

Attachment A

ARCGIS ENTERPRISE IMPLEMENTATION AND ADMINISTRATION

SCOPE OF SERVICES

The Consultant shall execute the project as directed by the City Project Management. At a minimum the following services shall be provided.

At a minimum the following services shall be provided:

1. **Objective A** – Assess City of Laramie (COL) needs, ArcGIS Enterprise suite requirements, and suggest management of ArcGIS Enterprise after setup.
 - a. Assess COL needs including server requirements, suite items and plug-ins, administration, maintenance, and updates.
 - b. Detail base, suggested, and maximum server requirements and any additional COL IT inputs.
 - c. Detail management and update plans after ArcGIS Enterprise setup, and any additional maintenance schedules.
 - d. Create a plan for On-Call or similar service, in case of issue that requires immediate remediation.
2. **Objective B** – Server setup
 - a. Supply COL IT with server requirements, administration access needs, and any additional help needed prior to implementation.
 - b. Setup servers and make sure requirements are met for ArcGIS Enterprise suite implementation.
3. **Objective C** – Implementation of ArcGIS Enterprise.
 - a. Implement the Full ArcGIS Enterprise suite on internal COL servers.
 - b. Setup ArcGIS Monitor with some basic reports.
 - c. Enable SAML or similar.
 - d. Setup valid web certificates.
4. **Objective D** – Transfer SDE databases
 - a. Transfer existing SDE databases into new SDE databases
 - i. Update SDE server location.
 - ii. Change SDE format from SQL Express to SQL or Postgres.
 - iii. Setup proper permissions for Branch versioning and editing via Portal.
5. **Objective E** – Transfer existing Portal groups and items
 - a. Transfer existing Portal groups and items to the new Portal
 - b. Don't transfer Organization Members as they will need to access via SAML login
 - c. Insure mobile app access to Portal via COL iPads.
6. **Objective F** – Cleanup of antiquated data and programs
 - a. This task is to be performed after COL GIS staff have been given access to the new system.
 - b. Remove existing ArcGIS Enterprise suite items from COL servers after transfer.
 - c. Remove old versions of transferred data from COL servers.
7. **Objective G** – COL staff training
 - a. Train COL staff in day-to-day ArcGIS Enterprise administration and management.
 - i. SDE setup
 - ii. Server manager
 - iii. Additional day-to-day tasks
8. **Objective H** – Maintenance
 - a. Assist COL GIS staff in ArcGIS Enterprise administration and management.
 - b. Perform security updates as needed.

- c. Update ArcGIS Enterprise versions at a minimum of yearly on dot versions.
- d. Create a schedule and/or check in regularly (monthly?) for updates and maintenance.
- e. Implement On-Call or similar service discussed in Objective A.

9. Additional Special Conditions:

- a. Conduct a kickoff meeting and periodic review meetings with the City Staff. The Consultant must provide a meeting agenda and notes of the meetings.
- b. City measurement and payment will be understood and complied within its entirety by the Consultant.
- c. Progress and review meetings shall be held as agreed upon by the City Project Manager and Engineer for the project. The Consultant shall be responsible for the writing down all comments made at review meetings and providing all the comments back to the City in the meeting minutes.
- d. Consultant shall be responsible for errors and will be expected to pay for correcting errors.
- e. City review does not absolve the Consultant of any errors.



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RE: QuestCDN 8363945 Title: RFQ for ArcGIS Enterprise Implementation and Administration for City of Laramie, Wyoming

Financial/Cost Proposal

Argis is excited to partner with the City of Laramie, Wyoming to deliver a successfully implemented Esri's ArcGIS Enterprise platform, provide training and maintenance, and to bring innovation to field operations through Augmented Reality that will empower the City for years to come.

Part 1:

Enterprise Implementation

Argis estimates that Part 1 of this project will take approximately **416 hours** of effort. With a blended rate of **\$136/hour**, this time and materials estimate will be approximately **\$56,576** worth of investment which includes the first quarter (3 months) of maintenance. The City will be billed monthly with Net 30 terms.

Part 2:

GIS Managed Services

To complete a full year of GIS maintenance for the remaining quarters 2 through 4, The City's GIS Managed Services will reserve **72 hours** of support quarterly (totaling 216 hours Q2-Q4), **\$28,944** that will span from the start of the second quarter until the end of the fourth quarter of the initial project, to be billed in three (3) separate payments of \$9,648 on a quarterly cadence. Hours can be added. The City will be billed for the increase in hours at the time the hours are approved by the City. These hours will be considered prepaid. Any unused hours will not carry over annually. Hours are spent and accrued on a quarterly basis. Any overage of hours is approved per quarter and billed per quarter. Hours can roll over from quarter to quarter but are limited to the life and duration of this SOW.

The City and Argis can revisit this agreement at any time and adjust it through an addendum, based on usage of hours and the schedule of future projects as determined by the City.

Part 3:

Augmented Reality

Argis estimates that Part 3 will take approximately **48 hours** of effort with an investment of **\$9,930**. This includes a yearly license fee of \$2,151 for 15 licenses and a training and set up investment of \$7,779. Training can be supported in a GIS Managed Services contract in the future.

License fee to be billed upon start of project. Training and setup investment paid upon completion of training on Net30 terms.

In addition, for Argis to perform an on-site Demo, the one-time, fixed fee investment is **\$1,100**.

Project	Milestone	Description	Amount
Part 1: Enterprise Implementation and first 3 months (Q1) of Maintenance	MS-1	Current State GIS Assessment	\$14,995.00
	MS-2	ArcGIS Enterprise Implementation And Modernization	\$26,350.00
	MS-3	Deployment and Training	\$11,916.00
	MS-4	Maintenance and Support	\$3,315.00
		Sub total	\$56,576.00
Part 2: Maintenance and Support (Q2-Q4)		Sub total	\$28,944.00
Part 3: Augmented Reality	MS-1	AR Implementation and Rollout	
		Training and Set up	\$7,779.00
		Licenses	\$2,151.00
		Demo	\$1,100.00
		Sub total	\$11,030.00
	TOTAL	\$96,550.00	

Not to Exceed Amount

As a fixed fee investment for Part 1, Argis commits to not exceed the amount stated above to complete this project in a timely manner. If there are scope changes requested by the City, these will be outside of this agreement and will be appropriately scoped and approved by the client through a change order process, or a new agreement.

REIMBURSABLE EXPENSES

Optional

Unless otherwise stated, Argis will provide all work remotely and will not be on premise unless determined by the City that it is necessary for the success of the project. If the City determines on-premise work is necessary, the reimbursable rate would be \$1,500 per person per visit assuming visit is under three (3) days. Any other reimbursable expenses will be charged to the City on a pass-through basis. Any expense will be approved prior to incurring the expense.

State and Local Government Rates

GIS Services

- GIS Analyst/Technician \$95/hour
- GIS Developer \$133/hour
- GIS Architect \$174/hour
- GIS Project Manager \$137/ hour
- Senior GIS Manager \$137/hour
- Cartographer \$69/hour

Software Development Services

- Project Manager \$147/hour
- Mobile Developer \$147/hour
- Full Stack Developer \$147/hour
- AR Developer \$133/hour
- Database Administrator \$133/hour
- DevOps \$137/hour
- User Experience/Visual Designer \$116/hour
- System Architect \$174/hour



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Milestone Task Breakdown

MS-1 Current State GIS Assessment

The initial step of the process is to review the current GIS environment and needs of the City and once the assessment is complete, architect a future state that meets the City's needs and follows best practices for an Esri Enterprise platform. Argis' assessment begins with data gathering and finishes with architectural design and documentation.

DETAILS/ASSUMPTIONS/APPROACH

Initial steps in the assessment process will be:

1. Data gathering – confirm access to key City servers and resources, interrogate those systems to confirm server architecture, data model, servers, data content, etc.
 - a. Server Specs for Hardware are evaluated and compared to ESRI recommendations.
 - b. Software versions are evaluated and tracked.
 - c. Security and SSO settings will be reviewed for best practices with ArcGIS Enterprise implementations.
 - d. Database software is evaluated for version and compared to ESRI recommendations.
 - e. Database Model is reviewed for scalability, useability, and best practices.
 - f. Data Content, Apps, and Maps are evaluated to find missing or broken data connections and duplication. Recommendations are provided based on efficiency and usage.
 - g. Web services are evaluated for optimization and speed based on user experience.
2. Interview key end users and subject matter experts (SMEs) to determine current use cases for GIS, current successes and failures in the GIS implementation, and the vision that those users and SMEs have for the future of GIS. Argis will take time to talk to departments across the City to identify innovative ways to better utilize investments in GIS and to improve offerings and efficiencies organization wide.



3. Document key findings and pain points for the City in the As-Is document.
4. Architect a best practices implementation for the Esri platform and iterate on that design with the City to confirm the implementation meets future objectives.
5. Document new architecture and vision for the To Be document.

DELIVERABLES

- As-Is Architecture document
- To-Be Architecture document

MS-2 ArcGIS Enterprise Implementation and Modernization

The second stage of this project is the actual solution implementation of the GIS platform for the City. There are two key areas of work in the implementation:

1. Server setup and update
2. Database setup and migration

DETAILS/ASSUMPTIONS/APPROACH

INITIAL ASSUMPTIONS INCLUDE

1. AD is setup and accessible by the servers.
2. A primary Active Directory User (AD) is available on each installation. This user will have access to the databases and have admin level privileges for installation.
3. SSL certificates purchased and installed on servers. (non-wildcard 3rd party certificate is the cleanest)
4. Firewall access setup per port requirements of the specific ArcGIS Enterprise portion (server, portal and datastore). Ports such as 6443, 7443, 2443, etc. as defined in ESRI recommendations and installation requirements.
5. ArcGIS Enterprise and ArcGIS Pro licensing is available and accessible to the Argis team.

TECHNICAL APPROACH

Server Setup and Installation

Argis will install ArcGIS Enterprise (ArcGIS Server, Portal for ArcGIS, Web Adaptors, and ArcGIS Datastore) on multiple machines.

Implementing test, staging, and production servers would meet the high availability standards of the City. Argis would work with the City to determine if load balancing is required.

Likely, if all existing servers are virtualized, the resources used for these servers will be released for IT reuse once all data is transferred to the new server structure.

A final stage to the server implementation is to turn on ArcGIS Monitor.



Database Implementation and Migration

Argis Evaluation will determine the current state of the database and ArcGIS Data Store and how they are used within the City's Architecture.

- 1.) Argis will take a back up the current database and set up the same schema on the new server.
- 2.) Argis will then confirm that the connections to ArcGIS Enterprise are set up to ensure editable feature services are ready for use.
- 3.) Export of existing datasets will be imported to the new SDE databases.
- 4.) Test Publishing to the Portal and editing workflows will take place to determine if the database is ready to go live.
- 5.) The new Database will become the primary for data for the City.
- 6.) Republish existing map and feature services to the new Portal for use in the new apps.
- 7.) Any apps that need to be transferred will be backed up and transferred once all services are published.
- 8.) Security model will be set up based on best practices with AD and ESRI recommendations.

DELIVERABLES

- New ArcGIS Enterprise environment
- New Database
- Migrated Data and Applications

MS-3 Deployment and Training

DETAILS/ASSUMPTIONS/APPROACH

Throughout the project, the Argis GIS team will provide knowledge and expertise to build out the new GIS System. Once the system is built, there will be requirements for training the City's GIS Staff. Complex Esri ArcGIS Enterprise implementations have intricacies and workflows that have been created throughout the setup process that require knowledge transfer to the GIS team. Argis will provide the administrative training for the City's GIS Staff to include adding users to the new deployment, publishing web services, updating database connections, updating, and editing GIS data, and other areas of knowledge as they are identified. Training will provide the City's staff with a seamless transfer to maintaining the new GIS System.

Argis will continue hands-on training in the ongoing maintenance and support of the system, working with the City's staff to train on subjects within the ArcGIS Enterprise implementation, or through Esri's technologies. ESRI provides standard GIS Desktop and Enterprise training, available online and through instructor-led training classes. Argis will guide the City toward applicable Esri training when needed. Importantly, Argis' internal staff is available and can provide any training required.

DELIVERABLES

- GIS Staff training and hand over during Go Live phase



MS-4 Maintenance and Support (First Quarter)

DETAILS/ASSUMPTIONS/APPROACH

Following the installation of a new system, ESRI will update software or system problems may arise over time requiring additional technical expertise. Argis Solutions provides GIS Managed Services as a partnership with the City. These services provide system health checks, workflow reviews, and provide system troubleshooting on a planned time frame of the City's choosing. Once the implementation is complete, Argis will not leave the City without resources to address any issue that may arise.

Esri typically releases updates to ArcGIS quarterly. Argis anticipates three areas that will need intervention by the Argis technical team to deliver this maintenance agreement:

1. ArcGIS Upgrades
 - a. Argis will install the latest version of ArcGIS on either test and/or staging server and test to identify any issues.
 - b. Argis will install the latest version of ArcGIS on the City's production environment after the latest version has passed acceptance tests.
2. Release Compatibility Analysis
 - a. Argis will test ArcGIS data connections, extensions, widgets, or tools to confirm they will not be adversely affected by the update.
 - b. Should Argis discover any adverse effect, Argis will either act to correct the issue or in the case of a hard failure, notify the POC (Point of Contact) of corrective steps needed to replace the affected item.
3. Minor projects as determined by the City
 - a. In the future as the City's implementation of ArcGIS becomes more established, Argis can provide minor development support to create, ETLs (Extract, Transform, Load), integrations, widgets, or other tools, as determined in concert with the City.
 - b. Training on tools and Esri can also be conducted by the Argis staff as a minor project.

As part of the GIS Managed Services package, the technical lead assigned to the City will schedule a regular meeting cadence. The technical lead will clearly communicate scheduled upgrades, compatibility testing, maintenance window schedules, or other actions that will affect the uptime of the ArcGIS implementation.

DELIVERABLES

- Quarterly Review of the new systems and recommendations for upgrades and training.

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Milestone Task Breakdown

MS-1 AR Implementation and Rollout

DETAILS/ASSUMPTIONS/APPROACH

Argis included an optional value add-on for the City with our award-winning and patented AR (Augmented Reality) technology. This project will be started with an initial demonstration of the AR technology and discussion on use cases for the technology. This will occur likely during or near MS-1 of the initial project but on the scheduling of the City. Argis will then work with the City to determine the workflow for the end users, training, and deployment of this tool to be integrated with the new Esri infrastructure. This milestone will be completed once MS-3 is complete, and MS-4 of the initial project is in progress.

Additionally, Argis has a pilot program starting in April that is launching our new product, Ranger. Ranger is an Esri Field Maps Extension, built to bring fast and easy AR visualizations to Field Maps workflows, increasing value and efficiency in those field operations. This will be available for the City as well, and rolled out as it becomes available.

DELIVERABLES

There are three key deliverables for the AR option:

1. Augmented Reality demonstration on-site in the City with current technology and [arcgis.com](https://www.esri.com/en-us/arcgis/products/arcgis-enterprise) based feature service(s).
2. Argis Lens Console, Lens, Users and Licenses setup and confirmed to work for the City
3. Initial Data Scenes setup and on-site training completed for City administrators and field operators.
4. Implementation and Training of the Ranger Pilot Program.