MUNICIPAL GIS DEVELOPMENT SERVICES

Proposal for the

Town of St. Paul, Indiana

A practical, maintainable GIS for water, wastewater, stormwater, and future municipal operations

A municipal operations platform - not simply a set of maps. The proposed system combines organized infrastructure data, secure web access, staff training, and a foundation that St. Paul can expand over time.

Prepared for

Town Council and Town Staff

Prepared by

Jeffrey S. Steele | GIS Coordinator, City of Greensburg

August 2026

PROPOSAL GUIDE

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A clear path through the proposed engagement, demonstrated experience, and commercial terms.

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Proposal objective Create an accurate, usable, Town-owned GIS that supports daily utility operations today and provides a disciplined foundation for future municipal applications.

SECTION 01

Letter of Transmittal

A commitment to a useful system that Town staff can trust and sustain.

Town of St. Paul
106 N. Webster Street
P.O. Box 235
St. Paul, Indiana 47272

Dear Members of the Town Council:

Thank you for the opportunity to submit this proposal for development of the Town of St. Paul's Geographic Information System (GIS).

For more than twenty-three years, I have developed and managed municipal GIS solutions for the City of Greensburg. That experience has shown me that a successful GIS is much more than a collection of digital maps. It is an operational resource that supports utilities, public works, emergency response, planning, and day-to-day decisions.

St. Paul has an opportunity to organize its water, sanitary sewer, and stormwater information into one dependable system while preserving institutional knowledge and creating a practical foundation for future growth. My objective is to deliver a GIS that is accurate, easy to use, straightforward to maintain, and designed around the way Town staff actually work.

This proposal describes a phased approach to reviewing existing records, building standardized utility datasets, publishing secure web maps, validating the results with Town staff, and transferring the knowledge needed for long-term success.

I appreciate your consideration and welcome the opportunity to discuss the project with the Town Council and staff.

Respectfully,

Jeffrey S. Steele
GIS Coordinator, City of Greensburg, Indiana
812-593-2770 | jffsteele@etczone.com

SECTION 02

Executive Summary

Building a reliable foundation for smarter municipal operations.

Recommended engagement Implement a unified GIS for St. Paul's water, sanitary sewer, and stormwater systems under a time-and-materials contract capped at $15,000 without prior written authorization.

The project will convert available CAD files, engineering plans, as-built drawings, utility maps, and staff knowledge into standardized GIS data and an intuitive ArcGIS Online application. The result will be a single, Town-owned source of infrastructure information available from office computers and mobile devices.

What St. Paul receives

- Organized GIS datasets for water distribution, sanitary sewer, and stormwater infrastructure
- Secure web maps configured for practical office and field use
- Consistent asset fields, naming conventions, symbology, and maintenance standards
- Quality review with Town staff before final delivery
- Hands-on training and supporting documentation
- A scalable structure for inspections, work management, 811 response, citizen reporting, and future assets

Commercial framework

Item	Planning basis
Professional GIS services	$110 per hour
Initial implementation	Not to exceed $15,000 without written authorization
Billing	Monthly; actual hours and services performed
Optional continuing support	$500 per month for up to five hours
Software and equipment	Purchased by the Town; budgetary options shown later

If fewer hours are required, the Town pays only for actual services performed. No out-of-scope work will proceed without written approval.

SECTION 03

Project Understanding

The core need is dependable access to infrastructure knowledge - in the office and in the field.

St. Paul's utility information likely exists across multiple formats and generations: CAD drawings, engineering plans, as-built records, paper maps, spreadsheets, and staff knowledge. The project must organize that information without overstating its accuracy, while giving Town personnel a clear path to review and improve it.

Success means the GIS is

Quality	What it means for the Town
Practical	Staff can search, view, print, and use the system without advanced GIS experience.
Traceable	Mapped assets retain available source, confidence, and descriptive information.
Maintainable	Standards and training support routine updates after project completion.
Scalable	New assets, inspections, work records, and applications can be added without rebuilding the foundation.
Town-owned	St. Paul retains ownership and control of its data and determines how it is shared.

Immediate operational value

- Faster access to valves, hydrants, mains, manholes, inlets, outfalls, and related records
- Improved support for maintenance, repairs, utility locates, and emergency response
- Reduced dependence on paper records and individual memory
- A clearer basis for capital planning and future infrastructure improvements
- More consistent information between office personnel, field crews, consultants, and contractors

Accuracy principle The GIS will document the best available information and its source. Records-derived locations are not represented as survey-grade unless they have been field verified to an appropriate standard.

SECTION 04

About the Consultant

Municipal GIS experience grounded in daily operations.

Jeffrey S. Steele

GIS Coordinator
City of Greensburg, Indiana

23+ years developing, managing, and expanding municipal GIS solutions

My work focuses on solutions that improve municipal operations while remaining understandable and sustainable for the people responsible for them. Experience includes utility infrastructure, addressing, emergency response, public works, inspection programs, field data collection, citizen services, dashboards, and workflow automation.

Relevant municipal capabilities

- Water, sanitary sewer, and stormwater GIS
- ArcGIS Online administration and governance
- Mobile field applications and high-accuracy GNSS collection
- 811 utility locate response workflows
- Citizen request and problem-reporting applications
- Lead service line inventory and infrastructure inspections
- Dashboards, Experience Builder applications, and automated workflows
- Training, documentation, and long-term data stewardship

Municipal perspective The proposed system is designed by someone who uses GIS throughout the full lifecycle of local-government operations - not only during implementation.

SECTION 05

Implementation Approach

A phased process with visible checkpoints and Town review.

1. Initiate and inventory

Confirm objectives, gather available records, identify staff contacts, document priorities, and establish a working schedule.

2. Design the data model

Create utility layers, attribute fields, domains, identifiers, source tracking, and naming conventions suited to St. Paul's needs.

3. Convert and compile

Transfer available water, sewer, and stormwater information from CAD, plans, maps, tables, and other records into GIS datasets.

4. Review and validate

Check completeness, attributes, connectivity, spatial placement, symbology, and source references; review questions with Town staff.

5. Publish and configure

Publish approved information to ArcGIS Online and configure secure, intuitive web maps for office and mobile access.

6. Train and deliver

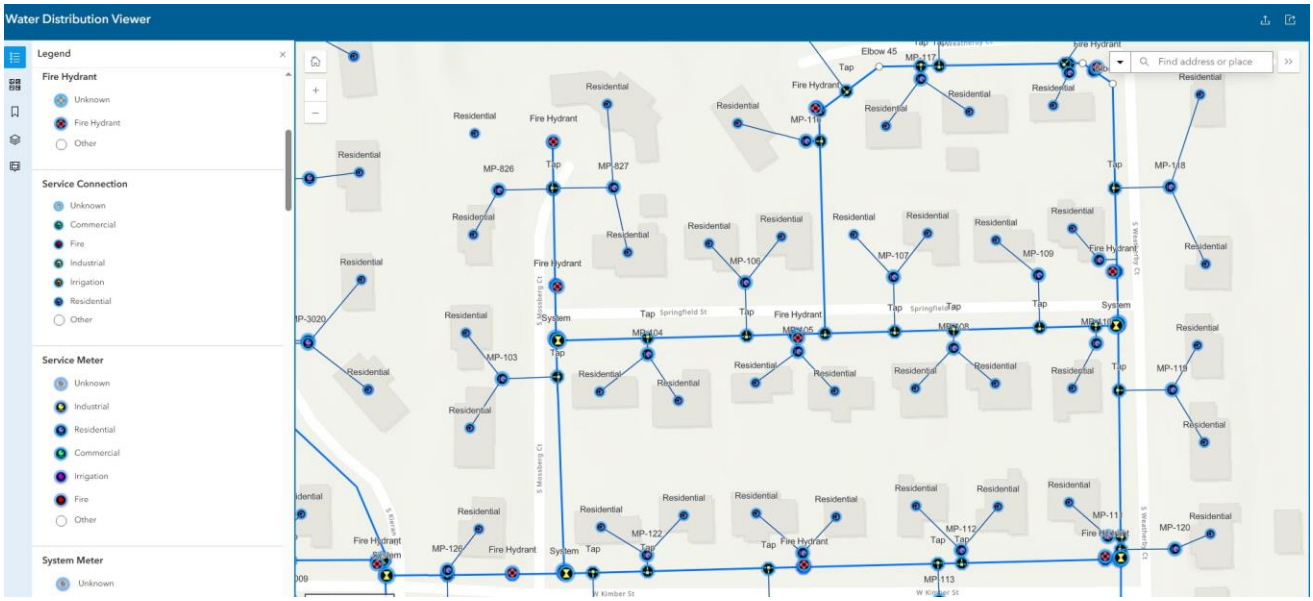
Provide hands-on training, documentation, final datasets, and recommendations for ongoing stewardship and future expansion.

Schedule A detailed milestone schedule will be confirmed after kickoff and review of the availability, condition, and completeness of source records. Regular progress updates will identify work completed, decisions needed, and remaining budget.

SECTION 06

Scope of Services

Water distribution system



Representative municipal water-distribution application developed for the City of Greensburg.

The water distribution GIS will organize available information into a connected, understandable representation of St. Paul's potable-water infrastructure. The system will support routine maintenance, emergency response, asset verification, and future capital planning.

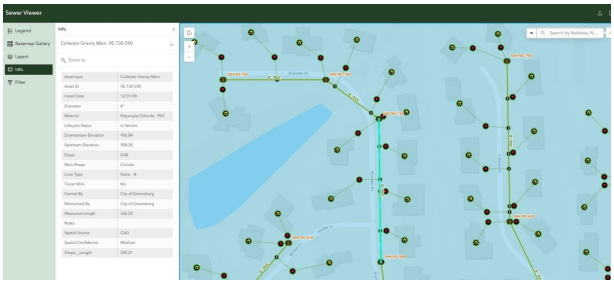
Asset category	Typical information incorporated when available
Water mains	Diameter, material, status, installation information, ownership, source, and confidence
Valves	Type, identifier, status, access notes, maintenance information, and location source
Hydrants	Identifier, status, ownership, inspection or maintenance fields, and location source
Services and meters	Service classification, meter or connection identifiers, and related operational fields
Other facilities	System meters, fittings, tanks, pumps, or other assets supported by available records

Final fields and asset categories will be confirmed with Town staff during data-model design.

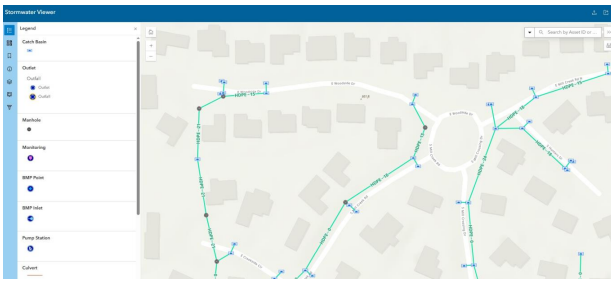
SECTION 06

Scope of Services

Sanitary sewer and stormwater systems



Sanitary Sewer Viewer



Stormwater Viewer

Sanitary sewer collection

The sanitary sewer GIS will organize available gravity mains, force mains, manholes, lift stations, service laterals, and associated structures. Where source records support them, fields may include diameter, material, elevations, slope, installation information, status, and source confidence.

Stormwater infrastructure

The stormwater GIS will organize available storm mains, catch basins, inlets, manholes, culverts, outfalls, detention facilities, monitoring points, and related drainage structures. The data model will support future inspection and maintenance programs.

Shared quality checks

- Review mapped features against source plans and available imagery
- Check obvious network gaps, duplicates, and attribute inconsistencies
- Record unresolved questions for Town review rather than guessing
- Apply consistent identifiers, symbology, source, and confidence fields

SECTION 07

Deliverables and User Experience

A complete working system with standards, access, and documentation.

Core deliverables

Deliverable	Description
Town-owned GIS database	Organized water, sanitary sewer, and stormwater datasets created from available source information.
ArcGIS Online content	Hosted layers, web maps, groups, and sharing settings configured for authorized Town use.
Utility viewer	An intuitive application for finding locations, viewing assets, switching layers, measuring, and printing.
Data standards	Layer structure, identifiers, field definitions, domains, symbology, metadata, and maintenance guidance.
Issue and decision log	Documented source questions, assumptions, corrections, and items requiring future verification.
Training and documentation	Hands-on instruction and reference material for routine use and updates.

Expected viewer functions

- Search by address or asset identifier
- Locate infrastructure and view descriptive information
- Turn operational layers and aerial imagery on or off
- Measure distances and areas and create printable maps
- Use the application from modern desktop and mobile browsers
- Apply secure access controls for non-public utility information

Data control The Town retains ownership of project data and controls sharing. ArcGIS Online services remain subject to the Town's Esri subscription and applicable platform terms.

SECTION 08

Quality, Training, and Knowledge Transfer

The project is not complete until staff can use and understand the system.

Quality assurance

Quality review will be integrated throughout development rather than postponed until the end. Checks will focus on traceability, completeness, attribute consistency, network logic, map presentation, and the resolution of staff comments.

Checkpoint	Review focus
Source review	Record availability, legibility, conflicts, dates, coordinate information, and known limitations
Conversion review	Feature placement, duplicates, omissions, identifiers, attributes, and source references
System review	Layer organization, permissions, symbology, search, pop-ups, and application behavior
Town review	Institutional knowledge, known conditions, corrections, priorities, and acceptance comments
Final review	Approved revisions, documentation, backups, ownership, and training readiness

Training topics

- Navigating the web viewer and locating assets
- Viewing, filtering, measuring, and printing information
- Making authorized updates and documenting source information
- Using mobile devices and optional GNSS equipment
- Adding future improvements without undermining data consistency
- Administering users, groups, sharing, and basic ArcGIS Online content

Knowledge transfer Training will emphasize St. Paul's everyday tasks and will be supported by concise reference documentation suitable for current and future employees.

SECTION 09

Selected Municipal GIS Experience

Working applications that demonstrate the proposed capabilities.

City of Greensburg GIS Portfolio

Representative systems designed for active municipal operations

These examples show the range of systems that can grow from a well-designed GIS foundation. They are included as evidence of relevant experience; St. Paul's applications will be configured for its own data, staff, policies, and priorities.

Utility infrastructure GIS

Connected water, sanitary sewer, and stormwater datasets with detailed assets, web access, and field support.

811 Response Center

A centralized ticket-processing and locate-response workflow integrating maps, status tracking, and emergency priorities.

Citizen Problem Reporter

A public-facing request system with map-based reporting, departmental routing, status tracking, and resident transparency.

Workflow and administration

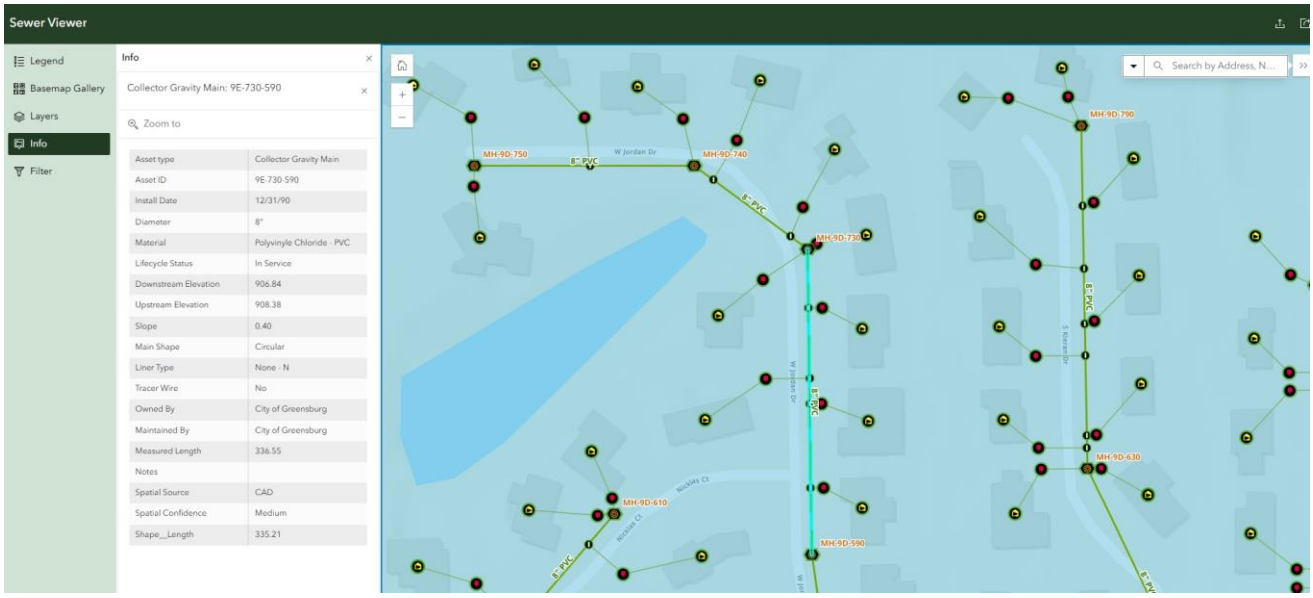
ArcGIS Online governance, mobile applications, dashboards, Experience Builder, and automation.

Transferable value The same practical design principles - clear ownership, simple interfaces, traceable data, and staff-centered workflows - will guide the St. Paul implementation.

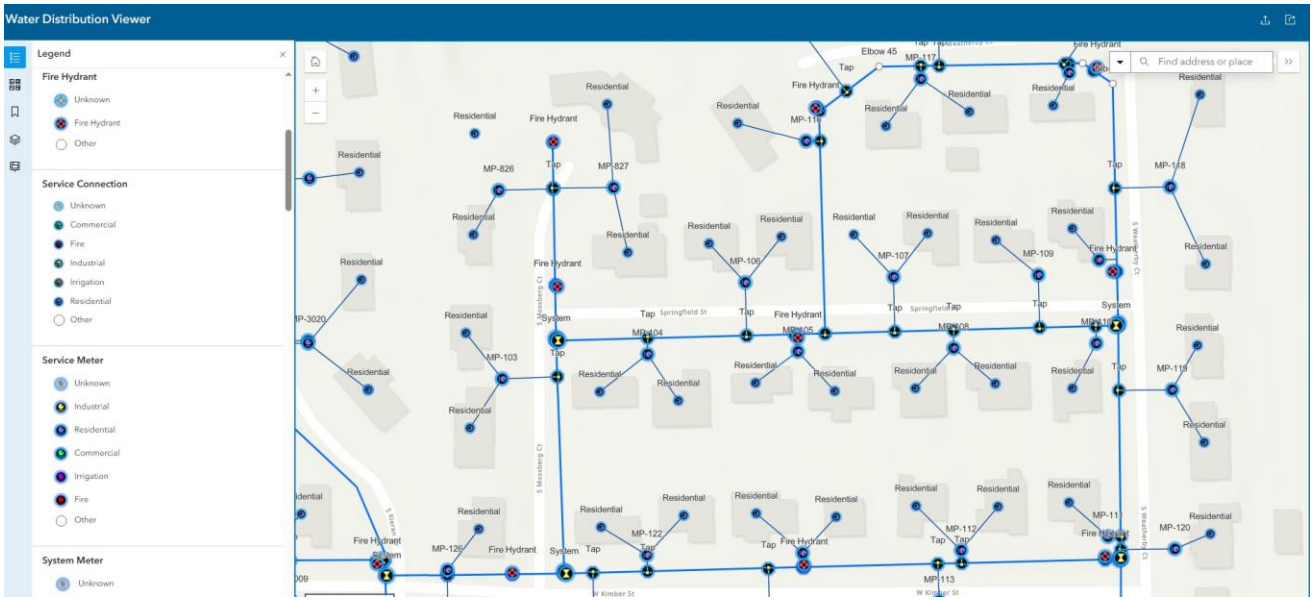
SECTION 09A

Portfolio: Utility Infrastructure GIS

Centralized information for office staff and field personnel.



Sewer Viewer: asset-level information, mapped connectivity, dimensions, materials, elevations, source, and confidence.



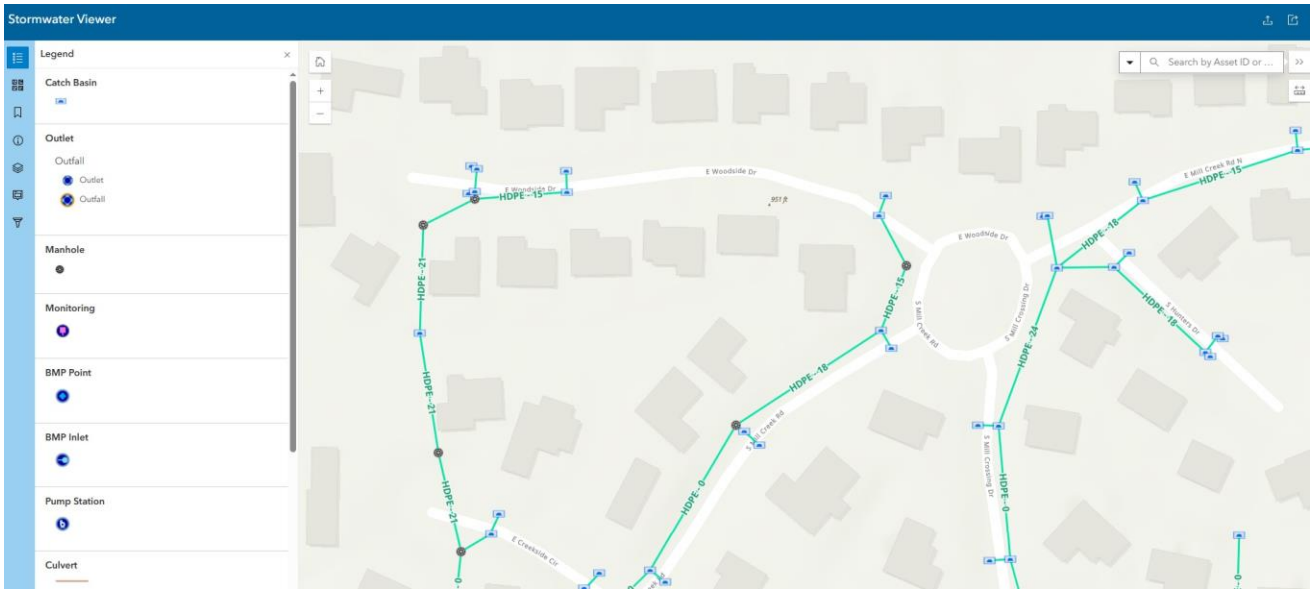
Water Distribution Viewer: mains, meters, service connections, taps, hydrants, and customer classifications.

Operational benefit: a single, accessible source of utility information supports maintenance, emergency response, field verification, planning, and communication across departments.

SECTION 09B

Portfolio: Stormwater GIS

Connected drainage infrastructure with clear asset categories and labels.



Stormwater Viewer: pipe networks, catch basins, outlets, outfalls, manholes, BMP assets, pump stations, and culverts.

Demonstrated capabilities

- Purpose-built symbology for different drainage structures
- Pipe material and size labeling that remains readable at operational scales
- Layer controls and search tools for rapid access
- A structure that can support future inspections, cleaning records, condition ratings, and capital planning

Relevance to St. Paul This experience directly supports development of a stormwater system that can begin with available records and become progressively more complete through field review and maintenance activity.

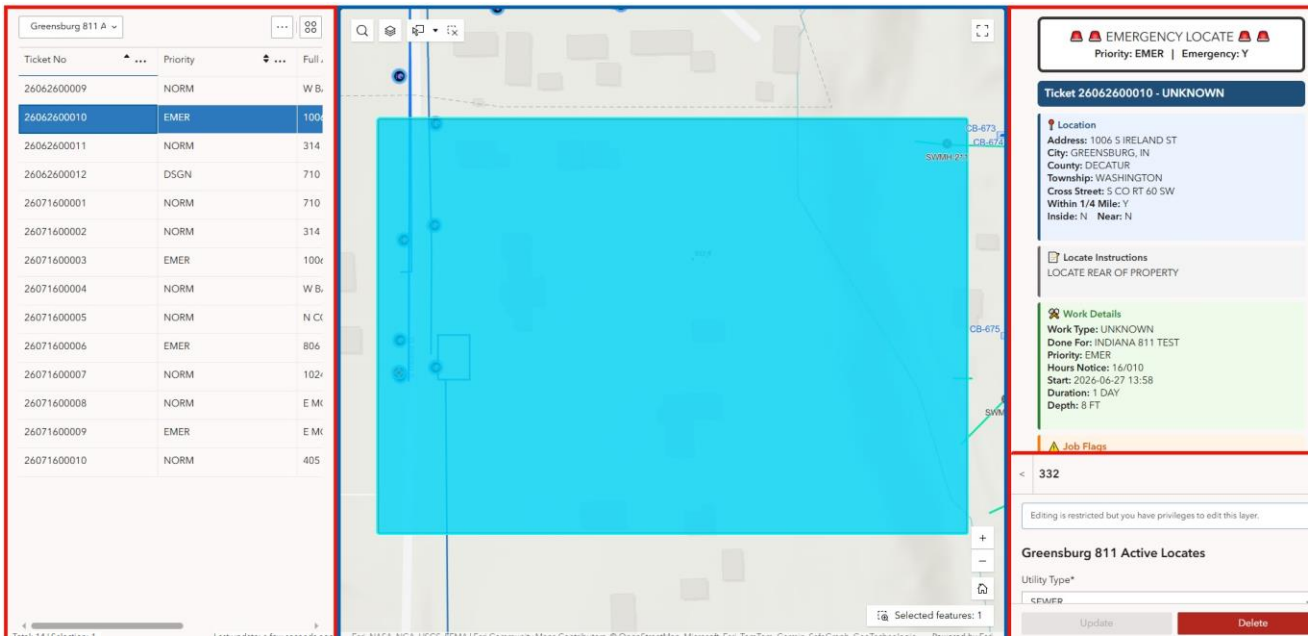
SECTION 09C

Portfolio: 811 Response Center

A GIS workflow that turns locate requests into accountable action.

Locate | Respond | Protect

A centralized interface for reviewing tickets, mapping work areas, recording department responses, and prioritizing emergencies.



Greensburg 811 Response Center: ticket list, mapped locate area, emergency priority, instructions, and work details.

Operational value

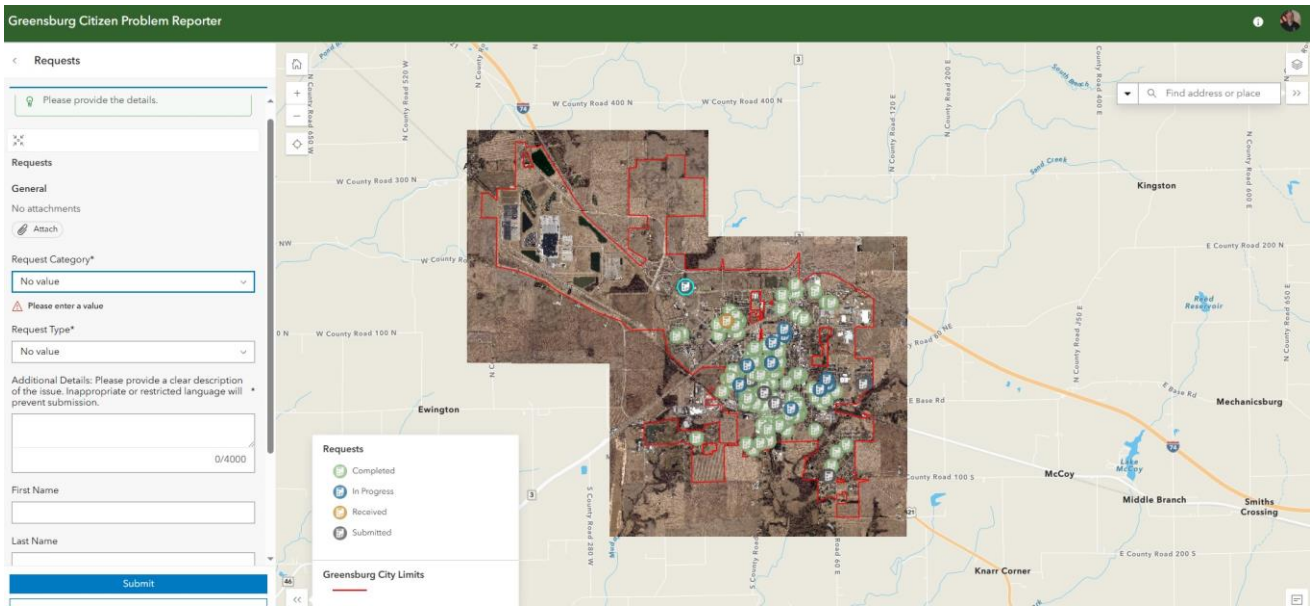
- Reduces manual ticket handling and repetitive data entry
- Gives field and office users a shared view of each request
- Improves visibility of emergency tickets and response status
- Supports consistent records and management reporting

SECTION 09D

Portfolio: Citizen Problem Reporter

A resident-friendly entrance connected to a map-based municipal workflow.

Public landing page: a clear, branded entrance for non-emergency community requests.



Citizen Problem Reporter: location, category, description, attachments, and visible request status.

Operational benefit: residents receive a straightforward reporting experience while staff gain structured locations, categories, routing, and status information that can be managed consistently.

SECTION 10

Future GIS Expansion

Build the foundation once, then add value as needs and resources evolve.

The initial project focuses on utility infrastructure. The same standards, accounts, and web-mapping foundation can later support additional municipal programs without requiring St. Paul to start over.

Program area	Potential future applications
Public works	Street centerlines, signs, sidewalks, ADA ramps, guardrails, pavement condition, snow routes
Utility operations	Valve exercising, hydrant maintenance, sewer inspections, stormwater inspections, lead service inventory
Parks and facilities	Buildings, parks, recreational assets, trees, playgrounds, cemetery management
Planning and administration	Capital improvements, asset replacement, infrastructure reporting, public information maps
Public safety and service	Emergency planning, 811 response, citizen requests, work tracking, dashboards

Expansion principles

- Add applications only when they address a defined operational need
- Reuse authoritative data instead of maintaining disconnected copies
- Document ownership and maintenance responsibility for each dataset
- Protect sensitive utility information while sharing appropriate public content
- Measure success through time saved, better decisions, improved records, and staff adoption

SECTION 11

Cost Proposal

Flexible professional services with a firm authorization ceiling.

Initial project authorization Professional GIS services at $110 per hour, billed for actual time worked, with a not-to-exceed total of $15,000 unless St. Paul provides prior written authorization.

Pricing element	Terms
Professional services rate	$110 per hour
Maximum initial authorization	$15,000
Approximate maximum hours	136.36 hours at the stated rate
Invoice frequency	Monthly
Invoice detail	Hours, services performed, progress, and remaining authorized balance
Additional scope	Requires prior written approval before exceeding the authorized amount

Services covered by the authorization

- Project coordination and review of available source records
- GIS database and data-standard design
- CAD, plan, and record conversion into utility GIS datasets
- GIS editing, source documentation, and quality assurance
- ArcGIS Online configuration and utility-viewer development
- Meetings, Town review, revisions, training, and final documentation

If the work is completed for less than the authorized amount, St. Paul will be invoiced only for actual professional services provided.

SECTION 12

Optional Support and Software Planning

Continue only the level of service and access the Town needs.

Optional monthly GIS support

Service	Monthly fee	Included
GIS Support Services	$500	Up to five hours per month
Additional authorized services	$110/hour	Only when requested beyond included hours

The support arrangement is optional, may begin after implementation or later, and may be terminated by either party with 30 days written notice. Typical services include updates, ArcGIS Online administration, map production, minor application enhancements, user assistance, and general GIS planning.

ArcGIS user types - budgetary annual pricing

User type	Annual price	Typical role
Creator	$700	Administration, web-map creation, ArcGIS Pro Basic
Professional	$2,200	Advanced editing, data management, ArcGIS Pro Standard
Professional Plus	$4,200	Advanced analysis, AI workflows, ArcGIS Pro Advanced
Mobile Worker	$400	Field collection, updates, assignments, and navigation
Contributor	$250	Collaboration and simple edits
Viewer	$125	Secure viewing of maps, applications, and dashboards
Additional credits	$120 / 1,000	Eligible premium services and cloud operations

Planning figures supplied August 2026. Final user types, quantities, credits, taxes, and terms should be confirmed directly with Esri before purchase.

SECTION 13

Recommended Field Equipment

Scalable GNSS accuracy without committing to unnecessary capability.

Future maintenance and field verification will benefit from a high-accuracy GNSS receiver. Trimble Catalyst combines a DA2 receiver with subscription-based positioning, allowing St. Paul to select an accuracy level appropriate to each task.

DA2 field package - historical budget reference

Component	Quoted amount
Trimble Catalyst DA2 receiver packout	$415
Two Anker PowerCore 5000 power banks	$72
Trimble Catalyst pouch	$30
Two-meter carbon-fiber range pole	$330
Seiler technical support	$495
Historical quoted total	$1,342 plus applicable tax and shipping

The referenced Seiler quotation was issued June 22, 2023 and expired December 31, 2023. It is included only as a historical planning basis; obtain a current vendor quote before purchase.

Trimble Catalyst subscription options - per user

Plan	Approx. accuracy	Monthly	Annual
Catalyst 60	60 cm	$57	$478
Catalyst 30	30 cm	$166	$1,420
Catalyst 10	10 cm	$276	$2,366
Catalyst 1	1-3 cm	$480	$4,139

Recommendation Catalyst 30 or Catalyst 10 generally provides a practical balance for utility asset verification. Catalyst 1 can be activated when higher precision is warranted. Subscription prices are approximate and subject to current vendor terms.

SECTION 14

Project Assumptions and Authorization

Clear responsibilities protect the Town, the consultant, and the integrity of the data.

Key assumptions and limitations

- St. Paul will provide available CAD files, plans, maps, records, and reasonable access to staff knowledge needed for the work.
- The project organizes and represents available information; it does not include professional land surveying, engineering design, legal boundary determination, or subsurface utility locating unless separately authorized and performed by appropriately qualified parties.
- Spatial accuracy depends on source quality. Records-derived locations will be identified appropriately and should be field verified before excavation, design, or other high-consequence use.
- ArcGIS, GNSS, cellular service, hardware, taxes, shipping, and third-party subscriptions are direct Town costs unless expressly included by written amendment.
- Secure utility information will be shared only with users and groups authorized by the Town. Public-facing applications require separate review of content and policy.
- Material scope changes, unavailable records, or significant conditions not reasonably identifiable at kickoff may affect priorities or schedule; no work beyond the authorization ceiling will proceed without written approval.

Authorization

The Town of St. Paul authorizes Jeffrey S. Steele to provide the professional GIS services described in this proposal at $110 per hour, with total initial-project fees not to exceed $15,000 without prior written authorization. Optional monthly support and third-party software or equipment are not included unless separately selected.

Authorized for the Town of St. Paul

_____ _____

Authorized signature / printed name Date

Thank you I appreciate the opportunity to help St. Paul create a GIS that staff can rely on, maintain, and expand for years to come.

Jeffrey S. Steele | GIS Coordinator, City of Greensburg
812-593-2770 | jffsteele@etczone.com