

BILL NO.: 4956

ORDINANCE NO.: _____

Introduced by: City Manager Nathan Mai-Lombardo

AN ORDINANCE OF THE CITY OF BERKELEY, MISSOURI, AUTHORIZING THE CITY MANAGER TO EXECUTE AN AGREEMENT WITH HORNER & SHIFRIN, INC. FOR MAPPING AND GIS SERVICES ACCORDING TO RFP #932

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BERKELEY, MISSOURI, AS FOLLOWS:

- Section 1.** The City Manager is hereby authorized to enter into and execute an agreement with Horner & Shifrin, Inc. to provide comprehensive services related to the City’s mapping/geographic information system (GIS) project according to RFP #932.
- Section 2.** The agreement will be attached and hereby incorporated herein and made a part of this ordinance, as if fully set out herein.
- Section 3.** This Ordinance shall be in full force and effect from and after its date of passage.

1st Reading this _____ day of _____ 2023
2nd Reading this _____ day of _____ 2023
3rd Reading, PASSED and APPROVED, this _____ day of _____ 2023

Babatunde Deinbo, Mayor

ATTEST:

Deanna L. Jones, City Clerk

Approved as to Form:
Donnell Smith, City Attorney

Final Roll Call:			
Councilwoman Verges	Aye	Nay	Absent
Councilwoman Williams	Aye	Nay	Absent
Councilman Hoskins	Aye	Nay	Absent
Councilwoman Anthony	Aye	Nay	Absent
Councilman Hindeleh	Aye	Nay	Absent
Councilwoman-at-Large Crawford-Graham	Aye	Nay	Absent
Mayor Deinbo	Aye	Nay	Absent

SHORT FORM OF AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

This is an Agreement between **Berkeley, MO** (Owner) and Horner & Shifrin, Inc. (Engineer). Owner's Project, of which Engineer's services under this Agreement are a part, is generally identified as **GIS Hosted and On-Call Services** (Project). Engineer's services under this Agreement (Services) are generally identified as **GIS Hosted and On-Call Services**.

Owner and Engineer further agree as follows:

1.01 Services of Engineer

- A. Engineer shall provide or furnish the Services set forth in this Agreement, and any Additional Services authorized by Owner and consented to by Engineer.

2.01 Owner's Responsibilities

- A. Owner shall provide Engineer with existing Project-related information and data in Owner's possession and needed by Engineer for performance of Engineer's Services. Owner will advise the Engineer of Project-related information and data known to Owner but not in Owner's possession. Engineer may use and rely upon Owner-furnished information and data in performing its Services, subject to any express limitations applicable to the furnished items.
 - 1. Following Engineer's assessment of initially-available Project information and data, and upon Engineer's request, Owner shall obtain, furnish, or otherwise make available (if necessary through retention of specialists or consultants) such additional Project-related information and data as is reasonably required to enable Engineer to complete its Services; or, with consent of Engineer, Owner may authorize the Engineer to obtain or provide all or part of such additional information and data as Additional Services.
- B. Owner shall provide necessary direction and make decisions, including prompt review of Engineer's submittals, and carry out its other responsibilities in a timely manner so as not to delay Engineer's performance. Owner shall give prompt notice to Engineer whenever Owner observes or otherwise becomes aware of (1) any relevant, material defect or nonconformance in Engineer's Services, or (2) any development that affects the scope or time of performance of Engineer's Services.

3.01 Schedule for Rendering Services

- A. Engineer shall complete its Services within the following specific time period: **1-year effective starting date contract is signed by owner. This scope of service renews annually automatically, unless forty-five (45) days' notice from Owner.** If no specific time period is indicated, Engineer shall complete its Services within a commercially reasonable period of time.
- B. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's Services is impaired, or Engineer's Services are delayed or suspended, then the time for completion of Engineer's Services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.

C. Startup Delays

1. This Agreement was developed with an anticipated start date of April 1, 2023. The Engineer developed the project schedule based on the anticipated start date and having personnel available to begin the project according to the project schedule. Should, through no fault of the Engineer, the project start date be delayed more than 90 days or experience a delay during the course of the project of greater than 90 days, the Engineer shall be entitled to amend the contract fee accordingly. The start date is defined as the date the Client provides a written notice to proceed to the Engineer, and the Engineer is not restricted by the Client in performing the work as outlined in the project schedule. The Engineer shall also be permitted to update the project schedule to account for the startup delay, which due to personnel availability and other project commitments at the time of receiving a delayed notice to proceed of more than 90 days, may require a change in the schedule of greater than the actual delay experienced including a change in the completion date, as well as different personnel being assigned to the project.

4.01 Invoices and Payments

- A. Invoices: Engineer shall prepare invoices in accordance with its standard invoicing practices and submit the invoices to Owner on a monthly basis. Invoices are due and payable within 30 days of receipt.
- B. Payment: As compensation for Engineer providing or furnishing Services and Additional Services, Owner shall pay Engineer as set forth in this Paragraph 4.01, Invoices and Payments. If Owner disputes an invoice, either as to amount or entitlement, then Owner shall promptly advise Engineer in writing of the specific basis for doing so, may withhold only that portion so disputed, and must pay the undisputed portion.
- C. Failure to Pay: If Owner fails to make any payment due Engineer for Services, Additional Services, and expenses within 30 days after receipt of Engineer's invoice, then (1) the amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day; (2) in addition Engineer may, after giving 7 days' written notice to Owner, suspend Services under this Agreement until Engineer has been paid in full all amounts due for Services, Additional Services, expenses, and other related charges, and in such case Owner waives any and all claims against Engineer for any such suspension; and (3) if any payment due Engineer remains unpaid after 90 days, Engineer may terminate the Agreement for cause pursuant to Paragraph 5.01.A.2.
- D. Reimbursable Expenses: Engineer is entitled to reimbursement of expenses only if so indicated in Paragraph 4.01.E or 4.01.F. If so entitled, and unless expressly specified otherwise, the amounts payable to Engineer for reimbursement of expenses will be the Project-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external expenses allocable to the Project, including Engineer's subcontractor and subconsultant charges, with the external expenses multiplied by a factor of **10%**.
- E. Basis of Payment
 1. Lump Sum. Owner shall pay Engineer for Services as follows:

- a. A Lump Sum amount of **\$7,500 annually on anniversary of date agreement is signed, \$19,880 for setup of Skyview GIS platform, and \$2,272 for additional 16 hours of training.**
 - b. In addition to the Lump Sum amount, reimbursement of the following expenses: reimbursement for expenses will be as specified in Appendix 1.
 - c. The portion of the compensation amount billed monthly for Engineer's Services will be based upon Engineer's estimate of the percentage of the total Services actually completed during the billing period.
- F. Additional Services: For Additional Services, Owner shall pay Engineer an amount equal to the cumulative hours charged in providing the Additional Services by Engineer's employees, times standard hourly rates for each applicable billing class; plus reimbursement of expenses incurred in connection with providing the Additional Services. Engineer's standard hourly rates are attached as Appendix 1. **PDF to CAD to GIS Conversion, Customizations, and Integration with other software, are all considered additional services. We will provide an estimate before performing in additional services projects to provide OWNER with an idea of cost before beginning project.**
- G. Rate Changes
 - 1. The Engineer shall be permitted to update billing rates on January 1 and July 1 of each calendar year.

5.01 Termination

A. Termination for Cause

- 1. Either party may terminate the Agreement for cause upon 30 days' written notice in the event of substantial failure by the other party to perform in accordance with the terms of the Agreement, through no fault of the terminating party.
 - a. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 5.01.A.1 if the party receiving such notice begins, within 7 days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30-day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein will extend up to, but in no case more than, 60 days after the date of receipt of the notice.
- 2. In addition to its termination rights in Paragraph 5.01.A.1, Engineer may terminate this Agreement for cause upon 7 days' written notice (a) if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional, (b) if Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control, (c) if payment due Engineer remains unpaid for 90 days, as set forth in Paragraph 4.01.C, or (d) as the result of the presence at the Site of undisclosed Constituents of Concern as set forth in Paragraph 6.01.I.
- 3. Engineer will have no liability to Owner on account of any termination by Engineer for cause.

- B. Termination for Convenience: Owner may terminate this Agreement for convenience, effective upon Engineer's receipt of notice from Owner.
- C. Payments Upon Termination: In the event of any termination under Paragraph 5.01, Engineer will be entitled to invoice Owner and to receive full payment for all services performed or furnished in accordance with this Agreement, and to reimbursement of expenses incurred through the effective date of termination. Upon making such payment, Owner will have the limited right to the use of all deliverable documents, whether completed or under preparation, subject to the provisions of Paragraph 6.01.F, at Owner's sole risk.
 - 1. If Owner has terminated the Agreement for cause and disputes Engineer's entitlement to compensation for services and reimbursement of expenses, then Engineer's entitlement to payment and Owner's rights to the use of the deliverable documents will be resolved in accordance with the dispute resolution provisions of this Agreement or as otherwise agreed in writing.
 - 2. If Owner has terminated the Agreement for convenience, or if Engineer has terminated the Agreement for cause, then Engineer will be entitled, in addition to the payments identified above, to invoice Owner and receive payment of a reasonable amount for services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with Engineer's subcontractors or subconsultants, and other related close-out costs, using methods and rates for Additional Services as set forth in Paragraph 4.01.F.

6.01 General Considerations

- A. The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with any services performed or furnished by Engineer. Subject to the foregoing standard of care, Engineer may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.
- B. Engineer shall not at any time supervise, direct, control, or have authority over any Constructor's work, nor will Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, or the safety precautions and programs incident thereto, for security or safety at the Project site, nor for any failure of a Constructor to comply with laws and regulations applicable to that Constructor's furnishing and performing of its work. Engineer shall not be responsible for the acts or omissions of any Constructor.
- C. Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's failure to furnish and perform its work.
- D. Engineer's opinions of probable construction cost (if any) are to be made on the basis of Engineer's experience, qualifications, and general familiarity with the construction industry. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over

competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual construction cost will not vary from opinions of probable construction cost prepared by Engineer. If Owner requires greater assurance as to probable construction cost, then Owner agrees to obtain an independent cost estimate.

- E. Engineer shall not be responsible for any decision made regarding the construction contract requirements, or any application, interpretation, clarification, or modification of the construction contract documents, other than those made by Engineer.
- F. All documents prepared or furnished by Engineer are instruments of service, and Engineer retains an ownership and property interest (including the copyright and the right of reuse) in such documents, whether or not the Project is completed. Engineer grants to Owner a limited license to use the deliverable documents on the Project, extensions of the Project, and for related uses of the Owner, subject to receipt by Engineer of full payment due and owing for all Services and Additional Services relating to preparation of the deliverable documents, and subject to the following limitations:
 - 1. Owner acknowledges that such documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project, on any other project, or for any other use or purpose, without written verification or adaptation by Engineer;
 - 2. any such use or reuse, or any modification of the documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to its officers, directors, members, partners, agents, employees, and subconsultants;
 - 3. Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and subconsultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification of the documents without written verification, completion, or adaptation by Engineer; and
 - 4. such limited license to Owner shall not create any rights in third parties.
- G. Owner and Engineer agree to transmit, and accept, Project-related correspondence, documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, in accordance with a mutually agreeable protocol.
- H. Waiver of Damages; Limitation of Liability: To the fullest extent permitted by law, Owner and Engineer (1) waive against each other, and the other's officers, directors, members, partners, agents, employees, subconsultants, and insurers, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to this Agreement or the Project, from any cause or causes, and (2) agree that Engineer's total liability to Owner under this Agreement shall be limited to \$100,000 or the total amount of compensation received by Engineer, whichever is less.
- I. The parties acknowledge that Engineer's Services do not include any services related to unknown or undisclosed Constituents of Concern. If Engineer or any other party encounters, uncovers, or reveals an unknown or undisclosed Constituent of Concern, then Engineer may,

at its option and without liability for consequential or any other damages, suspend performance of Services on the portion of the Project affected thereby until such portion of the Project is no longer affected, or terminate this Agreement for cause if it is not practical to continue providing Services.

- J. Owner and Engineer agree to negotiate each dispute between them in good faith during the 30 days after notice of dispute. If negotiations are unsuccessful in resolving the dispute, then the dispute will be mediated. If mediation is unsuccessful, then the parties may exercise their rights at law.
- K. This Agreement is to be governed by the laws of the state of Missouri.
- L. Engineer's Services do not include: (1) serving as a "municipal advisor" for purposes of the registration requirements of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) or the municipal advisor registration rules issued by the Securities and Exchange Commission; (2) advising Owner, or any municipal entity or other person or entity, regarding municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, or other similar matters concerning such products or issuances; (3) providing surety bonding or insurance-related advice, recommendations, counseling, or research, or enforcement of construction insurance or surety bonding requirements; or (4) providing legal advice or representation.

7.01 Definitions

- A. Constructor—Any person or entity (not including the Engineer, its employees, agents, representatives, subcontractors, and subconsultants), performing or supporting construction activities relating to the Project, including but not limited to contractors, subcontractors, suppliers, Owner's work forces, utility companies, construction managers, testing firms, shippers, and truckers, and the employees, agents, and representatives of any or all of them.
- B. Constituent of Concern—Asbestos, petroleum, radioactive material, polychlorinated biphenyls (PCBs), lead based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to laws and regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

8.01 Successors, Assigns, and Beneficiaries

A. Successors and Assigns

- 1. Owner and Engineer are hereby bound and the successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 8.01.A.2 the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the successors, executors, administrators, and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.
- 2. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, money that is due or may become due) in this Agreement without the written consent of the other party, except to the extent that any assignment, subletting, or transfer is mandated by law. Unless specifically stated to

the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

- B. Beneficiaries: Unless expressly provided otherwise, nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Constructor, other third-party individual or entity, or to any surety for or employee of any of them. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.

9.01 Total Agreement

- A. This Agreement (including any expressly incorporated attachments), constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

Attachments:

Appendix 1, Engineer's Standard Hourly Rates

Appendix 2, Engineer's Service Level Agreement to Provide GIS Services.

This Agreement's Effective Date is **date signed by Owner below.**

Owner:

City of Berkeley, MO

(name of organization)

By:

(authorized individual's signature)

Date:

(date signed)

Name:

Nathan Mai-Lombardo

(typed or printed)

Title:

City Manager

(typed or printed)

Address for giving notices:

8425 Airport Road

Berkeley, MO 63134

Designated Representative:

Name:

(typed or printed)

Title:

(typed or printed)

Address:

8425 Airport Road

Berkeley, MO 63134

Phone:

Email:

Engineer:

Horner & Shifrin, Inc.

(name of organization)

By:

(authorized individual's signature)

Date:

July 10, 2023

(date signed)

Name:

Jeff Stahlhuth

(typed or printed)

Title:

VP, IT Director

(typed or printed)

Address for giving notices:

401 S. 18th Street, Suite 400

St. Louis, MO 63103

Designated Representative:

Name:

John D. Gilmore

(typed or printed)

Title:

Business Unit Leader - Geomatics

(typed or printed)

Address:

401 S. 18th Street, Suite 400

St. Louis, MO 63103

Phone:

D:314-335-8688 / M:618-560-8742

Email:

jdgilmore@hornersshifrin.com

This is **Appendix 1, Engineer's Standard Hourly Rates**, referred to in and part of the Short Form of Agreement between Owner and Engineer for Professional Services dated **07/10/2023**.

ENGINEER'S STANDARD HOURLY RATES

A. Standard Hourly Rates:

1. Standard Hourly Rates are set forth in this Appendix 1 and include salaries and wages paid to personnel in each billing class plus the cost of customary and statutory benefits, general and administrative overhead, non-project operating costs, and operating margin or profit.
2. The Standard Hourly Rates apply only as specified in Paragraph 4.01 and are subject to annual review and adjustment.

B. Schedule of Hourly Rates and Reimbursable Expenses: See attached.

Billing Class	Title	Rate
GP01 Geomatics Professional	Associate V.P.	\$ 237 / hour
GP02 Geomatics Professional	Business Unit Leader	\$ 226 / hour
GP03 Geomatics Professional	Asst. Business Unit Leader	\$ 158 / hour
GP04 Geomatics Professional	Senior GIS Analyst	\$ 142 / hour
GP05 Geomatics Professional	GIS Analyst	\$ 126 / hour
GP06 Geomatics Professional	GIS Technician	\$ 111 / hour
GP01 Geomatics Technical	Asst. Business Unit Leader	\$ 166 / hour
GP02 Geomatics Technical	Professional Land Surveyor	\$ 142 / hour
GP03 Geomatics Technical	Land Surveyor In Training	\$ 126 / hour
GP04 Geomatics Technical	Senior Survey Technician	\$ 116 / hour
GP05 Geomatics Technical	Survey Technician	\$ 100 / hour
GP06 Geomatics Technical	Survey Intern	\$ 89 / hour
AP05 Administrative Professional	Senior Programmer/Analyst	\$ 163 / hour
AT03 Administrative Technical	Programmer/Analyst	\$ 110 / hour

This is **Appendix 2, Engineer's Service Level Agreement to Provide GIS Hosted Services**, referred to in and part of the Short Form of Agreement between Owner and Engineer for Professional Services dated **7/10/2023**.

Engineer's Service Level Agreement to Provide GIS Hosted Services

1. Term:

- 1.1. This Agreement shall become effective and remain in effect for a period of one (1) year from **date this contract is signed by owner**.

2. Services Provided:

- 2.1. ENGINEER will host the application "ESRI ArcSDE" that will facilitate storing and managing spatial data in a Microsoft SQL Server Management system.
- 2.2. ENGINEER will host OWNER-provided geographic information system (GIS) data.
- 2.3. ENGINEER will collaborate with OWNER GIS users to specify database requirements and identify GIS development needs.
- 2.4. ENGINEER will provide a single organizational web portal for the organization of all related web-based OWNER applications.
- 2.5. ENGINEER will provide unlimited data storage and unlimited web-based access for OWNER portals and applications.
- 2.6. ENGINEER will provide password authentication accounts for use with secure mobile and for web application security.
- 2.7. ENGINEER will provide custom web-based application development services not included in this agreement.
- 2.8. ENGINEER will provide 4 hours of onsite/online training session annually and unlimited online technical support for issues relating to the use of hosted GIS services. Additional onsite/online training sessions will be billed at Engineer's standard hourly rates and reimbursables below separate from hosting fee.
- 2.9. ENGINEER will provide a GIS team to manage the GIS services.
- 2.10. ENGINEER will provide one year of modifications to Skyview GIS interface. Any modifications beyond this time frame will be provided on an hourly on-call basis as needed at Engineer's standard hourly rates separate from hosting and setup fee.
- 2.11. ENGINEER will provide modifications to any data as requested by OWNER and will be billed at Engineer's standard hourly rates separate from hosting fee.

3. Additional Hourly Services

- 3.1. ENGINEER will provide OWNER estimate based on requirements and acquire notice to proceed before any work or invoicing proceeds.
- 3.2. ENGINEER will provide updates of any digital or non-digital data under an hourly service, as needed.
- 3.3. ENGINEER will provide modifications to Skyview GIS interface under an hourly service, as needed.

- 3.4. ENGINEER will provide custom integration services for iWorq, Geosoft, Energov, and other platforms under hourly service, as needed.

4. Support Structure:

- 4.1. ENGINEER GIS group will provide a secure and stable environment and system administration for the GIS services
 - 4.1.1. Provide computing and disk storage resources.
 - 4.1.2. Maintain computing resources and operating system software; apply patches, hot fixes and service packs.
 - 4.1.3. Provide backup and recovery for hosted enterprise GIS data.
 - 4.1.4. Perform system-monitoring functions (space, performance, system logs).
- 4.2. ENGINEER GIS group will provide Data Base Administration support for the GIS system.
 - 4.2.1. SQL Server database support for the GIS data. All routine patch maintenance will be performed during scheduled maintenance window: Monday – Sunday, 11PM – 4AM CST.
 - 4.2.2. Provide production database monitoring. All resources are housed in a climate controlled secured environment and monitored 24x7.
 - 4.2.3. Provide backup and recovery of database components. All database transaction record logs are stored for a minimum of 30 days and included with all incremental backups. Each server is stored on our SAN and backed up on 15-minute snapshots. Incremental backups are performed on 4-hour intervals to a local backup device and replicated off-site to cloud storage. Full system
 - 4.2.4. Provide system level Data Base Administrator (DBA) support.

5. System Location:

- 5.1. The GIS system resources will be located in the ENGINEER data facility, located at 401 S. 18th St., Suite 400, St. Louis, MO 63103, which provides a stable physical environment that is equipped with environmental controls, uninterruptible power supplies, and physical security systems.

6. Application Management:

- 6.1. ENGINEER GIS group will manage GIS application(s).
- 6.2. ENGINEER GIS group will have oversight of the administration of the server-side GIS application software.
- 6.3. ENGINEER GIS group will provide GIS application development and administration support as applicable.
- 6.4. ENGINEER GIS group will function as the security liaison with OWNER, identifying security needs and coordinating to implement them.

7. Owner will be responsible for the following:

- 7.1. Will own their respective GIS data and must authorize individuals be granted or denied access.
- 7.2. Must register GIS point of contact(s) with the ENGINEER GIS group.
- 7.3. Coordinate with ENGINEER to ensure OWNER provided data is in a compatible geospatial format.

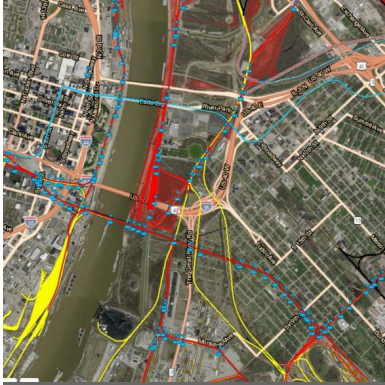
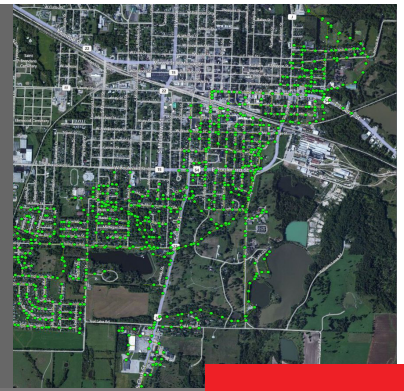
8. Planned Outages:

- 8.1. Planned outage for the enterprise GIS system will be conducted during established maintenance windows.
- 8.2. The GIS point of contact(s) and/or designee will be notified via E-mail in advance of any planned outages.

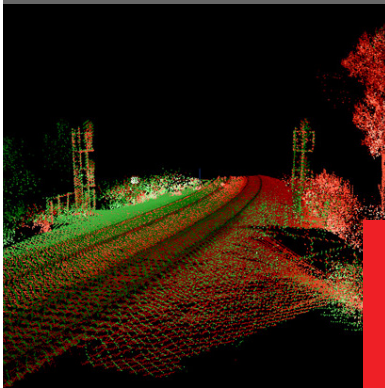
9. Unplanned Outages:

- 9.1. Unplanned outages will be announced and an estimated time to resolve.

CELEBRATING
90
YEARS
1933 - 2023



Statement of Qualifications: City of Berkeley, Missouri Mapping and GIS Services (#932)



July 7, 2023



City of Berkeley
City Hall
8425 Airport Road
Berkeley, MO 63134

July 7, 2023

Statement of Qualifications: Mapping and GIS Services for the City of Berkeley

Dear City of Berkeley,

Horner & Shifrin, Inc. (H&S) is pleased to present our team's proposal to the City of Berkeley, Missouri for Mapping and GIS Services. Our team understands the collaboration, communication, and project requirements, and we are confident we have the expertise to deliver a successful project/service. We place our priorities on customer service, timely responses, and attention to detail.

Our team currently provides web-based GIS systems, server and database management, custom programming, planning, lifecycle cost analysis, integration of multiple platforms, hosting, training, and a full range of GIS services identified in this RFP scope. We have provided these services for 100+ clients ranging from municipalities with a population less than 700 people to large counties and state-wide entities. Our ability to adapt to our clients' needs and provide custom solutions, allows our team the flexibility to work on varying GIS systems from H&S full hosting services to providing on-site server upgrades, as we have to continually upgrade our systems to keep up with the ever-changing technology. Our team is comprised of degreed GIS analysts, programmers, and database administrators to ensure we have the technical expertise to provide a full range of GIS capabilities.

As an **ESRI Bronze Partner** and our investment in the Geocortex Essentials technology platform as our interactive GIS mapping portal for our clients, we are committed to the continual training of staff to keep up with the latest advances in GIS technologies. We pass our knowledge on to our clients and work to help you maximize your GIS investment. We focus on providing the highest quality experience possible, while streamlining workflows and maximizing productivity and efficiency. In a world of a rapidly expanding range of geospatial tools, we have the right products and expert knowledge to help you achieve outstanding results. In addition to our dedicated GIS department, we offer a wide range of engineering services as a resource to you. This unique combination of GIS staff, surveyors, engineers, technology, and system knowledge provide you with a single source solution provider for all your GIS development needs.

We have the capacity, capability, and skills to help you accomplish any and all GIS operations from providing a secure interactive map for all Berkeley stakeholders, residents, partner agencies, with the ability to view or edit multiple layers of digital data including streets, utilities, zoning, flood plain, County data, Airport data, and other data layers as requested. Our on-call GIS support team is able to convert paper drawings to digital GIS formats, perform data management and migration, documentation, internal GIS analysis, API integration, and custom programming to meet your requirements. In addition, our investments in technology (automated workflows, programming, scanning, LiDAR, aerial drones, traditional survey, etc.) allows us to help you make better decisions on how to approach a project, collection methods, accuracies, deliverables, cost-effectiveness and time.

We understand that all projects are different, but we strive to exceed our client's expectations on every project by providing exceptional service and completing the project accurately and on time. Horner & Shifrin is willing to commit the personnel necessary to begin the project immediately upon Notice to Proceed (NTP) and is dedicated to meeting its completion schedule. We trust our team's expertise on previous projects show that we are more than qualified. We consider it a privilege to submit our proposal and look forward to your favorable consideration of our services. If you have any questions, please contact me at (314) 335-8688 or jdgilmore@hornershifrin.com.

Sincerely,



John Gilmore | Project Manager
Business Unit Leader - Geomatics



TABLE OF CONTENTS



A. FIRM OVERVIEW

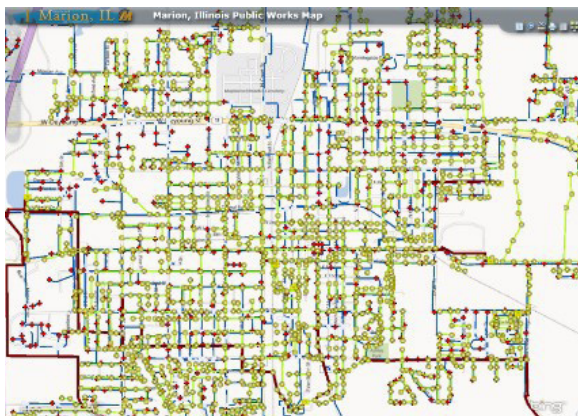
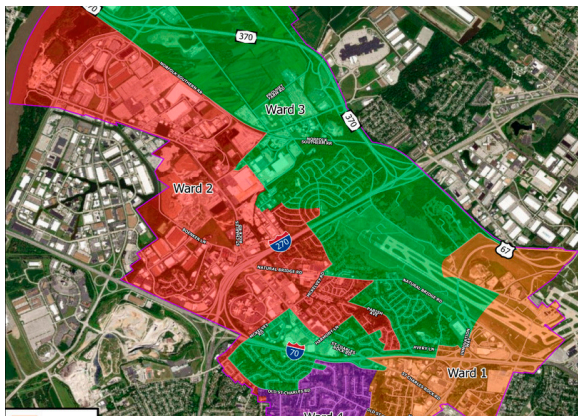
B. KEY PERSONNEL

C. PROJECT EXPERIENCE

E. APPROACH

F. WORK TIMETABLE & PRICING SCHEDULE

G. PROXIMITY





A. FIRM OVERVIEW

OFFICE LOCATIONS

Corporate Headquarters

401 S. 18th St., Ste. 400
St. Louis, MO 63103-2296
(314) 531-4321

Bentonville, Arkansas

3604 NW Frontage Rd., Ste. 6F
Bentonville, AR 72712-9254
(479) 398-7250

Chicago, Illinois

8755 W. Higgins Rd., Ste. 325
Chicago, IL 60631-0019
(312) 332-4334

Edwardsville, Illinois

231 N. Main St., Ste. 25
Edwardsville, IL 62025-1653
(618) 650-8440

Marion, Illinois

410 N. Court St.
Marion, IL 62959-2329
(618) 993-6411

O'Fallon, Illinois

604 Pierce Blvd., Ste. 300
O'Fallon, IL 62269-2588
(618) 622-3040

O'Fallon, Missouri

101 Laura K Dr., Ste. 101
O'Fallon, MO 63366-3991
(636) 329-9296

Poplar Bluff, Missouri

4061 Highway PP, Ste. 1
Poplar Bluff, MO 63901-3905
(573) 727-9666

St. Charles, Missouri

119 S. Main St.
St. Charles, MO 63301-2802
(636) 277-9550

Horner & Shifrin, Inc. is a multidisciplinary professional services firm with the experience and capability to serve a wide variety of clients throughout the United States.

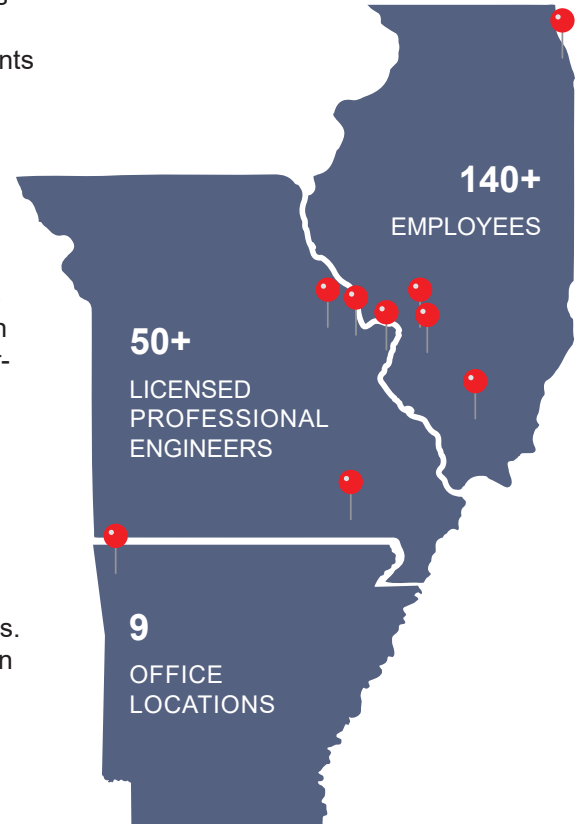
Founded in 1933 by W.W. Horner and H. Shifrin in St. Louis, the firm has grown to offer services to meet the ever-changing needs of our clients and to keep ahead of technological developments in the field of engineering.

We offer professional services in all phases of a project, from feasibility planning and development, funding application assistance, land survey and 3D scanning, and environmental planning, to engineering design and construction administration, as well as GIS mapping services. Our projects are managed in a way that allows for thorough review by senior-level staff, no matter the size of the project. H&S has demonstrated innovative design on numerous projects, receiving recognition in the form of professional awards and repeat assignments from 80% of our clients.

As a 100% employee-owned firm, every staff member has a personal vested interest in completing work to the satisfaction of our clients. These reasons and more make Horner & Shifrin the Right Choice for any project.



An Employee-Owned Company



SERVICES

- Active Transportation
- Building Services
- Construction Services
- Drinking Water
- Environmental Planning & Permitting
- Geospatial (GIS)
- Public Funding Assistance
- Public Involvement
- Site Development
- Surveying
- Transportation
- Wastewater
- Water Resources

80%

Repeat
Clients

89

Years in
Business

100%

Employee-
Owned

VISIT OUR WEBSITE

WWW.HORNERSHIFRIN.COM

**JOHN GILMORE, GISP****Business Unit Leader
Geomatics**

John Gilmore has more than 28 years of experience in GIS, CAD, and Surveying for state-wide, county, municipal, and private clients for a variety of projects that include GIS services, asset management, condition assessment, mobile mapping, building additions and modifications, bridges and tunnels, water and wastewater treatment facilities and water systems, storm and sanitary sewer systems. As Business Unit Leader, John is responsible for leadership of the Geomatics organization and oversees all GIS services including development and implementation of GIS Systems, multiple-tier database application development, project web sites, customized ArcGIS applications from conception to rollout, field collections, and GIS technology integration.

EDUCATION

BS, Geography (Specialization - Geographic Information Systems), Southern Illinois University Edwardsville, 2013

AAS, Drafting Technology, Belleville Area College, 1994

REGISTRATION

Certified Geographic Information Systems Professional

**PROFESSIONAL
ACTIVITIES**

ESRI St. Louis Users Group

Microstation Community of St. Louis

Illinois GIS Association (ILGISA), Board Member

Aerial Sync Education (ASE), Committee Member

SIUE Land Surveying and Geomatics Advisory Board

Infrastructure Asset Inventory and Data Collection | Missouri Department of Conservation

Project Manager for Infrastructure Inventory and Condition Assessment services at 128 Conservation Areas in the State of Missouri. Four conservation zones containing conservation areas were established by the Missouri Department of Conservation to simultaneously coordinate the work between consulting firms. H&S was awarded two of the eastern-most zones encompassing nearly half of the state, containing approximately 300,000+ acres of conservation areas. The two-year program requires strict adherence to a nearly 1,000 page condition assessment methodology, and use of MDC provided asset collection software. In addition to asset collection and condition assessment key aspects of the project include population of spatial GIS assets, collection of non-spatial data such as asset agreements, documents, and diagrams, rectification of asset data with historical reports, integration of third party GIS data sets, data governance through the use automated GIS tools, and integration of LiDAR, UAS, and traditional survey methods.

GIS Hosting Services | City of Marion, Illinois

Project Manager for the deployment of a Cloud GIS solution to extend the ability for City staff to have real-time access to City map data which was easy to deploy and cost effective. The solution was to deploy web-based GIS services to provide access to City staff to interact and view City-wide map data. Horner & Shifrin GIS staff collected digital and paper-based data from the City to construct a base map of existing assets. Using the Internet as a backbone, Horner & Shifrin deployed web-based GIS services to connect in-house Marion GIS staff with additional City personnel without the need to order additional software or hardware. Once the system was deployed City staff were able to access map data such as public works, code enforcement, EMS, cemetery data, etc. from every workstation throughout the city and from cellular enabled mobile devices such as Apple iPads.

GIS Hosting Services | City of Mexico, Missouri

Project Manager to provide a customizable cloud-based application for H&S and City staff the ability and/or resources required for real-time field data collection of multiple asset features for approximately 25 square miles surrounding the City of Mexico, Missouri. H&S and City field staff have teamed together and completed multiple phases of collection annually since inception of the cloud-based application. Some of projects within this collaboration was a study to analyze infiltration and inflow of the Cities 4,000+ sanitary sewer system. We evaluated, surveyed, inspected, smoke tested and recommended repairs or replacements to reduce infiltration and inflow, to help ensure regulatory compliance, and restore the sewer system structural integrity. H&S Skyview GIS application has allowed integration of source data from district provided paper-based plans, various electronic files, GPS survey files, photos attachments, PDF documents and videos. Our Skyview GIS application provides real-time, multi-user access for residents to view restricted data provided by the City and allows City staff secure access to edit system attributes (location, sizes, physical condition, etc.) of their existing features. Use of survey grade GPS units with centimeter accuracy ensures vertical accuracy of assets and the data collected would be reliable when imported into future modeling systems.

GIS Hosting Services | Rock Creek Public Sewer District

Project Manager for GPS field survey, GIS database development, and GIS web-based mapping development for the mapping and I/I investigation for a district-wide flow monitoring and evaluation program.

**TRISTA HAHN, GISP****Senior GIS Analyst
Geomatics**

Trista Hahn has more than 12 years of experience in developing GIS applications for infrastructure planning, engineering alternatives analysis, data analytics and mapping. Trista specializes in the development and implementation of large-scale enterprise databases and web mapping applications, with a strong focus on data collection and spatial analysis. She has been responsible for the development and deployment of GIS systems for managing and collecting data to support efforts such as sanitary sewer evaluation studies (SSES), infiltration and inflow (I&I) analysis, flow metering analysis, advanced metering infrastructure (AMI) deployment, and preparation of automated reports and tolls for asset management and maintenance.

GIS Hosting Services | Desoto County Florida BOCC

Project Manager for County GIS data including, but not limited to parcels, zoning, code enforcement, animal services, land use and other feature classes, along with integration with Energov.

GIS Hosting Services | City of Grafton, Illinois

GIS Analyst for developing and implementing a comprehensive Geographic Information System (GIS) with a focus on the management of their Stormwater Systems, Zoning, Wards, Real Estate, Tourism, Parks, Events, and the other assets as required. This project utilized our web-based Skyview GIS platform which allow City staff to view and make edits real-time out in the field and/or back in the office. Our Skyview GIS platform will integrate with Jersey County parcels, roads, and other feature classes available from the County. This will allow staff and residents access to the City and County data from a single source, instead of multiple sites to view data from. The Skyview GIS platform can be accessed from any internet connected device including desktops, laptops, tablets or smartphones, regardless of operating systems. This allows the client real-time access to all maps, data, agreements, pictures, videos, etc. from the office to the field and their data is literally at the touch of a button.

GIS Hosting | City of Ellisville, Missouri

GIS Analyst for a GIS solution to manage existing and future city assets. Using the Internet as a backbone, H&S deployed our Skyview GIS customizable web-based application to connect all City staff to a real-time centralized geodatabase without need to order additional software or hardware. Other GIS data resources (FEMA, St. Louis County, MSD, etc.) are accessible through the web-based GIS application to enhance the City's capabilities to outside resources in a single pane of glass. Utilizing desktop computers, tablets, and smartphones City staff can view, edit, collect and verify data in the office or out in the field on all asset types such as parcels, zoning, wards, ADA compliance, pavement condition, parks, and other data. Standard forms and drop-down menus ensured data integrity by providing preset values. Attached documents, photos and videos are also viewable through the Skyview GIS application in real-time. In addition to the system implementation, H&S staff were retained for on-call data management and manipulation. As part of the on-call data management Ellisville has requested that H&S integrate Catylist Real Estate API into the Skyview GIS web-based application. Catylist is a property-centric technology that captures every commercial property in a market, no matter the type or size. Catylist tracks all commercial properties, sale transactions, property surveys, retail tenant locations, ownership information, reports, and other features.

GIS Hosted Services | Pike County, Ohio

GIS Analyst to provide a GIS solution with an online, multi-user application allowing the staff and public to have real-time access to map data which would be easy to deploy, backed up and cost-effective. In addition, H&S updates the parcel system on a monthly basis from files received from the county and migrates it into the system. Once the Pike County, Ohio Skyview GIS system was structured, the staff and public were able to access map data such as parcel, addresses, municipal boundaries, sections, townships, land use, soils, multiple imagery layers and FEMA Flood Boundaries, etc. from any workstation throughout their offices and from any cellular enabled mobile devices such as Apple iPads.

GIS Hosting Services | City of Manchester, Missouri

GIS Analyst for development and implementation of a comprehensive Geographic Information System (GIS) with a focus on the management of Veteran's Memorial Brick Paver Program. This project utilizes web-based GIS services which will allow their staff to make edits real-time out in the field and back in the office.

EDUCATION

MS, Geographic Information Systems, Arizona State University, 2012

BS, Urban Planning, Arizona State University, 2011

REGISTRATION

Certified Geographic Information Systems Professional

PROFESSIONAL ACTIVITIES

American Planning Association (APA)

Urban and Regional Information Systems Association (URISA)

St. Louis GIS Users Group

**ZACH LAWRENCE, SUAS PILOT****GIS Analyst
Geomatics**

Zach Lawrence is Geographic information systems (GIS)/LiDAR Analyst who leads our sUAS and LiDAR field data collection and processing operations. His experience includes utilizing a variety of geospatial analysis software including ArcGIS, AutoCAD, Microstation, Virtual Surveyor, Pix4D, TopoDOT, and Trimble Business Center to complete projects for clients. Along with his GIS expertise, Zach holds certifications with the FAA (Part 107), Pix4Dmapper, and OSHA and has 5 years of experience with multi-rotor, and fixed wing drone platforms for photogrammetric and aerial LiDAR surveys, 7 years of experience with terrestrial and mobile LiDAR scanners, along with 9 years of experience using traditional field survey methods such as GPS and Total Station setups.

GIS Asset Management & Mapping | Terminal Railroad Association

GIS Analyst for development and implementation of a comprehensive Geographic Information System (GIS) with a focus on the management of TRRA's railroad assets and topographic field survey of railroad track and physical features. This project will utilize Cloud-based GIS services, LIDAR and other survey methods, and modern day scanning technologies converting hand drafted maps that are almost 100 years old.

Municipal Utility GIS Hosting | City of Poplar Bluff, Missouri

GIS Analyst for developing and implementing a comprehensive Geographic Information System (GIS) with a focus on the management of Utilities (water, sewer, and electric). This project will utilize web-based GIS services which will allow their staff to make edits real-time out in the field and back in the office. Horner & Shifrin's GIS staff collected digital data in the form of CAD drawings from City of Poplar Bluff Utilities to construct a base map of existing assets. Using the Internet as a backbone, Horner & Shifrin deployed web-based GIS services to connect City of Poplar Bluff Utilities personnel without the need to order additional software or hardware.

GIS Hosting Services | City of Mexico, Missouri

Supervisor to provide a customizable cloud-based application for H&S and City staff the ability and/or resources required for real-time field data collection of multiple asset features for approximately 25 square miles surrounding the City of Mexico, Missouri. H&S and City field staff have teamed together and completed multiple phases of collection annually since inception of the cloud-based application. Some of projects within this collaboration was a study to analyze infiltration and inflow of the Cities 4,000+ sanitary sewer system. We evaluated, surveyed, inspected, smoke tested and recommended repairs or replacements to reduce infiltration and inflow, to help ensure regulatory compliance, and restore the sewer system structural integrity. H&S Skyview GIS application has allowed integration of source data from district provided paper-based plans, various electronic files, GPS survey files, photos attachments, PDF documents and videos. Our Skyview GIS application provides real-time, multi-user access for residents to view restricted data provided by the City and allows City staff secure access to edit system attributes (location, sizes, physical condition, etc.) of their existing features. Use of survey grade GPS units with centimeter accuracy ensures vertical accuracy of assets and the data collected would be reliable when imported into future modeling systems.

GIS Hosting | City of Creve Coeur, Missouri

GIS Analyst for development of a GIS solution of existing and future city assets. Using the Internet as a backbone, H&S deployed our Skyview GIS customizable web-based application to connect all Creve Coeur staff to a real-time centralized geodatabase without need to order additional software or hardware. Other GIS data resources (FEMA, St. Louis County, etc.) are accessible through the Skyview GIS application to enhance the City's capabilities to outside resources in a single pane of glass. Utilizing desktop computers, tablets, and smartphones the City of Creve Coeur, MO can view, edit, collect and verify data in the office or out in the field on all asset types such as parcels, address points, zoning, wards, subdivisions, roads, sidewalks, parks, and other data. Standard forms and drop down menus ensured data integrity by providing preset values. Attached documents, photos and videos are also viewable through the Skyview GIS application in real-time. City of Creve Coeur staff no longer have to rely on a single person for GIS data or maps as each staff member has access to query, filter and search data along with capabilities to measure or print maps. In addition to the system implementation, H&S staff were retained for on-call data management and manipulation.

EDUCATION

BS, Geography (Specialization - Geographic Information Systems), Southern Illinois University Edwardsville, 2013

REGISTRATION

FAA (Part 107) Small Unmanned Aircraft Pilot

PROFESSIONAL ACTIVITIES

St. Louis GIS Users Group

St. Louis Railway Club

**KIP KRITIS****GIS Analyst
Geomatics**

Kip Kritis is a GIS Analyst who specializes in the collection and development of data for geographic analysis. His GIS experience includes the use of ArcGIS for database management, working knowledge of ERDAS Imagine and knowledge of computer languages. Before working at Horner & Shifrin, Kip worked as a Utilities Technician for the United States Navy. He brings with him five years of working in a team-driven environment, focusing on completing projects and goals related to increasing security experience.

GIS Hosting Services | City of Mexico, Missouri

GIS Analyst to provide a customizable cloud-based application for H&S and City staff the ability and/or resources required for real-time field data collection of multiple asset features for approximately 25 square miles surrounding the City of Mexico, Missouri. H&S and City field staff have teamed together and completed multiple phases of collection annually since inception of the cloud-based application. Some of projects within this collaboration was a study to analyze infiltration and inflow of the Cities 4,000+ sanitary sewer system. We evaluated, surveyed, inspected, smoke tested and recommended repairs or replacements to reduce infiltration and inflow, to help ensure regulatory compliance, and restore the sewer system structural integrity. H&S Skyview GIS application has allowed integration of source data from district provided paper-based plans, various electronic files, GPS survey files, photos attachments, PDF documents and videos. Our Skyview GIS application provides real-time, multi-user access for residents to view restricted data provided by the City and allows City staff secure access to edit system attributes (location, sizes, physical condition, etc.) of their existing features. Use of survey grade GPS units with centimeter accuracy ensures vertical accuracy of assets and the data collected would be reliable when imported into future modeling systems.

GIS Hosting | City of Ellisville, Missouri

GIS Analyst for a GIS solution to manage existing and future city assets. Using the Internet as a backbone, H&S deployed our Skyview GIS customizable web-based application to connect all City staff to a real-time centralized geodatabase without need to order additional software or hardware. Other GIS data resources (FEMA, St. Louis County, MSD, etc.) are accessible through the web-based GIS application to enhance the City's capabilities to outside resources in a single pane of glass. Utilizing desktop computers, tablets, and smartphones City staff can view, edit, collect and verify data in the office or out in the field on all asset types such as parcels, zoning, wards, ADA compliance, pavement condition, parks, and other data. Standard forms and drop-down menus ensured data integrity by providing preset values. Attached documents, photos and videos are also viewable through the Skyview GIS application in real-time. In addition to the system implementation, H&S staff were retained for on-call data management and manipulation. As part of the on-call data management Ellisville has requested that H&S integrate Catylist Real Estate API into the Skyview GIS web-based application. Catylist is a property-centric technology that captures every commercial property in a market, no matter the type or size. Catylist tracks all commercial properties, sale transactions, property surveys, retail tenant locations, ownership information, reports, and other features.

GIS Hosting Services | City of Manchester, Missouri

GIS Analyst for development and implementation of a comprehensive Geographic Information System (GIS) with a focus on the management of Veteran's Memorial Brick Paver Program. This project utilizes web-based GIS services which will allow their staff to make edits real-time out in the field and back in the office.

GIS Hosting Services | City of Marion, Illinois

GIS Analyst for the deployment of a Cloud GIS solution to extend the ability for City staff to have real-time access to City map data which was easy to deploy and cost effective. The solution was to deploy web-based GIS services to provide access to City staff to interact and view City-wide map data. Horner & Shifrin GIS staff collected digital and paper-based data from the City to construct a base map of existing assets. Using the Internet as a backbone, Horner & Shifrin deployed web-based GIS services to connect in-house Marion GIS staff with additional City personnel without the need to order additional software or hardware. Once the system was deployed City staff were able to access map data such as public works, code enforcement, EMS, cemetery data, etc. from every workstation throughout the city and from cellular enabled mobile devices such as Apple iPads.

EDUCATION

BS, Geography (Specialization
- Geographic Information
Systems), Southern Illinois
University Edwardsville, 2018

**KEITH CULLI, SUAS PILOT****GIS Technician
Geomatics**

Keith Culli has more than 5 years of experience in surveying and GIS, including a focused history of monitoring and mapping mine subsidence throughout the state of Illinois. Keith is experienced in mapping, collection, condition assessment, and maintenance of GIS assets and systems including roadway improvements, water, storm, and sanitary sewer systems. As a GIS analyst, Keith is responsible for multiple-tier database application development, following the firm's and clients GIS standards and custom GIS technology integration. Keith is a Certified Survey Technician Level 1 and has his Certificate in OSHA Outreach Training. Keith is a NASSCO Certified sewer inspector and proficient in the inspection and condition assessment of sewer systems.

GIS Hosting Services | Rock Creek Public Sewer District

GIS Analyst for GPS field survey, GIS database development, and GIS web-based mapping development for the mapping and I/I investigation for a district-wide flow monitoring and evaluation program.

Lake Area Waste Water Association GIS Hosting | Lake Area Waste Water Association

GIS Analyst to provide a secure, multi-user, and customizable GIS platform (Skyview GIS) allowing the Lake Area Waste Water Association (LAWWA) staff and their partner agencies to have real-time access to LAWWA asset features and data that is easy to deploy, backed up, and cost effective by utilizing desktop workstations/laptop and cellular enabled tablets/smartphones. The Skyview GIS platform allows LAWWA staff and their partner agencies to view, edit, integrate, migrate, upload, download, share, and analyze a wide range of source data and formats including district-provided paper-based plans, regulatory agency data, non-ESRI databases, shapefiles, geodatabases, tabular data, CAD files, GPS/GNSS survey data, aerial and mobile LiDAR data/photogrammetry, embedded data attachments (photos, videos, and PDF documents) and other third party GIS sources into a homogenous single source SDE geodatabase. Our staff adheres to the standards provided by LAWWA, so all parties are on the same page when collaborating. Standard forms and drop down menus ensure data integrity by providing preset values for LAWWA staff asset types such as manholes, clean outs, pump stations, pits, gravity and force mains, etc., along with providing the ability to view and/or edit the sanitary system, additional modules and asset data can be added to track the flushing of the sanitary system, smoke testing, basement backups, service request, rehab status, addresses, parcel data from any device. Use of survey-grade GPS units with centimeter accuracy ensures vertical accuracy of assets and the data collected would be reliable when imported into future modeling systems.

GIS Hosting Services | City of Mexico, Missouri

GIS Analyst to provide a customizable cloud-based application for H&S and City staff the ability and/or resources required for real-time field data collection of multiple asset features for approximately 25 square miles surrounding the City of Mexico, Missouri. H&S and City field staff have teamed together and completed multiple phases of collection annually since inception of the cloud-based application. Some of projects within this collaboration was a study to analyze infiltration and inflow of the Cities 4,000+ sanitary sewer system. We evaluated, surveyed, inspected, smoke tested and recommended repairs or replacements to reduce infiltration and inflow, to help ensure regulatory compliance, and restore the sewer system structural integrity. H&S Skyview GIS application has allowed integration of source data from district provided paper-based plans, various electronic files, GPS survey files, photos attachments, PDF documents and videos. Our Skyview GIS application provides real-time, multi-user access for residents to view restricted data provided by the City and allows City staff secure access to edit system attributes (location, sizes, physical condition, etc.) of their existing features. Use of survey grade GPS units with centimeter accuracy ensures vertical accuracy of assets and the data collected would be reliable when imported into future modeling systems.

GIS Web-Based Hosting & Asset Inventory | City of Cassville, Missouri

GIS Analyst to provide a GIS solution allowing the staff to have real-time access to asset map data which would be easy to deploy and cost effective. Horner & Shifrin's GIS staff collected digital data from City of Cassville, MO and other GIS sources (FEMA) to construct a base map of existing assets. Using the Internet as a backbone, Horner & Shifrin deployed web-based GIS services to connect in-house City of Cassville, MO staff with additional field personnel without the need to order additional software or hardware.

EDUCATION

BS, Geography, Southern Illinois University Edwardsville, 2022 (Anticipated)

AS, Southwestern Illinois College, 2012

REGISTRATION

FAA (Part 107) Small Unmanned Aircraft Pilot

ADDITIONAL TRAINING

National Society of Professional Surveyors (NSPS)
Certified Survey Technician - Level 1

National Association of Sewer Service Companies (NASSCO)
Certified: Pipelines, Manholes & Laterals (PACP/MACP/LACP)

**NIC PLAZA, SUAS PILOT****GIS Technician
Geomatics**

Nic Plaza is a graduate of Illinois State University, with a B.S. in Geography, Certificate in OSHA Outreach Training, and experience in GIS through his undergraduate education and internship with the McLean County Department of Building and Zoning. As a GIS Analyst for Horner & Shifrin, Nic is responsible for assisting in the assessments of utility systems such as water, storm, and sanitary sewer systems through the use of GIS software such as ArcGIS Pro and pipeline assessment tools. Nic is a NASSCO Certified sewer inspector and proficient in the inspection and condition assessment of sewer systems.

Municipal Utility GIS Hosting | City of Poplar Bluff, Missouri

GIS Technician for developing and implementing a comprehensive Geographic Information System (GIS) with a focus on the management of Utilities (water, sewer, and electric). This project will utilize web-based GIS services which will allow their staff to make edits real-time out in the field and back in the office. Horner & Shifrin's GIS staff collected digital data in the form of CAD drawings from City of Poplar Bluff Utilities to construct a base map of existing assets. Using the Internet as a backbone, Horner & Shifrin deployed web-based GIS services to connect City of Poplar Bluff Utilities personnel without the need to order additional software or hardware.

GIS Hosting | City of Ellisville, Missouri

GIS Technician for a GIS solution to manage existing and future city assets. Using the Internet as a backbone, H&S deployed our Skyview GIS customizable web-based application to connect all City staff to a real-time centralized geodatabase without need to order additional software or hardware. Other GIS data resources (FEMA, St. Louis County, MSD, etc.) are accessible through the web-based GIS application to enhance the City's capabilities to outside resources in a single pane of glass. Utilizing desktop computers, tablets, and smartphones City staff can view, edit, collect and verify data in the office or out in the field on all asset types such as parcels, zoning, wards, ADA compliance, pavement condition, parks, and other data. Standard forms and drop-down menus ensured data integrity by providing preset values. Attached documents, photos and videos are also viewable through the Skyview GIS application in real-time. In addition to the system implementation, H&S staff were retained for on-call data management and manipulation. As part of the on-call data management Ellisville has requested that H&S integrate Catylist Real Estate API into the Skyview GIS web-based application. Catylist is a property-centric technology that captures every commercial property in a market, no matter the type or size. Catylist tracks all commercial properties, sale transactions, property surveys, retail tenant locations, ownership information, reports, and other features.

I&I Investigation and Reduction | City of Blytheville, Arkansas

GIS Analyst for an extensive smoke testing of the entire sanitary sewer system including I&I investigation involving structure inspection, condition assessment, and video inspection of selected portions of the system. In addition, GIS asset collection and website deployment were included in the scope of work. H&S developed a secure web-based GIS application and database of system attributes (location, sizes, physical condition, etc.) and performed data migration of existing sewer system drawing files into the GIS system. We conducted survey-grade GPS survey of 200+ structures including manholes, pump stations, air release valves, and valve vaults. Survey data was integrated into the GIS to create a District wide sewer map and integrated with online aerial data. We conducted approximately 200+ detailed manhole inspections utilizing NASSCO standards to collect physical dimensions, structural conditions, and sources of possible I/I. Mobile devices linked to the web-based GIS were used to collect all data, inspection notes, and photographs in real-time providing up to the minute data and status of structures. Utilization of real-time data allowed for additional coordination with PMI and City staff to coordinate additional efforts in the event of extreme I&I situations. We conducted smoke testing on over 500,000 linear feet of gravity sewer lines. Public and private defects and possible I/I locations were documented and entered into the GIS database system. Mobile devices linked to the web-based GIS were used to collect location, data, and photographs of defects in real-time. Specific sewer reaches were identified, a sub-consultant CCTV crew gathered additional detail from visual pipe inspections and the CCTV inspection video and PDF reports were added to the web-based GIS to provide direct access for PMI and the City staff to the data.

EDUCATION

BS, Geography, Illinois State University, 2020

AFA, Lincoln Land Community College, 2017

REGISTRATION

FAA (Part 107) Small Unmanned Aircraft Pilot

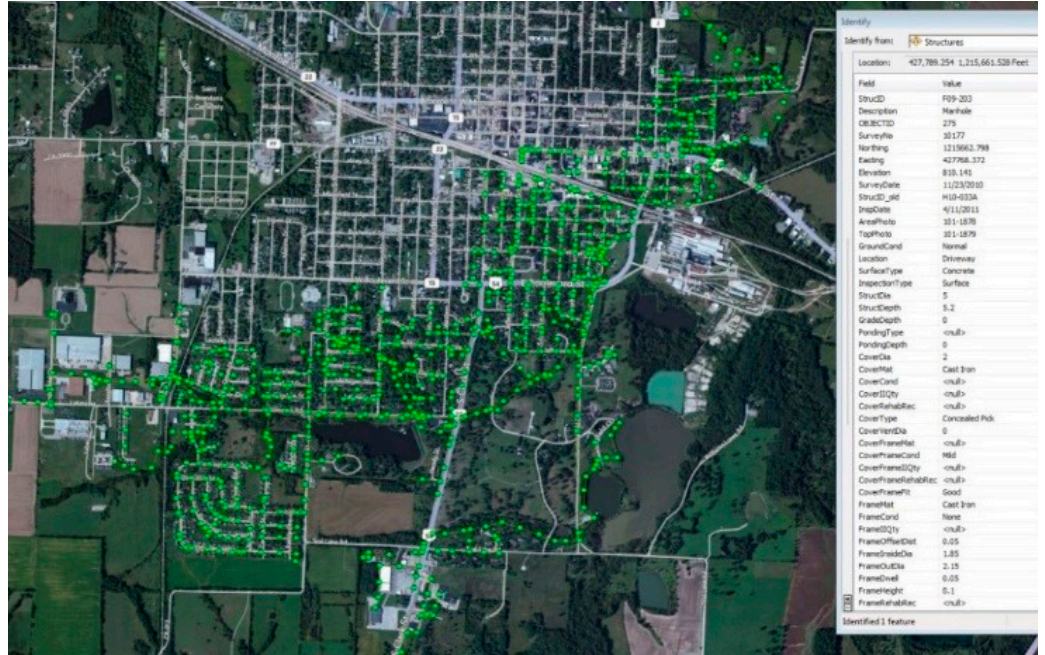
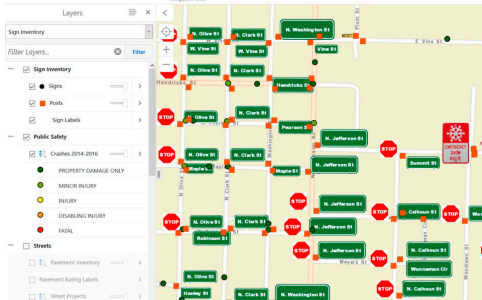
ADDITIONAL TRAINING

National Association of Sewer Service Companies (NASSCO) Certified: Pipelines, Manholes & Laterals (PACP/MACP/LACP)



C. PROJECT EXPERIENCE

GIS HOSTING SERVICES



PROJECT OWNER
City of Mexico, Missouri

PROJECT LOCATION
Mexico, Missouri

COMPLETION
Ongoing

REFERENCE
Andrew Williford
City of Mexico, Missouri
City Administrator
(573) 581-2100
awilliford@mexicomissouri.org

Since 2008, the City of Mexico retained the services of Horner & Shifrin to provide a customizable cloud-based application for use by H&S and City staff, providing the ability and/or resources required for real-time field data collection of multiple asset features for approximately 25 square miles surrounding the City. H&S and City field staff have teamed together and completed multiple phases of collection annually since inception of the application. Some projects within this collaboration have included studies to analyze infiltration and inflow of the City's 4,000+ sanitary sewer system. We evaluated, surveyed, inspected, smoke tested and recommended repairs or replacements to reduce infiltration and inflow, to help ensure regulatory compliance, and restore the sewer system structural integrity.

H&S's Skyview GIS application has allowed for the integration of source data from district-provided paper-based plans, various electronic files, GPS survey files, photos attachments, PDF documents and videos. Our Skyview GIS application provides real-time, multi-user access for residents to view restricted data provided by the City and allows City staff secure access to edit system attributes of existing features (location, sizes, physical condition, etc.). Use of survey-grade GPS units with centimeter accuracy ensures vertical accuracy of assets and the data collected would be reliable when imported into future modeling systems.

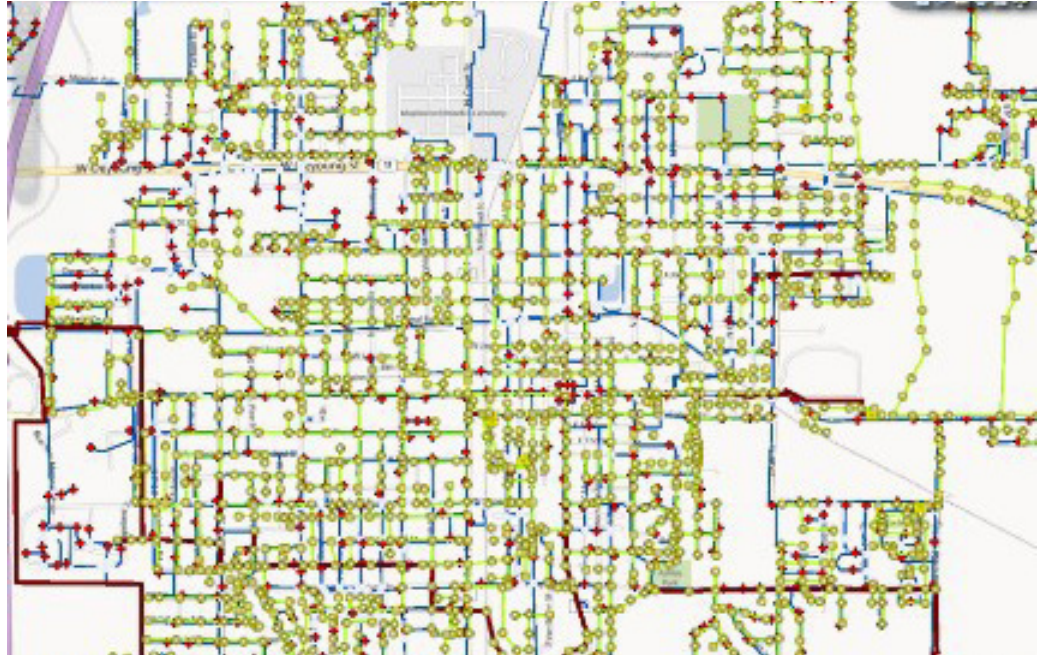


GIS HOSTING SERVICES

Welcome

This site is for informational purposes and internal use by Marion, IL city staff to provide a common area for general business tools. Information contained may not include confidential or sensitive information and may not be distributed without written authorization.

All links listed below will open in a new window



PROJECT OWNER

City of Marion, Illinois

PROJECT LOCATION

Marion, Illinois

COMPLETION

Ongoing

REFERENCE

William Barrett
Marion Police Department
911/GIS Coordinator
(618) 993-2124
911@marionpolicedept.com

Horner & Shifrin was retained to provide a GIS solution to extend the ability for City staff to have real-time access to City map data which was easy to deploy and cost effective. The solution was to deploy web-based GIS services to provide access to City staff to interact and view City-wide map data. H&S GIS staff collected digital and paper-based data from the City to construct a base map of existing assets. Using the Internet as a backbone, H&S deployed web-based GIS services to connect in-house Marion GIS staff with additional City personnel without the need to order additional software or hardware. Once the system was deployed City staff were able to access map data such as public works, code enforcement, EMS, cemetery data, etc. from every workstation throughout the city and from cellular enabled mobile devices such as Apple iPads.

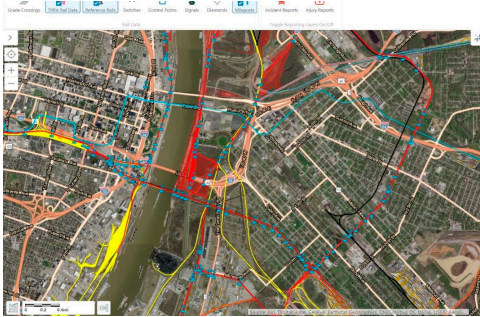
Cemetery GIS Mapping:

Horner & Shifrin also provide a Cloud GIS solution for the collection of over 18,000 burial sites throughout the City of Marion. Utilizing Trimble GeoXH handheld devices the solution provided city personnel with the ability to locate and record burial data within 3-inch accuracy. Standard forms and drop down menus ensured data integrity by providing preset values. The standardized menus and ease of use allowed the City to realize further savings by utilizing summer interns for field data collection. Further enhancements provided connectivity from the City's main website to enable the public to search GIS records for location.

This cemetery mapping project won a Merit Award through the American Council of Engineering Companies (ACEC) of Illinois in 2015.



GIS HOSTING, ASSET MANAGEMENT, AND MAPPING

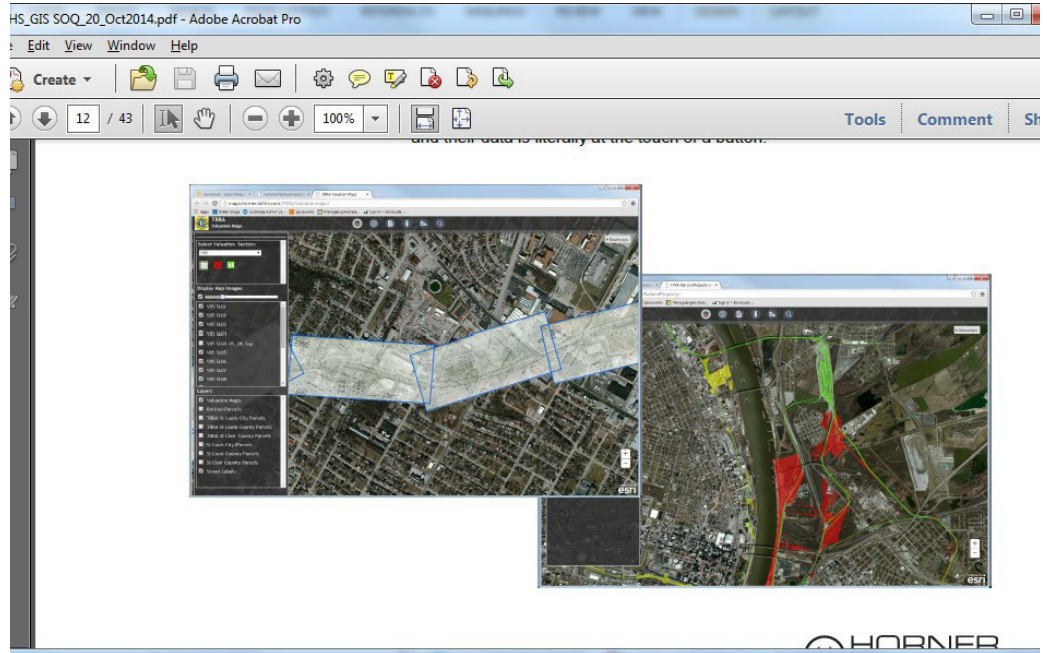


PROJECT OWNER
Terminal Railroad Association

PROJECT LOCATION
Saint Louis, Missouri

COMPLETION
Ongoing Hosting

REFERENCE
Kelly Gibbons
Terminal Railroad Association
Manager of Corporate Contracts and Real Estate
(618) 451-8453
kgibbons@terminalrailroad.com



Terminal Railroad Association of St. Louis (TRRA), retained Horner & Shifrin's services for developing and implementing a comprehensive Geographic Information System (GIS) with a focus on the management of TRRA's railroad assets and topographic field survey of railroad track and physical features. This project will utilize Cloud-based GIS services, LIDAR and other survey methods, and modern day scanning technologies converting hand drafted maps that are almost 100 years old.

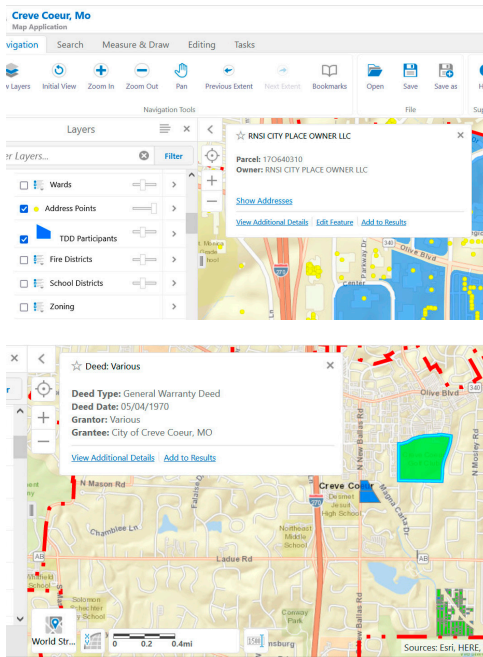
Key aspects of the project:

- Scan approximately 775 track and land cloth maps
- Incorporate scanned maps (PDF) and county parcel data from 4 counties into
- Cloud-based GIS application
- Attachment of parcel/land agreements to application
- LIDAR railroad track and other railroad features
- GPS and Total Station survey methods in conjunction with LiDAR survey

At the request of the client, we were able to go further than just attaching the scanned documents into the Cloud-based GIS application, but geo-reference the scanned images over aerial imagery using transparency sliders for client to visually see line work drawn in 1919, in relation to imagery of today.

This application can be accessed from any internet connected including desktops, laptops, iPads and iPhones, Android devices, etc. This allows the client real-time access to all maps, agreements, etc., from the office to the field and their data is literally at the touch of a button.

In conjunction with the asset collection and hosting project Horner & Shifrin was tasked with additional services to perform boundary survey work for TRRA easement and yard properties. Boundary surveys have been completed for over 240 acres of railway easements and 140 acres of railway yards located in Bi-State region.



PROJECT OWNER

City of Creve Coeur, Missouri

PROJECT LOCATION

Creve Coeur, Missouri

REFERENCE

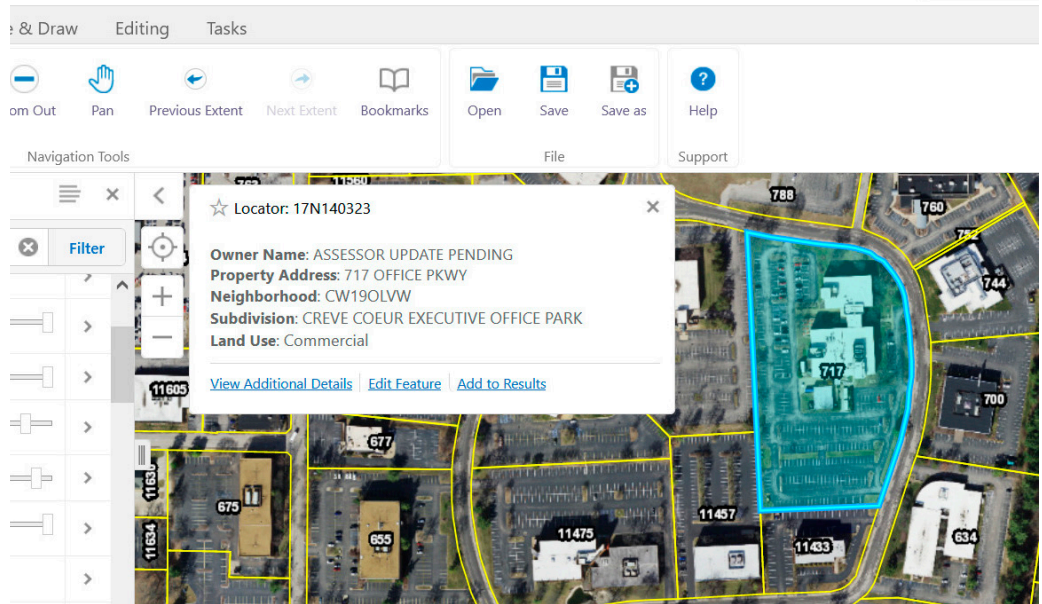
Jason Jaggi

City of Creve Coeur, Missouri

Director of Community Development

(314) 872-2504

jjaggi@ci.creve-coeur.mo.us



Horner & Shifrin was retained by City of Creve Coeur, Missouri to provide a GIS solution of existing and future city assets. Using the Internet as a backbone, H&S deployed our Skyview GIS customizable web-based application to connect all Creve Coeur staff to a real-time centralized geodatabase without need to order additional software or hardware. Other GIS data resources (FEMA, St. Louis County, etc.) are accessible through the Skyview GIS application to enhance the City's capabilities to outside resources in a single pane of glass.

Utilizing desktop computers, tablets, and smartphones the City of Creve Coeur, MO can view, edit, collect and verify data in the office or out in the field on all asset types such as parcels, address points, zoning, wards, subdivisions, roads, sidewalks, parks, and other data. Standard forms and drop down menus ensured data integrity by providing preset values. Attached documents, photos and videos are also viewable through the Skyview GIS application in real-time. City of Creve Coeur staff no longer have to rely on a single person for GIS data or maps as each staff member has access to query, filter and search data along with capabilities to measure or print maps.

In addition to updating their own data, Creve Coeur retained H&S to update the city deeds, zoning, and subdivisions based on paper data. H&S attached scanned deeds that are viewable through the Skyview GIS application. The City Clerk can search for deed data through the Skyview GIS application, instead of accessing a file cabinet or boxes in storage for deed data. H&S also provided the capabilities to print large format wall maps of their zoning and parcel/street maps through the Skyview GIS application to update current wall maps in conference rooms throughout the Creve Coeur, Missouri office. These maps were to be printed 48"x60" on dry-erase boards for the ability to mark on the maps with dry-erase markers for meetings.



Property Details

Location
Address: 15654 - 15658 Manchester Rd, Ellisville, MO 63011
County: St Louis Submarket: STL - West County
Parcels: 23763011, 237630201


Building Size
Building Size: 2,696 SF

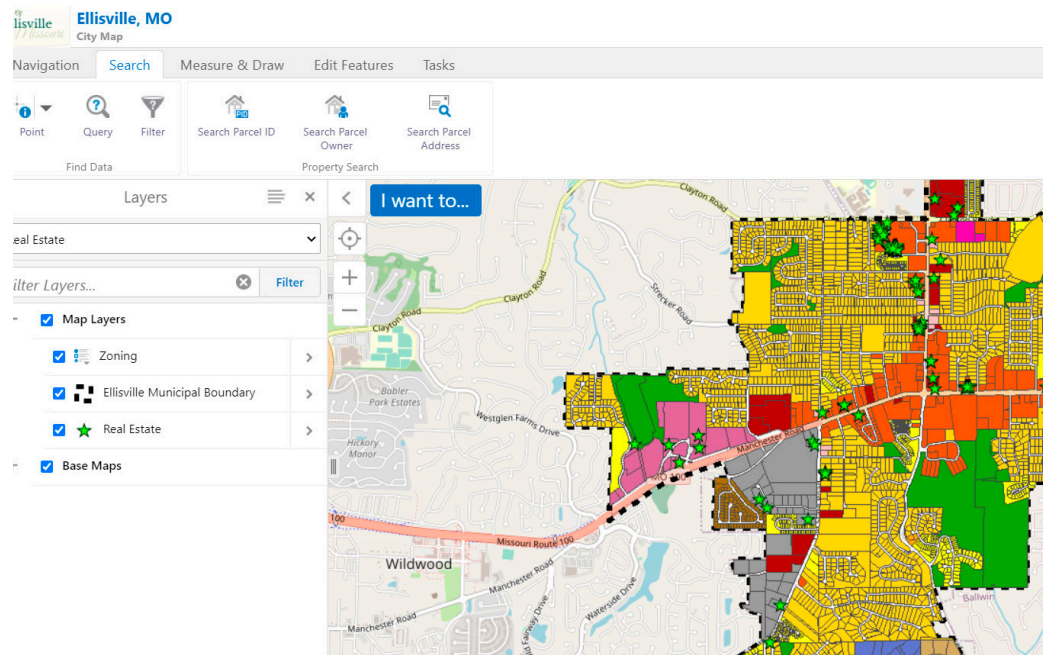
Building Details
Type: **Land: Retail**
Number of Buildings: Occupancy Type:
Permitted Occupied: Building Class:
Building Status: Existing Rooms: 1
Year Built: 1927 Sprinklers:
Parking Ratio:

Land & Utilities
Land (Acres): 0.51 Acres Land (CR): 22,216 SF
Zoning: 19C-3 Lot Depth:

COMMERCIAL CHANCE Search Post a Need/Want Add Listings Help

Patriot Sunroom **Land** **Real Estate**
15654 - 15658 Manchester Rd, Ellisville, MO 63011





PROJECT OWNER
City of Ellisville, Missouri

PROJECT LOCATION
Ellisville, Missouri

REFERENCE
Bill Schwer
City of Ellisville, Missouri
City Manager
(636) 227-9660
bschwer@ellisville.mo.us

Horner & Shifrin was retained by City of Ellisville, Missouri to provide a GIS solution of existing and future city assets. Using the Internet as a backbone, H&S deployed our Skyview GIS customizable web-based application to connect all City staff to a real-time centralized geodatabase without need to order additional software or hardware. Other GIS data resources (FEMA, St. Louis County, MSD, etc.) are accessible through the web-based GIS application to enhance the City's capabilities to outside resources in a single pane of glass. Utilizing desktop computers, tablets, and smartphones City staff can view, edit, collect and verify data in the office or out in the field on all asset types such as parcels, zoning, wards, ADA compliance, pavement condition, parks, and other data. Standard forms and drop-down menus ensured data integrity by providing preset values. Attached documents, photos and videos are also viewable through the Skyview GIS application in real-time. In addition to the system implementation, H&S staff were retained for on-call data management and manipulation.

As part of the on-call data management Ellisville has requested that H&S integrate Catylist Real Estate API into the Skyview GIS web-based application. Catylist is a property-centric technology that captures every commercial property in a market, no matter the type or size. Catylist tracks all commercial properties, sale transactions, property surveys, retail tenant locations, ownership information, reports, and other features.

E. APPROACH

Based on our understanding of your scope of services, the City of Berkeley, Missouri request a web-based GIS system and its related installation, configuration, data conversion/migration, implementation, hosting, and training services. Horner & Shifrin provides a secure web-based platform called Skyview GIS that is powered by Geocortex Essentials, which is designed exclusively for our clients and clients' partners to view, edit, upload, and analyze their data from any desktop, iOS or Android tablet or smartphone device 24/7/365.

As a stakeholder in this project, our six-step approach that we apply to most of our projects will start by working side-by-side with the City personnel to discover necessary data, design the system, migrate discovered data, create the hosted GIS web-based platform, review for quality and functionality, and train personnel to view, edit, analyze, query, filter, report, and share the information as the information changes. We expect to meet your specifications, provide sound GIS practices, promote cost-effective measures and support the City in this endeavor. The following details the major steps we would expect to conduct on your project.

Needs Assessment/Data Discovery

Our approach begins, with a kick-off meeting to set expectations by identifying essential City staff and stakeholders, along with IT staff, introduction of key H&S team members, establish a schedule for meetings and timelines, decide on preferred methods of meetings (in person, virtual, etc.), and review budget restraints. We will work with key stakeholders to identify and review the following:

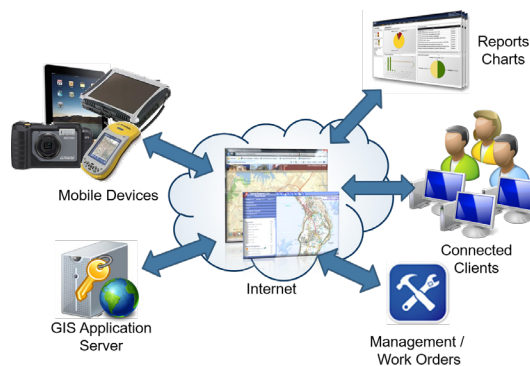
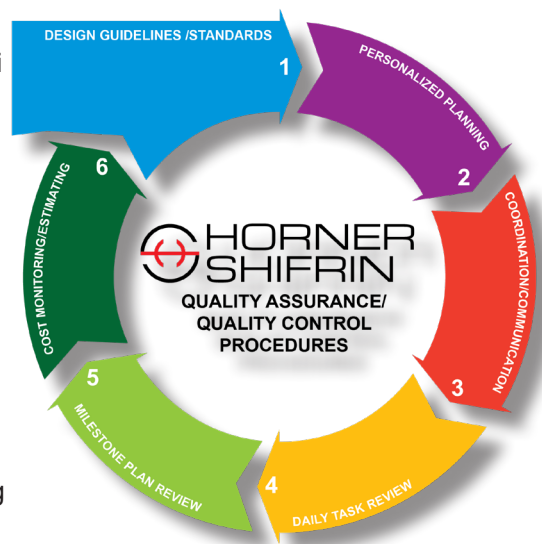
- Review desired outcomes for services, processes, and deliverables
- Review the existing system and servers, dataset features, and security permissions
- Review limits of working area
- Review capacity, capabilities, and formats
- Review current and future integration processes and requirements
- Review the success and challenges of current environments.

This is the time where we review in detail the data layers streets, utilities (water, sewer, gas, electric, etc.) zoning, flood plain, and any additional layers/data that are relevant to City, so we can move into the next phases of our approach by turning your vision into a creative and interactive GIS map by designing your system. We will discuss what attributed data the City wants to collect, view, edit, analyze, query, filter, and report on to meet the requirements of not only this scope of services, but allow the City to share and inform for all future needs. The H&S team will work with the key stakeholders to gather and review the existing dataset features, schema, symbology, coordinate systems, and review user access in roles and security permissions.

Database Configuration/Data Migration

Database configuration and data migration is the second and third phase of our approach. This where we design your ESRI SDE Geodatabase to be versatile, scalable, secure, and to either a third-party standard or your standard. Our analysts have extensive experience with Export Transform Load (ETL) processes and integration of spatial and non-spatial data sources into a single GIS schema. Our vast expertise and experience allow our staff to integrate/migrate a wide range of sources including non-ESRI databases, CAD, PDF, shapefile, tabular data, photos, videos, and GPS services along with integrating third party GIS sources into a homogenous single source database for our clients. We will use programs like Scan2Cad to convert PDF's into AutoCAD drawings, which allow us to import linework and text from any drawings into the Skyview GIS platform systems. We will help City staff acquire county and airport data and layers, aerial photography, and imagery for use in the Skyview GIS platform. We adhere to the standards provided by our clients and agencies, so all parties are on the same page when collaborating, which allows our team to provide a comprehensive, yet easy to follow GIS manual for all users to access, if required. The following are a few examples of integrated data sources / providers that our clients routinely require:

- CADD file migration (Autodesk AutoCAD, Bentley Microstation)
- Miscellaneous Innovyze InfoWater, BlueMarble, Pix4D, ERDAS
- Embedded data attachments (PDFs, images, videos, etc.)
- Assessor, county, and airport data (single or multiple sources)





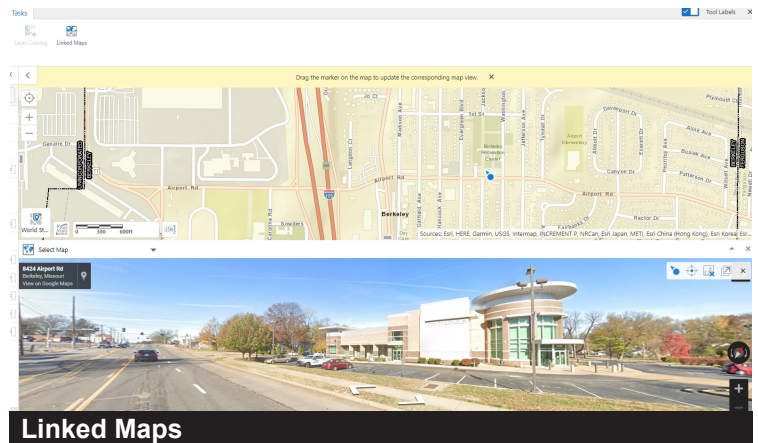
- Existing GIS / as-built data imports / migration
- Regulatory agency (FEMA, Utility, DNR, etc.) data
- Third-party database applications
- Conversion programs (Scan2Cad, Prism Video formatting, etc.)
- Surveying and mapping
 - Aerial UAV LiDAR & photogrammetry
 - Boundary and topographic surveying
 - Easement
 - Deed
 - ROW
 - Plats and record of survey



Application Development

Application development is the fourth phase of our approach. Our firm provides a secure web-based platform called Skyview GIS that is powered by Geocortex Essentials, which is designed exclusively for our clients and clients partners to view, edit, upload, and analyze their data from any desktop, tablet, or smartphone device. During application development we customize your user interface with intuitive and easy to use tools, search buttons, pop-ups for quick information, and workflows. Our system can also provide the ability for a mobile offline version to help in areas with no cell/data service/coverage, which would make a URL inaccessible. Our first-hand knowledge and experience in creating these systems house many capabilities.

- Provided inventory collection and management of all assets and data.
- Mobile access for real-time location and pictures of assets stored within the database noting maintenance issues and providing resolution documentation.
- Mobile access for the reporting of issues by the public or staff via a public portal with email notifications to City staff and essential stakeholders.
- Secure login usernames and roles for stakeholders, partner agencies, consultants, etc., to view, edit, manage, based on level of security requested by the City.
- Secure text messaging API integration for internal operations and notifications.
- Real-time breadcrumb mapping via tablet or phone.
- Nightly automated database updates of data from partnering agencies of our clients.
- Analytics reporting and charting.
- Linked maps capability to show Google Street View and Bing Maps (Road, Aerial, Bird's eye, and StreetSide views)



Our team routinely provides custom application development services related to the integration, distribution, visualization, and analysis of geospatial information using a variety of application frameworks such as: ArcGIS Online, VertiGIS Geocortex, Leaflet, C#, API integration, and native ESRI .NET/ Java. While we have not worked directly with iWorq or GeoSoft, we have worked with similar products and databases to integrate or update data from multiple other platforms and are confident these will be no different. We will utilize API and REST endpoint services to combine data between application sources with the GIS. We have routinely used this approach with other clients such as Ameren UE, MoDOT, St. Louis County, and various others to provide seamless and automated processes with systems such as Maximo, Twilio, Oracle, and flat file data imports from tabular and GIS databases. If desired, our team of degreed and certified analysts/programmers can provide customization to extend your GIS to meet your organization business process requirements and will utilize the following programs and development tools to create your system, maintain, modify, and QA/QC the data and application.

- ArcGIS Desktop & Pro – ArcMap Basic, Standard, Advanced, ArcGIS Pro
- ArcGIS Extensions – 3D Analyst, Data Reviewer, Network and Spatial Analyst, Workflow Manager
- ArcGIS Enterprise Server – Image Analyst,
- Development Tools – Python, JavaScript, ArcGIS SDKs, WebAppBuilder, Geocortex Essentials, C#



Some examples of application development and customization are providing the ability to add meets and bounds directly inside an online application, custom search and reporting capabilities, provided modifications to web-code platform, trained client staff on how to update their code, and provide clients the capability to merge over 250 different feature class shapefiles from 4 states into a single geodatabase on a monthly frequency. Another example, one of our clients collected code violations of trash/debris, grass to tall, and abandoned vehicles. The Code Inspector normal process took anywhere between 30 minutes to an hour of time, based on travel, office time, download of photos from a camera and mailed violation to homeowner. H&S decreased that time to two minutes by collecting data and photos through an iPad and printing violations directly in the vehicle on a wireless printer and submitting to homeowner on the spot. The inspector saves gas on vehicle travel back and forth to office, decreases collection time, and decreases processing time, which allowed for more violations to be collected and increased collections revenue and work orders.

Quality Assurance/Data Governance

Quality Assurance/Data Governance is the fifth phase of our approach. The integrity of GIS data is of paramount importance to run analyses, standards compliance, query data, filter for mapping purposes or share your data with other parties. Our staff utilize advanced automated tools to ensure data integrity of collected and imported data. By utilizing tools such as the ESRI Data Reviewer Extension, our staff can create automated workflows, which can analyze entire data sets and find errors such as non-connected vertexes, overlapping polygons, inconsistent naming, null values, etc. This time saving process provides our staff the ability to quickly, find, locate, and resolve targeting errors in database rather than reviewing all data, segment by segment.

Training

Training is the final phase of our approach. Training and engagement of stakeholders is crucial to the success of manipulating and maintaining the GIS system. Our onsite hands-on or virtual training sessions only takes about two hours from start to finish due to the intuitive and ease of use our Skyview GIS platform and will include a mix of office and field training along with providing staff step-by-step instructions on data integration, field application collection, data modifications, analysis, and data/map producing capabilities, which will be performed on current data for real world experience and not training data. Four hours of annual training along with unlimited email, phone, and texting support are included in our hosting contract at no additional cost. If more than four hours of training is required annually, we can provide additional training on an hourly cost. In addition to on-site support, we offer virtual office and online meeting support between our Analysts and the City of Berkeley. Your Skyview GIS platform includes access to documentation, ability to create support requests, and contact information for live support via phone, text, or email. As your project manager, I am also your on-call personnel for our firm and available as needed 24/7, as we have worked with clients on Saturday afternoon during emergency flood management events and Friday evening in a parking lot to resolve a change required to make after normal business hours.



Once your Skyview GIS platform has been designed, created, tested, verified and is in full operation, we will provide the onsite and/or virtual training (based on comfort of City stakeholders requiring training). While our platform is up 24/7/365, we do require to upgrade/update our platform to keep up with the ever-changing technology and usually conduct our upgrades on the weekends/off hours. We notify all clients prior to upgrades so each client can prepare for a few hours of down time. Normally about 3-4 hours on a Saturday morning or late at night a few times a year.

Benefits of Our Approach

Our goal as a stakeholder is to ensure the success of each client organization and their projects. We have used this approach with numerous large and small clientele and projects. We take the time to listen to our client's requests, issues, and needs, so we can formalize a proper solution and response. Our creative and innovative team allow our capabilities to be limitless and provide a common framework for future integration and scalability. We provide cost-effective solutions and promote automation that reduces time and money, we ensure the integrity of your data using the proper software and tools, and we are strategic in forging a collaborative environment between client, partners, and team.

The fact is, we use the same approach on internal projects within our firm as we do externally with our clients, partners, and agencies by using the same software, applications, databases, and configurations on our projects as we would for yours. The combination of our full-service GIS team and leverage of our engineering, surveying, civil/site, water, construction administration, and environmental assessment services provides a library of resources at the disposal of our clients; therefore, we are confident our team's service portfolio, support, training, and recommendations will meet the City of Berkeley's immediate and future needs.

**F. WORK TIMETABLE & PRICING SCHEDULE****WORK TIMETABLE**

While we envision the time frame to be completed within two-three months from Notice to Proceed, the number and types of customizations can decrease or increase time frame to configure and implement.

TASK	TENATIVE TIMETABLE
Notice to Proceed	8/1/2023
Kick-off Meeting / Review of Current Skyview GIS Platform Capabilities / Data Discovery	8/3/2023 - 8/10/2023
Date Discovery Review and Customization Requirements Meeting	8/11/2023 - 8/18/2023
Skyview GIS Setup/Database Creation	8/18/2023 - 8/25/2023
Implementation / Customization/Migration / URL Creation	8/25/2023 - 10/6/2023
Setup Review Meeting	10/6/2023 - 10/20/2023
Training / Deliverables	10/23/2023 - 11/3/2023
Testing / Comment	11/6/2023 - 11/24/2023

PRICING SCHEDULE

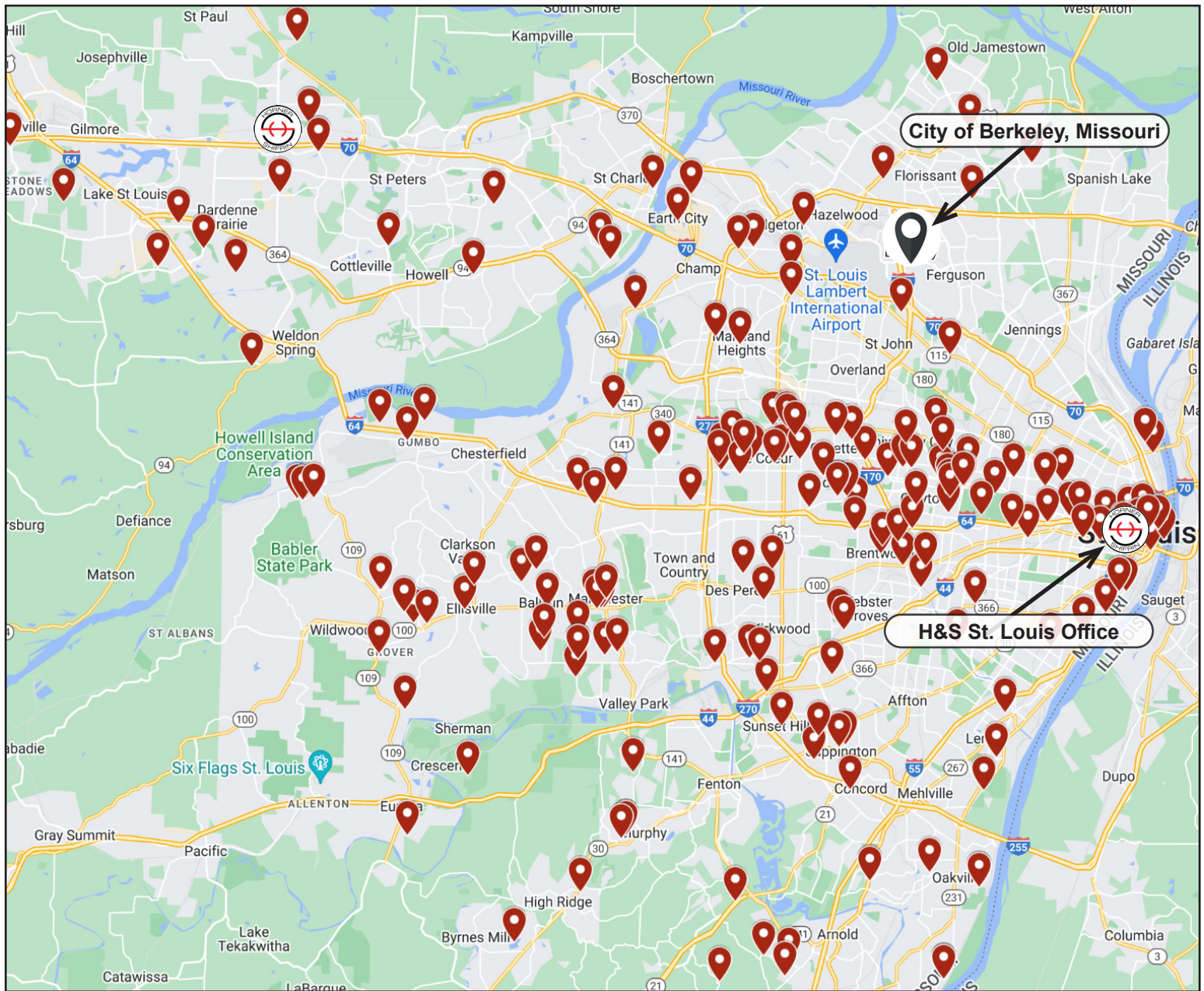
Our cost of services is an estimate based on assumptions and level of detailed anticipated. The number of layers, attributes, modifications, customization, automation, integration with other software, and file conversions, etc. can decrease or increase the cost of our services.

TASK	UNIT COST	UNIT	QUANTITY	COST TOTAL
Annual Hosting Fee (currently unlimited storage, seats, and 4 hours training included)	\$7,500.00	Annually	1.0	\$7,500.00
Skyview GIS platform setup is a one time fee for meetings, data discovery, data mining, configuration, implementation, testing, QA/QC, etc.	\$142.00	Hourly	140.0	\$19,880.00
Additional training as requested (estimate 20 hours minus 4 hours included in annual hosting fee)	\$142.00	Hourly	16.0	\$2,272.00
Subtotal				\$29,652
PDF to CAD to GIS Conversion (depends on how many files require conversion)	\$126.00	Hourly	120.0	\$15,120.00
Customizations (depends on level of customization)	\$142.00	Hourly	120.0	\$17,040.00
Integration with iWorq and Geosoft (depends on level of detail to integrate)	\$142.00	Hourly	120.0	\$17,040.00
Subtotal				\$49,200
TOTAL				\$78,852

G. PROXIMITY

Our proximity from the City of Berkeley, Missouri to our H&S St. Louis office is only a mere 17 miles away. The core of our GIS team is in our St. Louis office and can be physically onsite within an hour or two, if required, and work virtually with our other members in other offices to resolve any problems as they arise. The current virtual environment and collaboration that our teams deploy allow us to be anywhere and everywhere, as long as we have permission to access. Proof of this capacity and capabilities to work remotely is displayed in our current clients throughout Missouri, Illinois, Arkansas, Ohio, Iowa, and Florida.

The map below outlines our office locations and Geomatics projects in proximity to the City of Berkeley.



Map Legend

H&S Office Locations



H&S Geomatics Projects



City of Berkeley, Missouri



CELEBRATING
90
YEARS
1933 - 2023

CORPORATE HEADQUARTERS

The Power House at Union Station
401 S. 18th St., Ste. 400
St. Louis, MO 63103-2296
(314) 531-4321

OFFICE LOCATIONS

3604 NW Frontage Rd., Ste. 6F
Bentonville, AR 72712-9254
(479) 398-7250

8755 W. Higgins Rd., Ste. 325
Chicago, IL 60631-0019
(312) 332-4334

231 N. Main St., Ste. 25
Edwardsville, IL 62025-1653
(618) 650-8440

410 N. Court St.
Marion, IL 62959-2329
(618) 993-6411

604 Pierce Blvd., Ste. 300
O'Fallon, IL 62269-2579
(618) 622-3040

101 Laura K Dr., Ste. 101
O'Fallon, MO 63366-3991
(636) 329-9296

4061 Highway PP, Ste. 1
Poplar Bluff, MO 63901-3905
(573) 727-9666

119 S. Main St.
St. Charles, MO 63301-2802
(636) 277-9550

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WEBSITE**

www.hornershifrin.com