



Board members

Marc Nelson, Mayor | Rebecca Valk, Corporation Counsel | Dr. Brian Martinez, Commissioner of Finance | Chris Gent, Commissioner of Public Works | Rich DuPilka, Engineer

I. Old Business

1. Bids Opened:

2. Bids – Award Recommendation:

- a. RFB-COP-11-22-01- Malcolm X Lighting and Electrical- Veith Electric
- b. RFB-COP-10-22-01 – Pulaski Pool House Construction -TBD

3. Notice to Proceed Issued-

- a. RFB-COP-09-22-05 City Hall Trench Drains

II. New Business

1. Bids currently in circulation. – Bid packages available on City Website and Bidnet Direct, or the Office of the Purchasing Agent

2. Bids to be Renewed-for Discussion –N/A

III. Discussion

1. Uncharted – Sole Source

IV. Executive Session

RESOLUTION

WHEREAS, the Board of Contract and Supply (BOCS) is responsible for awarding contracts in accordance with competitive bidding pursuant to the General Municipal Law (GML); and

WHEREAS, two common law exceptions to competitive bidding under GML include sole source and professional services; and

WHEREAS, in applying the sole source exception, a municipality should document why the proposed vendor is the only viable source for the commodities needed; and

WHEREAS, the BOCS is considering the approval of the attached Statement of Work for Uncharted Power, Inc. (“Uncharted”) pursuant to procedures set forth in a Master Services Agreement (“MSA”) to centralize various sources of data regarding the City’s water infrastructure into unique software known as the Uncharted Platform (hereinafter the “Project”); and

WHEREAS, Uncharted presented details and information on the Uncharted Platform at the BOCS meeting of January 18, 2023; and

WHEREAS, the BOCS wishes to award the work to Uncharted and to document its finding the work is exempt from competitive bidding under both the sole source and professional services exceptions.

NOW, THEREFORE, BE IT RESOLVED, that the BOCS hereby makes the following findings:

1. The Uncharted Platform is a unique software platform available only from Uncharted. As the software was developed and designed by Uncharted, there is no possibility for competition because there is no comparable product available on the market. Further, there is no similar product on the market that could provide the substantively similar benefits.
2. Uncharted has already completed one Statement of Work for the City wherein the Uncharted Platform was used to centralize 100+ sources of data regarding the Joint Water

System managed in conjunction with the Town of Poughkeepsie. That is an essential piece of efforts to centralize data regarding the City's water infrastructure and this Project will be integrated with the Joint Water System information.

3. Additionally, this contract would qualify as a professional services contract as the City is engaging the services of skilled programmers to develop a platform customized to the particular needs of the City, requiring highlight specialized skill and the use of professional judgment.
4. Given the unique benefits received, the cost of the data collection and centralization into the Uncharted Platform is reasonable in comparison to other solutions to the City's needs available in the marketplace.

BE IT FURTHER RESOLVED, that the BOCS hereby awards the Project to Uncharted without the need for competitive bidding as it is both a sole source contract and the work qualifies as professional services.

The members of the BOCS voting as follows:

Rich DuPilka, City Engineer _____

Chris Gent, Commission of Public Works _____

Dr. Brian Martinez, Commissioner of Finance _____

Rebecca Valk, Corporation Counsel _____

2023 STATEMENT OF WORK: SERVICE OVERVIEW

BACKGROUND

In 2022, the City of Poughkeepsie (the “City”) leveraged the Uncharted Platform to ingest 100+ sources of data to successfully identify operational opportunities for improvement for the Joint Water System (“JWS”). Uncharted secured compelling data for launching an IMA working group for the JWS. However, the need for unified data goes beyond the IMA. Continued use of the Uncharted Platform will be critical for standardization of efficient water infrastructure operations, stakeholder coordination, succession planning, and other City water initiatives.

2023 PROJECT OVERVIEW

This Statement of Work is entered into pursuant to Section 2.1 of the Master Services Agreement (the “MSA”) dated as of February 2, 2022, between Uncharted Power, Inc. (“Uncharted”) and the City. From and after the date of execution of this Statement of Work (the “Effective Date”), this Statement of Work shall supersede the Statement of Work executed by the parties on September 1, 2021 (the “2021 SOW”) with respect to the Services (as defined in the MSA) to be performed by Uncharted following the Effective Date and the 2021 SOW shall be deemed to have been terminated, effective as of the Effective Date, in accordance with the provisions thereof.

The City of Poughkeepsie has identified their water systems, including drinking water, waste water, and storm water, as a priority for improving efficiency of their infrastructure planning, development, operations, repair & maintenance, and service delivery.

There is an evident need for a holistic water system data partner; as noted by the USGS, “[p]oor data quality, redundant data, and lost data can cost companies [up] to 25 percent of their operating budget.”¹ Uncharted’s proposed EFC Chapter draft² further demonstrates the benefits of the Uncharted Platform as said data partner. With the passing of the Bipartisan Infrastructure Law and the Inflation Reduction Act, the City has a once-in-a-generation opportunity to invest in the most critical infrastructure and improve the quality of living for its citizens through data centralization and standardization.

To achieve this vision, Uncharted will, over the next ten (10) years beginning in January 2023, build and maintain a system-wide view of the City’s water infrastructure. The Uncharted Platform will centralize **drinking water, waste & storm water, and joint water** to improve overarching water data governance and increase efficiency for various water infrastructure activities. Uncharted aims for the operational efficiencies resulting from the first year of work to save the City of Poughkeepsie approximately \$2.5 million to \$5 million over the course of the 10-year initiative. Targeted benefits include:

- **Delivering valuable data-based insights** to improve project operational efficiency, achieved via improved speed of data collection, reporting, and analysis for ongoing and new projects; providing guidance to the City and relevant stakeholders for both planning and operations therein.
- **Supporting current and upcoming water-related funding initiatives** with readily accessible and relevant data to leverage for such initiatives.
- **Improving accuracy and budget forecasting**, including more easily accessible and

¹ [Value of Data Management | U.S. Geological Survey](#)

² [EFC Grant Monitoring & Data Sub-Project Description & Justification- DRAFT - Sep 13](#)

executable self-auditing capabilities and the capability to engage in more frequent and efficient Joint Water reconciliations.

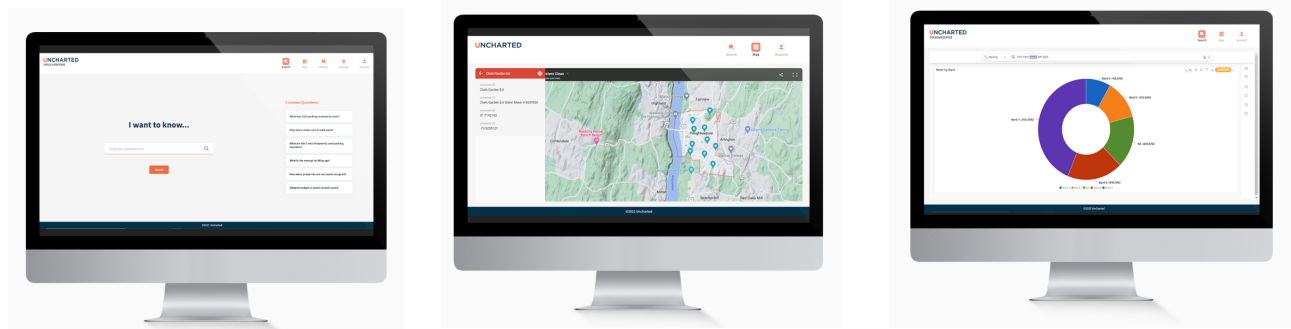
- **Improving repair and maintenance response times and costs**, including leak and abnormality identification and alerts throughout the City water systems.
- **Providing a foundation of water related data for technical succession planning.**

PROJECTS

Executive Summary

Uncharted's core offering to facilitate the above Overview & Vision is **the Uncharted Platform** software. These services are designed to be utilized for all projects below to increase efficiency, effectiveness, and ease of project planning and execution. Uncharted will:

- Create a customized instance on the Uncharted Platform to be used by select municipal employees to provide simplified interoperable insights from complex integrated and aggregated data streams; execution of the creation of said database may include:
 - Identifying necessary additional data streams from relevant parties not presently ingested in the Platform;
 - Data grooming, data fusion and unification;
 - Quality assurance; and
 - Support in the creation of a **digital shadow**³ of the water infrastructure of the City
 - Support projected maintenance of existing systems assessed during the course of the Project moving forward; and
- Customer service, quality assurance, and quality control support for all above services.



2023 Project Overview

Please note that this SOW represents one holistic body of work as a singular **2023 Project** relating to the full water system(s) of the City of Poughkeepsie. The sub-projects below are listed in **chronological order** by launch date, and are providing **data services** for the associated project (each, a “Project” and collectively, the “Projects”). All Projects unless otherwise noted will be executed with the objective of building a system-wide view of the City’s water infrastructure. All durations and timelines described below are estimates and are subject to change.

Project 1: Joint Water System / IMA Working Group

- Objective: Provide relevant data-driven insights to support the JWS IMA Working Group’s initiatives and activities.
- Estimated Duration: 13 months
- Launch Date: December 01, 2022

³ A **digital model** is a model of a system that incorporates manually-entered data to form said model. A **digital shadow** is a model of a system that incorporates both manually-entered and some automatic incorporation of data, as with API pulls. A **digital twin** is a model of a system that is comprised fully of automatically integrated data pulled in real time, or close to it.

Project 2: Commercial & Residential Meter Data Modernization

- Objective: Modernize meter data as part of a utility usage assessment as compared to real property tax payments.
- Estimated Duration: 12 months
- Launch Date: January 01, 2023

Project 3: Fallkill Creek CSO

- Objective: Drive immediate and long-term efficiencies by capturing and comparing pre-construction and post-construction data related to Fallkill Creek CSO project.
- Estimated Duration: 12 months
- Launch Date: January 01, 2023

Project 4: FRB Business Case

- Objective: Provide relevant data for a business case to unlock \$1.75M in potential FRB funding for use to improve key water infrastructure initiatives.
- Estimated Duration: 6 months
- Launch Date: January 01, 2023

Project 5: Transfer Station

- Objective: Drive immediate and long-term efficiencies and provide data-based possibilities relating to future expansion by capturing and comparing pre-construction and post-construction data related to the Transfer Station project. This project provides an opportunity to explore interoperable insights between the water infrastructure data and other sustainable data.
- Estimated Duration: 12 months
- Launch Date: February 01, 2023

Project 6: Water Main - South Ave

- Objective: Drive immediate and long-term efficiencies by capturing and comparing pre-construction and post-construction data related to the Water Main - South Ave project.
- Estimated Duration: 12 months
- Launch date: February 01, 2023

Project 7: Production Meters

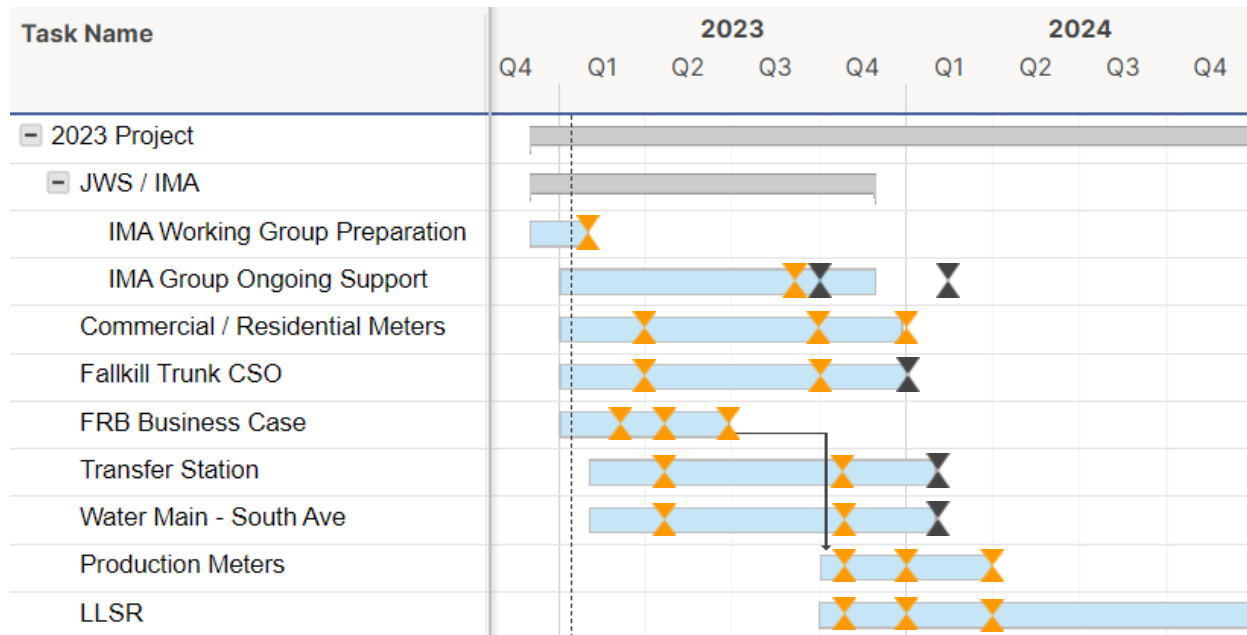
- Objective: Ingest and fuse data from all new production meters as they are installed.
- Estimated Duration: 6 months
- Launch Date: October 01, 2023

Project 8: Lead Line Service Replacement

- Objective: Accelerate the efficiency and prioritization of the deployment of lead line replacement in the City through data ingestion and centralization.
- Estimated Duration: 10 years
- Launch date: October 01, 2023

Estimated Timeline

Below is our understanding of key timelines regarding each sub-Project⁴:



Project 1: Data Services for JWS / IMA Working Group

Uncharted will centralize provided Joint Water System (JWS) data and commercial / residential usage data, among other sources, to support as needed for the JWS / IMA working group.

Project 1A: JWS Pre-Working Group Preparation Services:

Prior to the end of 2022, Uncharted will work with contacts within the City to:

- Support development of agenda items to address from the City's perspective within the JWS working group based on previously completed analyses; and
- Provide recommendations for data governance for the JWS working group, including aspects such as data sharing protocols, FOIL privacy, and specifications regarding data privacy between two collaborating municipalities with separate data.

Project 1B: JWS Working Group Support Services:

Beginning in 2023, Uncharted will work with City officials and members of the JWS working group, alongside relevant stakeholders across the municipalities, to provide data-based and general support to the JWS working group as needed, which may include:

- Create an instance of the Uncharted Platform for use by *joint* municipal employees during and following Uncharted's involvement in the Project, providing interoperable insights as data is aggregated and added;
- Provide ongoing customer service, quality assurance, quality control, and data governance for the above; and
- Select analytics projects for the above, to be scoped as needed.

⁴ Milestones are marked using orange for Uncharted-dependent milestones and black for relevant but Uncharted-independent milestones

Key Milestones:

February 01, 2023: Present IMA agenda to City

September 01, 2023: Provide instance access of Uncharted Platform for a Joint Water Project

October 01, 2023: Complete initial IMA draft⁵

Q1 2024: Execute and implement new IMA⁵

Project 2: Commercial & Residential Meter (“RCM”) Data Modernization

Uncharted will address the discrepancy between locations that pay real property taxes in the City of Poughkeepsie that simultaneously do *not* pay for water utility services. This will be achieved through the collection of data to be used by the City to most efficiently and optimally prescribe modernization efforts for future plans. This may include:

- Determining relevant data sources to address the underlying issue;
- **Assessment of data infrastructure** surrounding the Project and its constituent areas, including structure, syntax, and governance processes providing future recommendations to increase data capture on existing infrastructure asset and additional smart and sustainable solutions to achieve municipal goals; data to be assessed may include:
 - Existing **addresses** for real property taxes and water utilities
 - Existing **infrastructure states**, including material, age, historical replacement and maintenance actions taken, any part numbers that are available, the current status and location of each water meter, and whether each meter is being estimated;
 - **Demographics** of affected areas; and
 - A **holistic view** of affected areas as the above intersect;
- A **baseline status** of data infrastructure and methodologies will be established by the location, centralization, and comparison of existing historical data and data sources to an idealized version of themselves; specifically, areas of missing data, contradictory data, and / or ultra-localized data will be assessed in conjunction with **ground-truthing** as needed for the greatest proportion of empirical versus inferred data;
- Support of Freedom of Information Law (FOIL) administration with streamlined digital access to relevant, publicly available meter data for citizens;
- Further analysis will be executed to determine the **most efficient steps for modernization** of said facilities to facilitate automation of collection and cross-checking of all data involved;
- A brief retrospective and evaluation of the Project effects following Project execution for use in future projects with a focus on ROI; and
- Providing customer service, quality assurance, and quality control support for all above services.

Key Milestones:

April 01, 2023: Acquire initial key data sources and information and create assessment of missing information that may be needed to deploy potential work order(s), with an estimate of the work needed to acquire said information

October 01, 2023: Present initial analysis of key findings

January 01, 2024: Ingest data, new and old, into the Uncharted Platform; complete a case study detailing a comparison of City income from RCMs pre- and post-Project

⁵ This is a Project milestone, not solely an Uncharted milestone

Project 3: Fallkill Trunk CSO

Uncharted will centralize provided Fallkill Trunk CSO data into the Uncharted Platform software to improve data governance and efficiency for various Project operations, including the development of data-informed recommendations, which may include:

- Determining relevant data sources;
- **Assessment of data infrastructure** surrounding the Project and its constituent areas, including structure, syntax, and governance processes providing future recommendations to increase data capture on existing infrastructure asset and additional smart and sustainable solutions to achieve municipal goals; data to be assessed may include but not be limited to:
 - Existing **infrastructure states**, including material, age, historical replacement and maintenance actions taken, and any part numbers that are available;
 - **Geography** in the vicinity of the Project;
 - **Historical outflows**; and
 - Historical **weather patterns** as they relate to overflows;
- A **baseline status** of data infrastructure and methodologies will be established by the location, centralization, and comparison of existing historical data and data sources to an idealized version of **pre-construction data**; specifically, areas of missing data, contradictory data, and / or ultra-localized data will be assessed in conjunction with on-site assessments and inspection of facilities as needed; and
- Further analysis will be executed to determine the **most efficient steps for modernization** of said facilities to facilitate automation of collection and cross-checking of all data involved.

Key Milestones:

April 01, 2023: *Acquire initial key data sources and information and create assessment of missing information, including information that may be needed to deploy potential work order(s), with an estimate of the work needed to acquire said information*

October 01, 2023: *Present initial analysis of key findings*

January 01, 2024: *Ingest data, new and old, into the Uncharted Platform; completion of the Fallkill Trunk Project*

Project 4: FRB Business Case

The City may be able to unlock \$1.75M in funds via the production of a business case indicating a holistic view of the existing water system and anticipated benefits for proposed projects is required. Uncharted will provide data services to support the creation of a relevant business case, which may include:

- Determining relevant data sources for incorporation, which may include but is not limited to additional production meters, existing financial data, and ongoing collections being done by Uncharted and / or City employees and contractors;
- Assessing existing data structure, syntax, and governance processes providing future recommendations to increase data capture on existing infrastructure asset and additional smart and sustainable solutions to achieve municipal goals;
- Assembling a proposed plan for a full inventory of the City's water infrastructure, resulting in a business case relating to existing and in-progress projects relating to water infrastructure; and
- Providing customer service for all above services.

Key Milestones:

March 01, 2023: *Acquire initial key data sources and information and create*

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assessment of missing information, including information that may be needed to deploy potential work order(s), with an estimate of the work needed to acquire said information

May 01, 2023: Complete initial draft of the necessary business case

July 01, 2023: Complete and submit final draft of the necessary business case

Project 5: Transfer Station

Uncharted will centralize provided Transfer Station data into the Uncharted Platform software to improve data governance and efficiency for various Project operations, including the development of data-informed recommendations, which may include:

- Determining relevant data sources;
- **Assessment of data infrastructure** surrounding the Project and its constituent areas, including structure, syntax, and governance processes providing future recommendations to increase data capture on existing infrastructure asset and additional smart and sustainable solutions to achieve municipal goals; data to be assessed may include but not be limited to:
 - Existing **infrastructure states**, including material, age, historical replacement and maintenance actions taken, and any part numbers that are available;
 - Historical **throughput** of the previously damaged transfer station; and
 - Interest presented in expansion and potential waystation status;
- A **baseline status** of data infrastructure and methodologies will be established by the location, centralization, and comparison of existing historical data and data sources to an idealized version of **pre-construction data**; specifically, areas of missing data, contradictory data, and / or ultra-localized data will be assessed in conjunction with on-site assessments and inspection of facilities as needed; and
- Further analysis will be executed to determine the **most efficient steps for modernization** of said facilities to facilitate automation of collection and cross-checking of all data involved.

Key Milestones:

May 01, 2023: Acquire initial key data sources and information and create assessment of missing information, including information that may be needed to deploy potential work order(s), with an estimate of the work needed to acquire said information

November 01, 2023: Present initial analysis of key findings

February 01, 2024: Ingest data, new and old, into the Uncharted Platform; completion of the initial Transfer Station project

Project 6: Water Main - South Ave

Uncharted will centralize provided Water Main data into the Uncharted Platform software to improve data governance and efficiency for various Project operations, including the development of data-informed recommendations, which may include:

- Determining relevant data sources;
- **Assessment of data infrastructure** surrounding the Project and its constituent areas, including structure, syntax, and governance processes providing future recommendations to increase data capture on existing infrastructure asset and additional smart and sustainable solutions to achieve municipal goals; data to be assessed may include but not be limited to:
 - Existing **infrastructure states**, including material, age, historical replacement and maintenance actions taken, and any part numbers that are available;
 - **Geography** in the vicinity of the Project;

Pre-Decisional Working Group Draft - Not Subject to FOIL

- **Historical throughput**; and
 - Historical **readiness** as related to fire solutions and other emergency usage;
- A **baseline status** of data infrastructure and methodologies will be established by the location, centralization, and comparison of existing historical data and data sources to an idealized version of **pre-construction data**; specifically, areas of missing data, contradictory data, and / or ultra-localized data will be assessed in conjunction with on-site assessments and inspection of facilities as needed; and
- Further analysis will be executed to determine the **most efficient steps for modernization** of said facilities to facilitate automation of collection and cross-checking of all data involved.

Key Milestones:

May 01, 2023: *Acquire initial key data sources and information and create assessment of missing information, including information that may be needed to deploy potential work order(s), with an estimate of the work needed to acquire said information*

November 01, 2023: *Present initial analysis of key findings*

February 01, 2024: *Ingest data, new and old, into the Uncharted Platform; completion of the Water Main - South Ave Project*

Project 7: Production Meters

Uncharted will provide data services to improve the Customer's access to accurate, up to date, and accessible data relating to water infrastructure, which may include:

- Determining relevant data sources for incorporation, which may include but is not limited to additional production meters, existing financial data, and ongoing collections being done by Uncharted and / or City employees and contractors;
- Assessing existing data structure, syntax, and governance processes providing future recommendations to increase data capture on existing infrastructure asset and additional smart and sustainable solutions to achieve municipal goals;
- Facilitating the creation of a retrospective of the effects of the Production Meter install, with a focus on RoI and applications in future project prioritization; and
- Providing customer service, quality assurance, and quality control support for all above services.

Key Milestones:

November 01, 2023: *Acquire initial key data sources and information and create assessment of missing information that may be needed to deploy potential work order(s), with an estimate of the work needed to acquire said information*

January 01, 2024: *Present initial analysis of key findings*

April 01, 2024: *Ingest data, new and old, into the Uncharted Platform; a basic guide of how to utilize the Platform to create a retrospective of the Project*

Project 8: Lead Line Service Replacement

Uncharted will centralize provided Lead Line Service Replacement ("LLSR") data into the Uncharted Platform software to improve data governance and efficiency for various Project operations, including the development of data-informed recommendations. This may include:

- Determining relevant data sources for sub-projects;
- **Assessment of data infrastructure** surrounding the Project and its constituent areas, including structure, syntax, and governance processes providing future recommendations to increase data capture on existing infrastructure asset and

additional smart and sustainable solutions to achieve municipal goals; data to be assessed may include, but not be limited to:

- Existing **infrastructure states**, including material, age, historical replacement and maintenance actions taken, and any part numbers that are available;
- **Demographics** of affected areas; and
- A **holistic view** of affected areas as the above intersect;
- A **baseline status** of data infrastructure and methodologies will be established by the location, centralization, and comparison of existing historical data and data sources to an idealized version of themselves; specifically, areas of missing data, contradictory data, and / or ultra-localized data will be assessed in conjunction with **ground-truthing** as needed for the greatest proportion of empirical versus inferred data;
- Support of Freedom of Information Law (FOIL) administration with streamlined digital access to relevant, publicly available LLSR data for citizens;
- Further analysis will be executed to determine the **most efficient steps for modernization** of said facilities to facilitate automation of collection and cross-checking of all data involved;
- A brief retrospective and evaluation of the Project effects following Project execution for use in future projects; and
- Providing customer service, quality assurance, and quality control support for all above services.

Key Milestones:

November 01, 2023: *Acquire initial key data sources and information and create assessment of missing information that may be needed to deploy potential work order(s) and effectively prioritize LLSR work, with an estimate of the work needed to acquire said information*

January 01, 2024: *Present initial analysis of key findings; extended project plan & milestones*

April 01, 2024: *Ingest data, new and old, into the Uncharted Platform; suggestions for prioritization methodology*

FUNDING

Funding

Uncharted will invoice the City quarterly, in accordance with Section 3.1 of the MSA, and will be compensated for the Services under this Statement of Work on a schedule to be mutually agreed by the parties based upon the launch date and timeline for completion of each Project. An estimated funding schedule for each Project is set forth below with a suggested payment schedule, which is subject to finalization by the parties based upon the final timeline for each Project.

Task Name	Amount	Q1				Q2				Q3				Q4			
		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
☐ Funding																	
ARPA - 2022 - Existing SoW	\$120,000.00																
ARPA - 2023	\$260,000.00																
Water & Sewer - 2023 - 1	\$150,000.00																
Fallkill Trunk Grant	\$505,000.00																
Water & Sewer - 2023 - 2	\$210,000.00																
Transfer Station	\$400,000.00																
FRB Funding	\$175,000.00																

Estimated Work Funding Schedule

Uncharted will be compensated for the above according to the following schedule of payments for 2023:

Date	Funding Source
February - December 2022	\$120,000 - ARPA (Prior 2022 MSA)
2022 Total	\$120,000
January 20, 2023	\$260,000 - ARPA & Water Funds
February 15, 2023	\$150,000 - Water & Sewer Funds
April 01, 2023	\$505,000 - Fallkill Grant Funds
June 15, 2023	\$210,000 - Water & Sewer Funds
October 01, 2023	\$400,000 - Transfer Station Grant
December 01, 2023	\$175,000 - FRB Funds
2023 Total	\$1,700,000

The above is with the acknowledgement that the above schedule is dependent upon the City's successful receipt of various funds. The use of specific funding sources above is a suggestion of payment methods, but is not a requirement. The timeline described above is

approximate, and may be subject to change as needed and mutually agreed upon by both parties.

IN WITNESS WHEREOF, authorized representatives of the City and Uncharted have executed this SOW as of the dates set forth below:

City of Poughkeepsie

Uncharted Power, Inc.

Name:

Name:

Title:

Title:

Date:

Date:

APPENDICES

Sole Source Letter

 Sole Source Letter - 22.10.13

EFC Chapter

 EFC Grant Monitoring & Data Sub-Project Description & Justification- DRAFT - Sep 13