS data layers. The QA/QC audits and regular reviews ensure complete and accurate GIS data.

All errors discovered are reviewed and corrected throughout the project.

Additionally, GeoComm ensures the topological structure of all line work using quality control procedures which include ESRI ArcGIS topology rules.

GeoComm will perform several audits to ensure the quality of the street centerline layer. The audits used for checking the street centerline layer include:

- The **Address Range Audit** checks for overlapping road ranges. Furthermore, the audit is refined by the ESZ layer since the same ranges may exist in multiple ESZs.
- The road **Topology Audit** identifies road centerlines with invalid dangles and unbroken intersections, such as start or end points of roads that are not connected or snapped to any other intersecting roads and are not dead-ends.
  Invalid dangles are detrimental when routing emergency response vehicles. Most dispatch mapping applications are designed to calculate the quickest route and are not intelligent enough to avoid dangles in the road centerline layer. It is critical to correct invalid dangles so the most efficient route can be calculated.
- The **Missing Attribute Audit** checks for blanks and zero or null values in the address range fields. GIS Specialists will verify the results to ensure the accuracy of the errors since some road segments may have a valid zero value.
- The **Road Name Audit** compares street names to a master road name list. It identifies streets that exist in the map data but not in the master list. A master list can be a variety of sources such as a database table from another system or a database maintained manually. Typically a MSAG is utilized as the master list since it usually contains the approved street names.
- The **Length Audit** scans for segments longer than or shorter than a designated length, such as one mile. This is useful since roads are typically broken at section lines and sections are usually one mile in length. It is also useful to keep all road segments at a set length for consistency in the road centerline layer.

4.3.3.1 The Consultant's QA/QC methods will include the use of flag fields containing standard error codes associated with a particular address range or street segment.

GeoComm is compliant. As part of the GeoComm quality control process, geodatabase domains and subtypes are utilized to control data entry, reduce potential errors, and expand topology rule functionality. Using GeoLynx DMS, we are able to show which attributes and spatial geometry were modified and when in our QA/QC tracking fields. Flag fields to show error codes are not necessary for our method of data QA/QC, as we clean up the data and track modifications.

GeoLynx DMS software was optional and not included in this contract.

4.3.3.2 A notes field will be used to capture additional descriptive information on feature issues.
GeoComm is compliant.

4.3.3.3 Measureable QA/QC results should be included with the milestone street centerline report upon delivery of the final street centerline database.

GeoComm is compliant. The street centerline report will be provided with the GIS data, MSAG and ALI database analysis report.

4.4 Address Point Features

The Consultant will deliver an address point database containing all addressable features within Scott County. Unique street level addresses will be represented as individual point features. Point features for multi-unit structures that share a street level address will be resolved to the building level.

Apartments, suites and other sub address information shall be included in a separate table and related to the primary address point feature via a foreign key. Consultant will field verify multi-address structures.

4.4.1 Physical Feature Characteristics

4.4.1.1 Data delivered as feature class (ESRI File GDB format) in Iowa State Plane South, NAD 8 3 (HARN 9 6 adjustment) with units in U.S. Feet.

GeoComm is compliant. The address point layer developed and enhanced by GeoComm will provide to Scott County as an ESRI feature class in an ESRI geodatabase. The GIS data layers will be projected in Iowa State Plane South, NAD 83 (HARN 96 adjustment) with units in U.S. feet.

4.4.1.2 Database contains an address point for every addressable structure or street level address.

GeoComm is compliant. GeoComm will develop the address point layer based on resources provided by Scott County such as:

- Parcels
- Building footprints
- Aerial images
- And more

Addresses will be entered into each address point when available in one of the resources provided.

If desired, GeoComm will provide Scott County with field collection services to ensure that addressable structures which were missing from the available resources are included into the final address point layer. A base cost plus the daily cost for fieldwork is included in Section 5 Project Fee Schedule.

4.4.1.3 For single address structures, address point is placed on building (using orthophotography and/or building footprint features provided).

GeoComm is compliant. GeoComm will place address points in the center of the available building footprints or on the center of the addressable structure based on aerial images for each single addressed structure.

4.4.1.4 Mobile homes will be individually identified.

GeoComm is compliant. GeoComm will add an address point for each mobile home regardless of if it is individually addressed or if the entire mobile home park has one single address and lot numbers.

4.4.1.5 Multi-unit structures

4.4.1.5.1 Where multi-unit structures share same street address (e.g.1200 Main St, Building A, 1200 Main St., Building B) place address point for each structure.

GeoComm is compliant. GeoComm will develop an address point for each unit of a multi-unit structure which shares the same address and each unit has its own unit or building number. GeoComm will create a sub-address point layer which contains each individual unit point and the primary address layer will only contain the one point that is used for the main building.

4.4.1.5.2 Where units within a multi-unit structure are assigned individual street addresses (e.g. a duplex addressed as 1202 Main St and 1204 Main St), place address point at approximate location of access point for each unit, i.e. the door (+/-10 ft).

GeoComm is compliant. GeoComm will develop an address point for each unit of a multi-unit structure which has its own address. The address point will be placed near the location of access to each unit.

4.4.1. 6 For structures located more than 300' from addressed road segment, place point on structure and at access point (intersection of driveway/access road and main roadway).

GeoComm is compliant. GeoComm will develop two points for each addressable structure that has a driveway which is longer than 300'. One point will be placed at the center of the structure and the other will be placed near the driveway and main road intersection where access can be made.

4.4.1.7 Initial address point locations may be imported/generated from existing Bettendorf, Davenport and/or Scott County address point features, parcel features and/or the ALI database for the Scott Emergency Communications Center PSAP.

GeoComm is compliant. GeoComm will use existing resources as the basis for initial address point layer development. Updates will be made to the address point layer based on the available resources. In addition GeoComm will provide Scott County with field collection services to ensure that addressable structures which were missing from the available resources are included into the final address point layer.

4.4.1. 8 Address point additions or edits will be modified as necessary via photo interpretation from 2009 orthophotos or GPS methods according to NENA GIS Data Collection and Maintenance Standards NENA 02-014. See http://www.nena.org/technical-standards §02-014.

GeoComm is compliant. After initial development of the address points, GeoComm will adjust address points to the tops of the corresponding addressable structures using the 2009 orthophotos as a reference.

GeoComm will also complete fieldwork services for the 4,000 sites identified by Scott County to collect GPS locations of address points missing from the initial address point layer.

4.4.1.9 Consultant will field verify address points for multi-unit structures including multi-unit houses (duplexes, apartments), business parks, office buildings, shopping centers, etc. Field work will be itemized separately on “Attachment B - Project Fee Schedule”.

GeoComm is compliant. GeoComm will complete fieldwork for 4,000 sites in Scott County.

4.4.2 Feature Data Attributes

4.4.2.1 Data developed to NENA Standard Data Formats for ALI Data Exchange & GIS Mapping, NENA-02-010. See http://www.nena.org/technical-standards § 02-010.
GeoComm is compliant. GeoComm will add the following fields to the address point layer and attribute required fields with information based on resources provided by Scott County. Only fields where information is provided will be attributed.

Name	Label	Field Type	Field Length	Data Description
Community ID	CID	Long Integer	10	Community FIPS number
Site ID	SIN	Long Integer	10	Unique Site ID Number
Site Address Number	SAN	Long Integer	10	The numeric identifier for a land parcel, house, building or other feature, as defined by the official address authority for the given jurisdiction.
Site Address Number Suffix	SANSUF	Text	8	The non-integer portion of the identifier for the house, building or other feature which follows the address number itself, as defined by the official address authority for the given jurisdiction. (e.g. 1/2 , B, etc).
Pre Modifier	PRM	Text	20	A word or phrase that precedes all other elements of the street name and modifies it, but is separated from the street name by a street name pre-directional and/or pre-type.
Prefix Directional	PRD	Text	2	Leading street direction prefix. Valid Entries: N S E W NE NW SE SW
Street Name	STN	Text	60	Valid street name
Street Suffix	STS	Text	4	Street type as defined by the USPS Publication 28 Appendix C
Post Directional	POD	Text	2	Trailing street direction suffix. Valid Entries: N S E W NE NW SE SW
Post Modifier	POM	Tex	20	A word or phrase that follows all other elements of the street name and modifies it, but is separated from the street name by a street name post-directional and/or posttype (e.g. 12th St N Extended, 32nd Ave A, etc).
Street Address	STRADD	Text	126	[PRM] + [PRD] + [SAN] + [SAN2] + [STN] + [STS] + [POD] + [POM]
Zip Code	ZIP	Long Integer	5	Valid Zip Code
Structure ID	STRUCTID	Text	10	Unique structure ID
Building Type	BLDGTYP	Text	20	The type of strucure (when several structures are found at the same address). E.g., BuildingB, Tower 2, Block 5, etc.
Building Identifier	BLDGID	Text	10	The letters, numbers, words or combination thereof used to distinguish one structure from another when several occur at the same address (e.g., Building B, Tower 2, Block 5, etc).
Occupancy Address	OCCADD	Text	30	[BLDGTYP] + [BLDGID]
ESN	ESN	Text	5	Emergency Service Number associated with this House Number, Street Name and Community Name.
Site Type	STY	Text	2	Type of Structure – Classification Field
Source of Data	SOD	Text	5	Agency that last updated the record

Name	Label	Field Type	Field Length	Data Description
Date Updated	DOL	Date	8	Date of last update Format: CCYYMMDD
Address Status	STATUS	Text	1	Status of address point feature (active or inactive). E.g. unimproved subdivision lots are inactive, but may be assigned street address.
Flag	FLAG	Text	10	Identification of addressing issues to be flagged using one or more error codes.
Notes	NOTE	Text	255	Discretionary notes field to store additional special or circumstantial information about the feature.

4.4.2.2 Appropriate ESN codes will be assigned to each address.

GeoComm is compliant. GeoComm will add ESN attributes into the ESN field in the address point layer to correspond to the ESZ boundary layer ESN attributes.

4.4.2.3 Additional data fields: Additional data fields: Please see “Attachment E –Address Point Sample Data Structure”. The fields displayed in Attachment E contain NENA standard fields and additional data fields to support QA/QC, routing and other county addressing needs. Fields with blue shading are not NENA standard. This is not a mature data model with relationships, behaviors and other advanced features, but does provide a register of attributes required for the Scott County addressing project. The attributes may be subject to change based on Consultant recommendation or further county review.

GeoComm understands. GeoComm will add all NENA standard and county requested fields into the address point layer. Fields that will be attributed for each address point depends on data availability and resources provided by Scott County.

4.4.2.4 Create sub-address (apartment/suite/unit) feature database and one-to-many relationship class with address points based on Site Identification Number [SIN] field.

GeoComm is compliant. GeoComm will develop a sub-address point layer which will contain individual unit points which will be tied to the address point layer using the SIN field. The sub-address point layer will include the following fields. Only fields where information is provided will be attributed.

Name	Label	Field Type	Field Length	Data Description
Site ID	SIN	Long Integer	10	Unique Site ID Number
Floor Type	FLOORTYP	Text	20	The word describing the horizontal division of a building where an address is located (e.g. 2nd Floor, Floor 3, Mezzanine Level 1, etc).
Floor ID	FLOORID	Text	10	The numbers, letters, words or combination thereof distinguishing one floor from another within a structure (e.g. 2ndFloor, Floor 3, Mezzanine Level 1, etc).
Unit Type	UNITTYP	Text	20	The word describing the type of occupancy within a building or structure (e.g. Apartment12C, Suite 4, etc).
Unit Identifier	UNITID	Text	10	The numbers, letters, words, or combination thereof distinguishing one occupancy from another within a given address (e.g. Apartment 12C, Suite 4, etc).
Occupancy Address	OCCADD	Text	60	[BLDGTYP] + [BLDGID] + [FLOORTYPE] + [FLOORID] + [UNITTYP] + [UNITID]
Source of Data	SOD	Text	5	Agency that last updated the record
Date Updated	DOL	Date	8	Date of last update Format: CCYYMMDD
Flag	FLAG	Text	10	Identification of addressing issues to be flagged using one or more error codes.

Name	Label	Field Type	Field Length	Data Description
Notes	NOTE	Text	255	Discretionary notes field to store additional special or circumstantial information about the feature.

4.4.2.5 Alias name capabilities will be provided via fields, look up tables or some other solution for all addresses associated with a business, school, place of worship, landmark, or similar location with a common reference name. Aliases will also be provided for address point features with multiple street name aliases (e.g. Welcome Way/Harrison Street/Hwy 6 1). This data requirement is not represented in Attachment E.

GeoComm is compliant. Our approach to alias names will vary depending on resources available for the project.

4.4.2. 6 Where appropriate, default, domain values, split rules or other advanced database behaviors will be incorporated into the data model.

GeoComm is compliant.

4.4.3 Quality Assurance/Quality Control Procedures

The Consultant will implement effective QA/QC procedures to ensure consistent and reliable address point feature data development and verification. Be sure to describe your particular QA/QC methods with regard to address point features/attribute development in the RFP response.

GeoComm is compliant. GeoComm's QA/QC processes are outlined throughout this proposal.

4.4.3.1 QA/QC processes will be used including the addition of flag fields to capture information about standard errors encountered during address point development.

GeoComm is compliant. GeoComm will complete several audits to ensure the quality of the final address point layer. Audits such as the missing attribute audit which identifies address points with missing addresses and comparisons to Scott County's provided resources will be completed to ensure an address exists and that the address is accurate.

GeoComm will work with Scott County to determine accurate address attributes if any discrepancies are determined by the audits.

4.4.3.2 A notes field will be used to capture any additional descriptive information on feature issues.

GeoComm is compliant.

4.4.3.3 Measureable QA/QC results should be included in a report with delivery of the address point database final deliverable.

GeoComm is compliant.

4.5 Master Street Address Guide (MSAG), Address Location Identification (ALI) Development/Update

The MSAG (Master Street Address Guide) is the database that is used to route E911 calls to the proper answering point (PSAP) and to determine which emergency service providers are responsible for responding to each address. The MSAG is therefore a critical part of an enhanced E911 call management center.

The Automatic Location Identification (ALI) database provides for an address display of the subscriber calling 911. With ALI, the PSAP receives the ANI display including the subscriber's address, community, state, the associated ESN information (police, fire, rescue), type of service and if a business, the name of the business.

The Consultant is required to update the current MSAG and ALI databases housed by the 911 provider telephone company in a manner considered standard in the industry. This information must meet all requirements as set forth by the National Emergency Number Association (NENA). Updated MSAG and ALI databases will be delivered noting all deletions, additions or modifications made.
The Consultant is expected to communicate and/or coordinate development efforts with the SECC CAD/RMS vendor to be selected in August, 2009, and local Telco or database providers as necessary. The street centerline and address point features developed in GIS will be synchronized with the MSAG and ALI databases. An Address Integration and Maintenance Plan (§ 5) prepared by the Consultant will outline a methodology, using applicable NENA standards, to keep the databases in synch as changes and updates occur.

GeoComm is compliant. All GIS map data layers developed throughout this project will be developed based on resources provided by Scott County. Upon completion of the street centerline layer, GeoComm will complete a synchronization analysis to determine the synchronization rate of the GIS map data, Automatic Location Identification (ALI) database, and the Master Street Address Guide (MSAG).

As a company that specializes in GIS, specifically for E9-1-1 wireline and wireless call plotting, GeoComm knows the importance of accurate data. Of equal importance is the synchronization of the three primary data components related to accurately locating the origin of an E9-1-1 call: the GIS map data, ALI database, and the Master Street Address Guide (MSAG).

For over 14 years, GeoComm has provided our customers with data synchronization services focused on increasing the accuracy and synchronization among the three key components - the greater synchronization between them the higher probability for accurately pin-pointing emergency call locations.

GeoComm proposes to perform an analysis that will provide you with an overview of issues related to the synchronization and accuracy of the three components. Synchronization issues may be due to errors in any of the three components or a combination of all of them. This analysis is important to identify any potential errors that could occur between these three elements during a live 9-1-1 call so they can be corrected.

The issues will be identified by first reviewing the MSAG and ALI database individually and then comparing each of the components to one another. The following sections describe some of the processes used by GeoComm GIS Specialists to identify and then compile a report detailing synchronization and accuracy of the data.

Reviews

Reviews will be conducted on the MSAG and ALI database to verify information contained in each is accurate, consistent, and complete.

ALI Database

GeoComm will review addresses and community names in the ALI database. Incorrect, incomplete, and inconsistent addresses or community names in the ALI database may result in 9-1-1 addresses not matching the MSAG or GIS map data. Addresses from the ALI database must match the MSAG and GIS map data to plot wireline 9-1-1 calls.

MSAG

GeoComm will review the road names, address ranges, ESN, and community names in the MSAG. Incorrect, incomplete, and inconsistent road names, address ranges, ESNs, and community names in the MSAG may result in valid 9-1-1 addresses not matching the MSAG or GIS map data.

GeoComm will review the MSAG for any overlaps as these could be detrimental in plotting wireline 9-1-1 calls. Although an MSAG containing overlaps may rarely cause problems it is standard to only have one record for a given street name and range.

Synchronization

Following the reviews of these components GeoComm will perform several processes to evaluate the synchronization of all three components. First, the synchronization of the ALI database, MSAG, and GIS map data will be reviewed. This will provide a list of all ALI database records that are not MSAG-valid, as well as a list of ALI database records that do not match the GIS map data.

Second, GeoComm will evaluate the synchronization of the MSAG and the GIS map data. This synchronization review may produce a list of possible errors in the MSAG and GIS map data. Errors are due to MSAG records which are not represented the same in the GIS map data. It may not be necessary to “fix” all errors in the MSAG because the errors may not affect the accuracy of the ALI database records matching the GIS map data.

ALI Database, MSAG, and GIS Map Data

First, GeoComm will compare the MSAG and ALI database. This comparison may result in a list of ALI database records that are not MSAG-valid.

Following this comparison, GeoComm will geocode the address records within the ALI database to the road centerline layer. This process also compares the ESN assigned to the ALI database addresses to verify addresses locate within the correct boundary in the GIS map data. Geocoding the specific records in the ALI database will denote which addresses match the GIS map data. A list of errors will be compiled from the addresses that do match. These errors could exist for a variety of reasons which will be outlined in the final report.

MSAG and GIS Map Data

GeoComm will geocode records in the MSAG to the road centerline layer. This will be completed to provide a list of possible MSAG errors. The geocoding process also compares the ESN boundaries assigned to the MSAG addresses to verify addresses located in the correct boundary in the GIS map data. Geocoding the low and high addresses in the MSAG denote which MSAG records match the GIS map data. A list of errors will be compiled from the addresses that do not match. These errors could exist for a variety of reasons which will be outlined in the final report.

Final Report

After each step is complete the results will be compiled into a hard copy report and digital lists of the errors will be created. The hard copy report will provide you with examples of errors and possible solutions that may increase the synchronization of the components. The lists of errors will enable GeoComm to begin updating the GIS map data, ALI database, and MSAG.

ALI Database and MSAG Updates

Updates to the GIS map data, ALI database, and MSAG will be based on the fallout results of the analysis after final review from Scott County. GeoComm will provide Scott County or Scott County's database provider, Intrado, with a list of updates needed to be made in the ALI database and MSAG for proper synchronization to the GIS map data. If clarification of any update is needed, GeoComm will work closely with Scott County and Intrado to ensure accurate updates are made. This will ensure the GIS map data, ALI database, and MSAG are synchronized.

A follow up second analysis of the GIS map data, ALI database, and MSAG will be completed by GeoComm after updates are made to the GIS map data and Scott County's database provider has completed all requested ALI database and MSAG changes. Once the follow up analysis is complete, GeoComm will complete any remaining GIS map data updates and submit any remaining ALI database and MSAG updates to Intrado.

4.5.1 Master Street Address Guide (MSAG) Development

4.5.1.1 Delivered as a complete database to Scott County.

GeoComm is compliant. After GeoComm has submitted all final MSAG updates to Intrado and all updates have been made, GeoComm will request an updated copy of the Scott County MSAG and provide the latest copy to Scott County.

4.5.1.2 Consultant will provide to the County, a digital listing of corrections, additions, and deletions needed to update the existing MSAG. Required modifications shall be appended to the original MSAG with edits clearly identified.

GeoComm is compliant. GeoComm will submit all updates to the MSAG to Scott County and, if desired, to Intrado. GeoComm will also make the updates to the latest copy of the Scott County MSAG and provide the updated MSAG to Scott County with the MSAG updates noted.

4.5.1.3 Development and data exchange delivery of the MSAG updates will be to NENA Data Standards.

GeoComm is compliant.

4.5.1.4 Submit revised MSAG to database provider and confirm acceptance/update status.

GeoComm is compliant. GeoComm will provide Scott County's ALI database provider, Intrado, with all MSAG updates through 9-1-1 Net.

4.5.2 Address Location Identification (ALI) Development

4.5.2.1 Delivered as a complete database to Scott County.

GeoComm is compliant. After GeoComm has submitted all final ALI database updates to Intrado and all updates have been made, GeoComm will request an updated copy of the Scott County ALI database provider and provide the latest copy to Scott County. The cost to obtain the ALI database is Scott County's responsibility.

4.5.2.2 Consultant will provide to the County, a digital listing of corrections, additions, and deletions needed to update the existing ALI. Required modifications shall be appended to the original ALI with edits clearly identified.

GeoComm is compliant. GeoComm will submit all updates to the ALI database to Scott County and, if desired, to Intrado. GeoComm will also make the updates to the latest copy of the Scott County ALI database and provide the updated ALI database to Scott County with the ALI database updates noted.

4.5.2.3 Development and data exchange delivery of the ALI updates will be to NENA Data Standards in order to facilitate automated update.

GeoComm is compliant.

4.5.2.4 Verify 98% accuracy of records compared to MSAG/GIS database. (See § 4.5.3.4).

GeoComm is compliant. GeoComm will continue to complete synchronization audits until there is a 98 percent or better match rate between the GIS map data and MSAG.

4.5.2.5 Submit revised ALI to database provider and confirm acceptance/update status.
GeoComm is compliant. GeoComm will provide Scott County's ALI database provider, Intrado, with all ALI database updates through 9-1-1 Net.

4.5.3 Quality Assurance/Quality Control Procedures

The Consultant will implement effective QA/QC procedures to ensure consistent and reliable MSAG/ALI Database data development, synchronization and verification. Be sure to incorporate the QA/QC requirements below and describe any additional QA/QC methods with regard to ALI/MSAG development in the RFP response.

GeoComm is compliant. The QA/QC methods completed will consist of numerous geocodes and audits to ensure the GIS map data, ALI database, and MSAG are all in sync.

4.5.3.1 During development, the Consultant will synchronize GIS/ALI/MSAG databases to ensure that address information is consistent. The Address Integration and Maintenance Plan (§5) will detail a method of maintaining and synchronizing the MSAG, ALI and GIS address databases in an ongoing maintenance/update environment.

GeoComm is compliant. The SOP development and training will include the processes for maintaining the synchronization of the GIS map data, ALI database, and MSAG.

4.5.3.2 Consultant will compare GIS/ALI/MSAG databases and incorporate any changes, corrections, deletions encountered during verification. A listing of all address conflicts and resolutions will be provided to the County including any unresolved conflicts.

GeoComm is compliant.

4.5.3.3 As part of the QA/QC process the Consultant will geocode the ALI database against the address point database, street centerline file physical address range and street centerline file theoretical range. An exception report will be provided and resulting XY coordinates stored within the ALI database (WGS 8 4 or NAD 8 3 Longitude/Latitude).

GeoComm is compliant. GeoComm will geocode the ALI database to the address point layer and vice versa and geocode the ALI database to the street centerline layer to ensure accuracy. Any errors determined will be compiled into lists.

4.5.3.4 Pursuant to industry standards, the Consultant shall deliver a countywide MSAG and GIS address database that correctly matches a minimum 98% of the telephone subscriber records (ALI database). See NENA Information Document for Synchronizing Geographic Information System databases with MSAG & ALI" - NENA 2-001, Version 1, June6, 2009. This may require several iterations of database comparison and error corrections.

GeoComm is compliant.

4.5.3.5 Consultant will notify the county of all unaddressed structures, landmarks, or other non standard records in the ALI data (e.g. pay phones, special private VOIP records, etc) that require new address assignment or special consideration.

GeoComm is compliant. GeoComm will analyze unaddressed structures, landmarks, etc. and will provide a list of unaddressed structures, landmarks, or other standard records in the ALI data to Scott County. This proposal does not include addressing these locations. This service can be provided at an additional cost.

4. 6 Supporting Data Layers

The Consultant will provide supporting layers for use with the E911 CAD system. The additional layers include the following features.

4.6.1 Emergency Service Zone (ESZ) – Polygon

4.6.1.1 Eliminate null/sliver polygons, features will not overlap.

GeoComm is compliant. GeoComm will develop a polygon layer which will depict the unique emergency service zones in Scott County. The ESZ layer will be developed based on the following Scott County layers and additional information obtained from Scott County:

- Scott County fire layer
- Scott County ambulance district

In addition to these two layers, GeoComm will provide Scott County with a map of each of the provided boundary layers listed above plus an additional map where Scott County can draw the unique law enforcement boundaries on.

GeoComm will work with Scott County to develop the finalized ESZ boundary layer. After the three layers have been combined to create one ESZ boundary layer, GeoComm will provide Scott County with a map depicting the unique service area boundaries. The separate emergency service zone boundaries will be attributed with unique emergency service numbers (ESN) based on information provided by Scott County or as determined by the Scott County MSAG.

Subscription-based ESZs (individual residential ESZs) can be developed for an additional fee.

After the ESZ layer has been reviewed by Scott County and any changes have been made GeoComm will complete audits to ensure there are no topology errors (e.g. no gaps or slivers). Any errors determined by these audits will be fixed by GeoComm.

4.6.1.2 Provide relational check of ESZ, Emergency Service Number (ESN) and Emergency Service Agency (ESA) data.

GeoComm is compliant. GeoComm will complete comparisons to ensure the emergency service agencies and emergency service numbers assigned to each unique boundary is accurate. Any updates needed will be completed by GeoComm.

4.6.1.3 ESZ Boundaries should be joined to jurisdictional boundaries where appropriate (e.g. roads, rivers, municipality). All coincident boundaries should be exact (joined vertices to vertices).

GeoComm is compliant. Where appropriate GeoComm will ensure the ESZ boundaries are aligned with appropriate adjoining features such as street centerlines, municipal boundaries, etc. A multi-layer topology audit will be completed to ensure ESZ boundaries are joined at each vertice in the street centerline layer and municipal boundaries layer. Any errors determined from this audit will be corrected by GeoComm.

4.6.1.4 Shall be attributed according to section 22.3B of NENA-02-010.

GeoComm will add the following fields to the ESZ boundary layer and attribute required fields with information provided by Scott County or determined from the MSAG. Only fields where information is provided will be attributed.

Name	Label	Field Type	Field Length	Data Description
Community ID	CID	N	10	Unique Community ID Number i.e. FIPS, GEOCODES, etc.
County ID	COI	AN	5	County Identification code (usually the FIPS code). *Note: County Identification field is used to identify the county of call origination. The Committee recommends use of the FIPS code assigned to each county by the U.S. Census Bureau*
PSAP ID	PSI	AN	4	Code identifying the PSAP associated with the assigned ESN
Agency ID	AID	N	9	Emergency Service Agency ID
ESN	ESN	N	5	Emergency Service Number associated with this House Number, Street Name and Community Name. Note: The Service Provider, providing *the E9-1-1 Selective Routing will assign ESN's.*
Source of Data	SOD	A	5	Agency that last updated the record
Date Updated	DLU	N	10	Date of last update Format: CCYY-MM-DD

4.6.2 Emergency Service Agency Location Layer– Point

4.6.2.1 To be attributed per NENA-02-010 section 22.4A.

GeoComm is compliant. GeoComm will develop an emergency service agency location layer based on information provided by Scott County. At a minimum, the following information should be provided by Scott County:

- Latitude and longitude of the agency
- Agency name

GeoComm will add the following fields to the cell site coverage layer and attribute required fields with information provided by either Scott County or the wireless providers.

Only fields where information is provided will be attributed.

Name	Label	Field Type	Field Type	Data Description
Agency Type	ATY	A	1	Law = L Fire = F Emergency Medical Service = E
County ID	COI	AN	5	County Identification code (usually the FIPS code). Note: County Identification field is used to identify the county of call origination. The Committee recommends use of the FIPS code assigned to each county by the U.S. Census Bureau
Community ID	CID	N	10	Unique Community ID Number i.e. FIPS, GEOCODES, etc.
Agency ID	AID	N	9	Emergency Service Agency ID defined with the first 5 digits as the County ID code and the last 4 digits as the locally assigned agency code
Agency Name	ANA	A	35	Name of Agency
Agency Contact	ACO	A	25	Agency Contact Person
Agency Address	AAD	A	25	Street Address of Agency Facility
MSAG Community Name	MCN	A	35	Valid service community name as identified by the MSAG
State/Provin ce	STA	A	2	Alpa U.S. State or Canadian province abbreviation i.e. TX (Texas), ON (Ontario)
Telephone Number	TEL	A	12	Telephone Number of Agency Format: NPA-NXX-XXXX
Source of Data	SOD	A	5	Agency that last updated the record

Name	Label	Field Type	Field Type	Data Description
Date Updated	DLU	N	10	Date of last update Format: CCYY-MM-DD

4.6.3 Cell Tower Sites – Point

4.6.3.1 To be attributed per NENA-02-010 section 22.4B.

GeoComm is compliant. GeoComm will develop a cell tower site layer based on information obtained by Scott County from wireless providers. GeoComm will add a point to the layer for every cell tower site as depicted by the information provided. At a minimum, the latitude and longitude of the cell tower site should be provided by Scott County:

GeoComm will also add the following fields to the cell tower sites layer and attribute required fields with information provided by either Scott County or the wireless providers.

Only fields where information is provided will be attributed.

Name	Label	Field Type	Field Length	Data Description
LDT Provider ID	LDT	AN	8	LDT Provider Identification Code. Codes to be developed and held by NENA
Tower ID	TIN	A	10	Tower Identification Number
Tower Address	TAD	A	35	Tower street address
Tower Community	TWN	A	25	Tower community
Tower State	TSA	A	2	Tower state
Number of sectors	TNO	N	1	Number of sector faces (1=360 deg)
Ground elevation	GEL	N	8	Ground Elevation (nnnnn.nn)
Tower height	THT	N	4	Height of tower
Height/elev. units	ZUN	A	1	F=feet, M=meters of Ground Elevation and Tower Height
Range	RNG	N	6	Default range of tower based on power settings of tower. Units: miles. Format: nnn.nn (two decimal places)
Antenna Orientations	AOR	A	20	List of antenna orientations, separated by spaces or commas (i.e. compass degrees or compass directional)
Cell Type	CTP	A	1	A=Analog (900MHz), P=Digital (PCS), T=TDMA (Digital AMPs) – could expand depending on needs
Comment	CCM	A	60	Comment
Source of Data	SOD	A	5	Agency that last updated the record
Date Updated	DLU	N	10	Date of last update Format: CCYY-MM-DD

4.6.4 Cell Site Coverage - Polygon

4.6.4.1 Depicting the area covered by cell towers and service providers, including the sector or omni cell coverage area if this information is available.

GeoComm is compliant. GeoComm will develop a wireless Phase I cell site coverage layer in order for Scott County to plot wireless Phase I calls.

GeoComm will develop and attribute a cell site coverage layer for each sector or

omni coverage area based on cellular data resources supplied by Scott County. Each cellular coverage area will be a polygon representing the approximate coverage area for each sector or omni coverage and will be attributed with wireless carrier name, unique ID/address, and sector number.

GeoComm will complete in depth QA/QC procedures to ensure the accurate plotting of wireless Phase I 9-1-1 calls to the appropriate cellular sectors or omni coverages.

Wireless routing sheets obtained by Scott County from the wireless providers must be provided for development of this layer. The routing sheets should include:

- Latitude/Longitude coordinates of the tower
- Coverage Type: Omni or Sectorized. If the tower is sectorized provide:
  - Azimuth/Orientation
  - Sector Bandwidth
- Unique ID
- Sector ID
- Sector Number
- Wireless Company Name
- Radius

These resources are essential for a complete and accurate cell site coverage layer.

4.6.4.2 This layer to be attributed per NENA-02-010 section 22.

GeoComm is compliant. GeoComm will add the following fields to the cell site coverage layer and attribute required fields with information provided by either Scott County or the wireless providers. Only fields where information is provided will be attributed.

Name	Label	Field Type	Field Length	Data Description
LDT Provider ID	LDT	AN	8	LDT Provider Identification Code. Codes to be developed and held by NENA
Cell Site ID	CEL	AN	6	Identification number indicating a geographic region of wireless coverage. When Phase II location cannot be provided, Phase I information should be reported, i.e., the cell site or sector where the call is received.
Sector number	SNO	N	1	Number of this sector (face) 1-9
Sector ID	SEC	AN	2	Sub set/section of a cell. When Phase II location cannot be provided, Phase I information should be reported, i.e., the cell site or sector where the call is received.
ESRD	ESD	N	10	ESRD (P-ANI) assigned to this cell/sector
Sector Antenna Orientation	ANT	N	3	Center of antenna orientation for this face (i.e. Compass degrees or compass directional)
Coverage angle	CAG	N	3	Maximum angle of coverage for this face in miles or kilometers.
Maximum Range	SRG	N	6	Maximum range for this face
Comment	COM	A	60	
Coverage source	SSR	A	1	C=Company Map, D=Digital data from Company, P=GIS Propagation Study, L=Line of Site analysis, R=Range Def
Ground elevation	GEL	N	8	Ground (surface) elevation (nnnnn.nn)
Tower height	THT	N	8	Height of tower (nnnnn.nn)
Observed height	OHT	N	8	Amount to add to each point visible from tower
Height/elev. units	ZUN	A	1	F=feet, M=meters of Ground Elevation, Tower Height, and Observed Height

Name	Label	Field Type	Field Length	Data Description
Spot Elevation	SPO	N	8	Spot elevation for the tower
Vertical angle above	SV1	N	3	Possible angle above the horizon compass degrees or compass directional.
Vertical angle below	SV2	N	3	Possible angle below the horizon compass degrees or compass directional.
Inside radius	RD1	N	8	Starting radius (if any – Maximum range is outside radius) in feet or meters.
Source of Data	SOD	A	5	Agency that last updated the record
Date updated	DLU	A	10	Date of last update Format: CCYY-MM-DD

As SECC moves forward with a new CAD software package based on a GIS address database, Scott County will be the agency responsible for updating and maintaining the information. The authority for address assignment however, will remain within the jurisdictions currently responsible for those tasks. Scott County recognizes the need to develop comprehensive workflows, methods and/or tools that will permit centralized address database maintenance, promote inter-agency communication and support, and respect existing addressing authority structures.

As mentioned in § 4.5 of the RFP there is also a need to keep the GIS/ALI and MSAG databases in close agreement/synchronization. NENA currently provides standards for transferring data from one system to another via XML. The Consultant will provide support to properly implement these transfer standards and will coordinate with the local telephone company or other database providers to ensure agreement.

In order to properly plan for and successfully integrate the Scott County address development project with other agencies and databases, the Consultant will prepare an Address Maintenance and Integration Plan which will outline procedures and best practices for address database maintenance and integration from a technical and organizational perspective.

Specifically, the Address Integration and Maintenance Plan should include:

5.1 GIS Data Maintenance

Suggested approach for maintenance of the GIS street centerline and address point features in the ESRI ArcGIS Desktop and/or Arc Server environment.

GeoComm is compliant. Point file maintenance recommendations are included in the SOP and maintenance document described in Section 2 of this response.

5.2 Computer Aided Dispatch (CAD) Database Integration/Implementation

Provide consideration for the integration of GIS/ALI/MSAG databases with the SECC CAD software including any import/export routines or practices to support regular (and preferably automated) updates to the CAD software geofiles.

GeoComm is compliant. GeoComm will review Scott County's CAD requirements for GIS and will provide suggestions for updating the data to meet those requirements. In addition, GeoComm will provide recommendations for regular data file updates as part of the maintenance plan/SOP documents. GeoComm has previously developed GIS data used by the New World Systems CAD GIS application for a customer site in Nebraska.

5.3 Data/Address Standardization

Identify address and data standardization best practices, design strategies or tools that will help ensure consistent address quality within and between address databases.

GeoComm is compliant. GeoComm follows NENA standards for GOS data development and address assignment. Al recommendations will be grounded in these standards and any GIS or databases reviewed that do not follow standards will be documented

5.5 Database Synchronization/Data Exchange

Identify the maintenance and synchronization procedures for GIS/ALI/MSAG data to ensure that address information is consistent across these databases and the entities that maintain them. It is Scott County's desire to implement the NENA standards for data exchange detailed in the document, "NENA Standard Data Formats for ALI Data Exchange & GIS Mapping, NENA-02-010".

GeoComm is compliant. GeoComm follows NENA standards for GIS data development and address assignment. All recommendations will be grounded in these standards and any GIS or databases reviewed that do not follow standards will be documented. These situations will then be brought to the Scott County team's attention. In addition, GeoComm's GIS team has developed processes for reviewing and confirming the synchronization between the various 9-1-1 databases. These processes will be employed to ensure proper synchronization of the Scott County GIS, ALI and MSAG databases

5. 6 Address Assignment and Maintenance

There are numerous jurisdictions responsible for address assignment within Scott County. As a consequence it is challenging to manage and update address data, ensure proper notification and encourage standards. The Consultant will research current address assignment/maintenance and information workflows between Scott County and the various jurisdictions responsible for these tasks and provide recommendations and solutions for improvement.

GeoComm is compliant. For an overview and description of the SOP/maintenance development plan please refer to section 2 of this response.

5.6.1 Inventory/Evaluation

Inventory and report existing county address assignment/maintenance practices as a starting point for evaluation. Chart current workflows.

GeoComm is compliant. As outlined in section 2, GeoComm will review and document Scott County's current address assignment and maintenance processes and will offer suggested improvements along with a plan for maintaining the updated street centerline data to ensure that the data meets maintenance requirements for E9-1-1.

5.6.2 Address Assignment Planning

With county and other stakeholder input, plan/develop/suggest new processes, tools, etc to improve address assignment and maintenance. Specifically, the county is interested in a solution that will accommodate multiple jurisdictions, leverage current technology, and bring a measure of standardization and verification to the process. Provide recommendations and diagram new workflows.

GeoComm is compliant. GeoComm's consultants will meet with county stakeholders to review current processes and to update those processes based on the newly updated GIS data. This process is outlined and described in Section 2 (SOP Development).

ADDITIONAL SERVICES

After the initially developed road centerline layer is updated, GeoComm will create a copy of it for edits to be completed. GeoComm will edit the new copy of the road centerline layer for use in the county's RescueNet CAD system from Zoll Data Systems. Edits will include breaking road centerline segments at additional intersections and re-assigning address ranges. In this road centerline layer, road centerlines will be broke where they intersect with alleys and other access roads such cemetery and park roads. Breaking road centerlines requires address ranges to be re-dispersed among the two new segments. GeoComm will re-assign road address ranges for road centerlines which were broken.

GeoComm Deliverables

Project deliverables to Scott County include:

- Project schedule
- One on-site project kickoff meeting
- One initial on-site meeting for Standard Operating Procedures (SOP) development
- One Web meeting to discuss the preliminary SOP documentation
- SOP Development and one on-site SOP training session
- SOP Document to include:
  Integration and Maintenance Plan
    - New address processes
    - GIS map data update processes
    - MSAG and ALI database update processes
    - Visio Diagram
- Bi-monthly status reports
- Monthly conference calls
- Public awareness samples (if fieldwork is needed)
- Updated MSAG
- Updated ALI Database

GeoComm will deliver the final GIS map data layers as ESRI feature classes in a an ESRI geodatabase. The GIS data layers will be projected in Iowa State Plane South, NAD 83 (HARN 96 adjustment) with units in U.S. feet. The GIS map data layers delivered will include:

- Street centerline layer
- Address point layer
- Sub-address point layer
- ESZ layer
- Emergency service agency location layer
- Cell tower sites layer
- Cell site coverage layer

GeoComm will deliver an additional road centerline layer to Scott County for use in the RescueNet CAD system. This road centerline layer will include the following changes:

- Roads broken at intersections will include the following access roads:
    - Parks
    - Alleys

Data delivery: CD in ESRI format in an agreed upon projection.

GeoComm will guarantee the quality of the GIS map data for a period of one year from the date of delivery. Any data errors discovered by Scott County within this period should be communicated to the project management team for immediate resolution.

Relinquishment of Data Rights

GeoComm will NOT retain any rights of ownership, copyrights, or distribution rights for the data created for Scott County. Upon completion of the project, the data will be delivered to Scott County for use at their discretion. In addition, GeoComm has an established level of security and follows standard operating procedures that eliminate the risk of unauthorized access to confidential customer data.

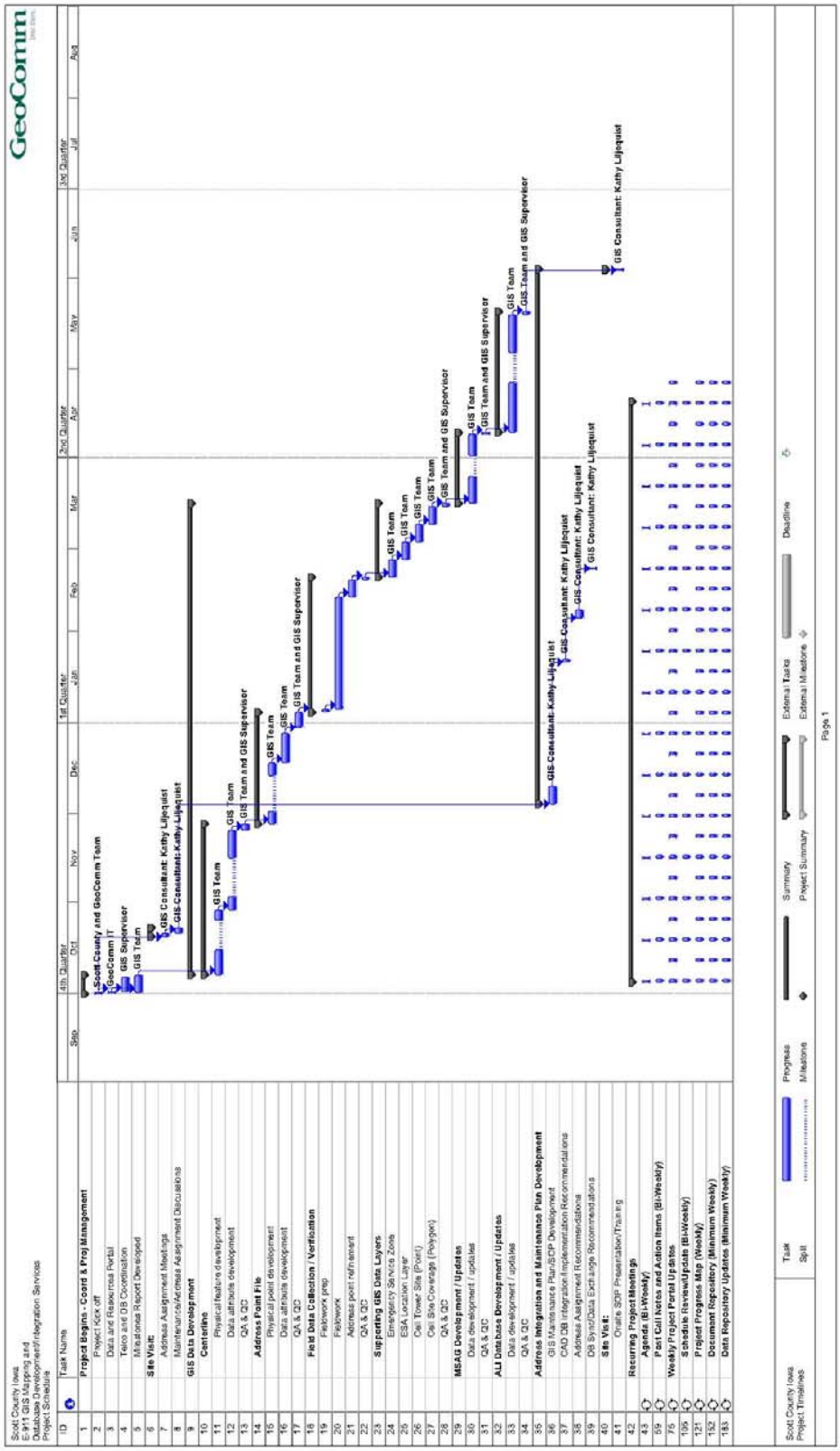
Exhibit - C Scott County, Iowa Responsibilities

GeoComm believes our clients play a critical role in the overall success of each project. It is desired that Scott County will provide local support so the project will be completed in an efficient and timely manner.

One of the key elements to having a successful project is the quality of the resources provided. In addition to quality, the timeliness of receiving them is essential for completing a dependable and accurate project.

GeoComm anticipates Scott County staff will play a role in the following elements:

- Assist in coordinating and attend periodic conference calls
- Provide pertinent project information and documentation
- Provide a single point of contact at Scott County
- Assist in the ongoing quality assurance
- Be available for communication throughout the project
- Assign appropriate staff to attend the training courses provided
- Assist in coordinating meetings and conference calls with county and city officials, telephone companies, database providers, etc.
- Provide pertinent county and city documents
- Provide existing GIS map data, if available, in ESRI format including projection information
- Provide all other necessary hard copy and digital resources, as needed, to complete proposed services to develop accurate GIS map data layers
- Provide written explanations of existing addressing schemes, including municipalities and information on other special addressing situations
- Assist in the public awareness campaign, as needed (only if fieldwork is completed)
- Provide aerial images in a standard agreed format, e.g. TIFF, BIL, Mr. SID, etc., including the corresponding world file. Images must be rectified.
- Provide a map or other resources depicting street surface types
- Provide hard copy or digital resources depicting all streets to be included in final street centerline layer
- Provide hard copy or digital resources referencing existing street names in county/city
- Provide hard copy or digital resources depicting one-ways and overpasses plus information on streets to not include in the network for routing purposes
- Provide a digital copy of the Scott County Master Street Address Guide (MSAG) and Automatic Location Identification (ALI) database in a standard format (.txt, .xls, or ascii)


Scott County Iowa
E-911 GIS Mapping and
Database Development/Integration Services
Project Schedule
GeoComm
Task Name
4th Quarter
1st Quarter
2nd Quarter
3rd Quarter
Project Begins - Coord & Proj Management
Project Kick off
Scott County and GeoComm Team
Data and Resource Portal
GeoComm IT
Telco and GIS Coordination
GIS Supervisor
Milestones Report Developed
GIS Team
Site Visit:
GIS Consultant: Kathy Liljequist
Address Assignment Meetings
GIS Consultant: Kathy Liljequist
Maintenance/Address Assignment Discussions
GIS Data Development
Centerline
GIS Team
Physical feature development
GIS Team
Data attribute development
GIS Team and GIS Supervisor
QA & QC
Address Point File
GIS Team
Physical point development
GIS Team
Data attribute development
GIS Team and GIS Supervisor
QA & QC
Field Data Collection / Verification
Fieldwork prep
GIS Team
Fieldwork
GIS Team
Address point refinement
GIS Team
QA & QC
GIS Team and GIS Supervisor
Supporting GIS Data Layers
GIS Team
Emergency Service Zone
GIS Team and GIS Supervisor
ESA Location Layer
GIS Team
Cell Tower Site (Point)
GIS Team and GIS Supervisor
Cell Site Coverage (Polygon)
QA & QC
MSAG Development / Updates
Data development / updates
QA & QC
ALI Database Development / Updates
Data development / updates
QA & QC
Address Integration and Maintenance Plan Development
GIS Maintenance Plan/SOP Development
CAD DB integration Implementation Recommendations
Address Assignment Recommendations
DB Sync/Data Exchange Recommendations
Site Visit:
GIS Consultant: Kathy Liljequist
Onsite SOP Presentation/Training
GIS Consultant: Kathy Liljequist
GIS Consultant: Kathy Liljequist
GIS Consultant: Kathy Liljequist
Recurring Project Meetings
Agenda (Bi-Weekly)
Past Call Notes and Action Items (Bi-Weekly)
Weekly Project Portal Updates
Schedule Review/Update (Bi-Weekly)
Project Progress Map (Weekly)
Document Repository (Minimum Weekly)
Data Repository Updates (Minimum Weekly)
Scott County Iowa
Project Timelines
Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline
Page 1

Attachment A - Scott County Requirements

A. SCOTT COUNTY INSURANCE REQUIREMENTS:

a. The CONSULTANT shall have in force during the period of this contract, insurance as listed below:
   i. Workers Compensation and Employers Liability Insurance meeting the requirements of the Iowa Workers Compensation Law covering all the CONSULTANT's employees carrying out the work involved in this contract.
   ii. General Liability Insurance with limits of at least $1,000,000 per occurrence for Bodily Injury and Property Damage. Coverage for Premises, Operations, Products and Completed Operations shall be included. This coverage shall protect the public or any person from injury or property damages sustained by reason of the CONSULTANT or its employees carrying out the work involved in this contract.
   iii. Professional Liability Insurance with 1,000,000 per claim limits is required to cover Consultant's Professional Liability.
   iv. Subcontractors: In the case of any work sublet, the CONSULTANT shall require subcontractors and independent contractors working under the direction of either the CONSULTANT or a subcontractor to carry and maintain the same workers compensation and liability insurance required of the CONSULTANT and name Scott County as additional insured under the General Liability.
   v. Qualifying Insurance: Policies shall be issued by insurers authorized to do business in the State of Iowa and currently having an A.M. Best Rating of "A" or better. All policies shall be occurrence form. If Professional Liability coverage is written on a claims made policy form, the certificate of insurance must clearly state coverage is claims made and coverage must remain in effect for at least two years after final payment with the CONSULTANT continuing to furnish the COUNTY certificates of insurance. The CONSULTANT shall be responsible for deductibles and self-insured retentions in the CONSULTANT's insurance policies.
   vi. Additional Insured: The County of Scott County, its officers and employees shall be named as additional insured on the CONSULTANT's, subcontractor's, and independent contractor's general liability insurance policies. This provision does not apply to workers compensation insurance and professional liability insurance.

b. Certificate of Insurance Requirements
   i. The Description area of the certificate should state: Scott County, its officers and employees are named as additional insured. List the (Project of Benefit Consultant) as the scope of services the certificate covers.
   ii. The minimum liability limits required by the COUNTY are: ($1,000,000).
   iii. The following address must appear in the Certificate Holder section:
   Scott County
   Risk Management Department
   600 W. 4th Street
   Davenport, IA 52801

iv. Certificates may be sent by e-mail, fax (563-328-3285), mail or delivery to the attention of Rhonda Oostenryk. A certificate of insurance must be provided to the COUNTY prior to selection.

c. Indemnification
   i. Vendor will indemnify and hold harmless Scott County against claims, liabilities, injury or damage expenses arising from any negligence or errors or omissions of Vendor.

B. OWNERSHIP OF DATA:

a. All data and other records supplied to the Consultant for this project shall remain the sole property of the County. The Consultant shall not, without written consent, copy or use such records, except to carry out contracted work, and will not transfer such records to any other party not involved in the performance of the Contract pursuant to this RFP.

C. LATE COMPLETION:

a. Should the Consultant selected as a result of this RFP fail to perform the work within the period of time stipulated in the contract, the Contractor shall pay to Scott County $400.00 as liquidated damages per calendar day from the day of default, unless extensions of time granted by the County specifically provide for the waiving of late completion charges. The liquidated damages represent the amount estimated to be lost as a result of untimely completion.
b. Scott County shall have the right to deduct the late completion charges from any monies in its hands, otherwise due, or to become due, to the Consultant, or to sue for and recover compensation for damages for nonperformance of this contract within the time stipulated.

D. SUBCONTRACTOR:

a. The County reserves the right to approve any subcontractor utilized by the prime Consultant and inclusion of any subcontractor in your proposal shall not be misconstrued as implied consent by the county to use that subcontractor.

If it is your firm's intent to abide by the Scott County project requirements as described, please have an authorized representative sign below.

GeoComm
Consultant Company Name

[signature] V.P Sales 8-14-09
Authorized Signature | Title | Date