

**REQUEST FOR PROPOSALS
for
PROFESSIONAL SERVICES**

**2020 COLOR DIGITAL ORTHO AERIAL PHOTOGRAPHY, LiDAR CONTOUR
MAPPING, AND PLANIMETRIC UPDATES**

I. PURPOSE OF REQUEST

The City of Fargo, on behalf of metro area jurisdictions, requests proposals from qualified consultants for the following project:

Project No. MS-19-H1
Project Area 563.25 Square Miles in the Cities of Fargo, Moorhead,
Dilworth, West Fargo, Cass County and Clay County
Services Required: 2020 Digital Orthophoto, Color Aerial Photography, LiDAR, 1
Foot Contours, Planimetric Updates, and Impervious Surfaces.

The City intends to utilize one consultant to complete all phases of the project. The City reserves the right to reject any or all submittals.

II. GENERAL INSTRUCTIONS

A. Any questions or comments regarding the proposal should be submitted to:

CITY OF FARGO INFORMATION SERVICES
DEPARTMENT
225 4TH STREET NORTH
FARGO, ND 58102

**Daryl Masten 701-241-8196
Email DMasten@FargoND.gov**

B. Proposals shall be submitted to:

CITY OF FARGO AUDITOR'S OFFICE
225 4TH ST N
FARGO, ND 58102
BY 4:00 PM, JANUARY 6, 2020

- C. All proposals must be clearly identified and marked for the project as follows:

<p>Proposal For:</p> <p>Professional Services</p> <p>Project No. MS-19-H1</p> <p>2020 Aerial Collection Project</p>
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All proposals must be received by 4:00pm CST January 6, 2020. Six (6) copies of the proposal must be presented.

The proposal format shall consist of a general section of the firm's background, experience and personnel and specific sections pertinent to the project that is covered in this proposal.

- D. Selection Committee

The proposals will be reviewed by the Selection Committee. The Selection Committee will include the following representatives from the Metropolitan area:

Fargo GIS Manager
Cass County GIS Programs Manager
Clay County Information Services Director
Moorhead GIS Manager
West Fargo GIS Specialist

- E. Respondent Qualifications

Respondents must submit evidence that they have relevant past experience and have previously delivered professional services similar to the ones required. Each respondent may also be required to show that he has satisfactorily performed similar work in the past and that no claims of any kind are pending against such work. No proposal will be accepted from a respondent who is engaged in any work that would impair his ability to perform or finance this work.

No proposal will be accepted from, nor will a subcontract be awarded to, any respondent who is in arrears to the City, upon any debt or contract; who is in default, as surety or otherwise, upon any obligation to the City; or who is deemed to be irresponsible or unreliable by the City.

F. Equal Employment Opportunity

In connection with this proposal and any subsequent contract, the consultant shall not discriminate against any employee or applicant for employment because of race, color, creed, religion, national origin, disability, sex, or status regarding public assistance. The consultant will take action to insure that its employees are fairly treated during employment without regard to their race, color, creed, religion, national origin, disability, sex, or status regarding public assistance. Such actions shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising, layoff or termination; rate of pay or other forms of compensation; and selection for training, including internship and/or apprenticeship. The consultant further agrees to insert a similar provision in all subcontracts, except subcontract for standard commercial supplies or raw materials. The consultant will furnish all necessary information and reports and will permit access to its books, records, and accounts by the City and/or its representatives including state and federal agencies, for purposes of investigation to ascertain compliance with non-discrimination provisions of any resultant contract.

G. Ownership, Publication, Reproduction, and Use of Materials

All work products of the contractor which result from this contract are the exclusive property of City, and its federal/state/local partner agencies.

No material produced in whole or part under this agreement shall, during the life of this agreement, be subject to copyright in the United States or in any other country. Permission and approval must be obtained from the City before any material produced from this project are published. Draft copies of all deliverables must be prepared by the consultant and reviewed and approved by the City before publication. The consultant, subject to the approval by the City, shall have the authority to publish, disclose, distribute, and otherwise use in whole and part, any reports, data, or other materials prepared under this agreement.

H. Records

The contractor shall maintain accounting and project records as the City may require. Such records shall be made available to the City and the state/federal government for inspection and audit during the agreement term and for three years after the date of final payment, unless any litigation, claim, or audit is started before the expiration of the three years, then the records shall be retained until such action is satisfied.

I. Conflicts of Interest

No official or employee of the City, state, or any other governmental instrumentality who is authorized in his official capacity to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting, or approving any contract or subcontract in connection with a project shall have, directly or indirectly, any financial or other personal interest in any such contract or subcontract. No engineer, attorney, appraiser, inspector, or other person performing services for the City, state, or a governmental instrumentality in connection with a project shall have, directly or indirectly, a financial or other personal interest other than his employment or retention by the City, state, or other governmental instrumentality, in any contract or subcontract in connection with such project. No officer or employee of such person retained by the City, state, or other governmental instrumentality shall have, directly or indirectly, any financial or other personal interest in any real property acquired for a project unless such interest is openly disclosed upon the public records of the City or other such governmental instrumentality, and such officer, employee, or person has not participated in such acquisition for and in behalf of the state.

J. Subcontracting

The contractor may, with prior approval from the City, subcontract as necessary to accomplish the contract objectives. Subcontracts shall contain all applicable provisions of this agreement, and copies of the subcontract must be made available to the City upon request.

K. Assignments

The contractor shall not assign or transfer the contractor's interest in this agreement without the written consent of the City.

L. Termination

The right is reserved by either party to terminate this agreement with or without cause at any time if the recipient does not comply with the provisions of this agreement or its attachments.

If the City terminates this agreement, it reserves the right to take such action as it deems necessary and appropriate to protect the interests of the City and its partner agencies. Such action may include refusing to make any additional reimbursement of funds and requiring the return of all or part of any funds that have already been disbursed.

M. Amendments

The terms of this agreement shall not be waived, altered, modified, supplemented, or amended in any manner whatsoever; except by written instrument signed by the parties.

N. Hold Harmless

The contractor shall save and hold harmless the City, its officer, agents, employees, and members, from all claims, suits, or actions of whatsoever nature resulting from or arising out of the activities of the contractor or its subcontractors, agents, or employees under this agreement.

It is hereby understood and agreed that any and all employees of the contractor and all other persons employed by the contractor in the performance of any of the services required or provided for under this agreement shall not be considered employees of the City and that any and all claims that may arise under the Worker's Compensation Act on behalf of said employees while so engaged and any and all claims by any third parties as a consequence of any act or omission on the part of said contractor's employees while so engaged in any of the services to be rendered under this agreement by the contractor shall in no way be the obligation or responsibility of the City.

O. Compliance with Federal Regulations

The contractor is advised that his or her signature on this contract certifies that its jurisdiction will comply with all provisions of this agreement as well as applicable federal and state laws, regulations, and procedures. Moreover, the contractor affirms its compliance with the federal Debarment and Suspension Certification and the federal Restrictions on Lobbying.

III. **PRELIMINARY PROJECT SCHEDULE**

A. Consultant Selection

Public Works Project Evaluation Committee
(PWPEC) Review of RFP
Advertise for Consultant Proposals
Receive Proposals by
Selection Committee

October 14, 2019
November 25, December 2 & 9, 2019
January 06, 2020

Review Proposals	January 14, 2020
Select Finalists	January 14, 2020
Interviews (If necessary)	January 21, 2020
Final Selection/Cost Negotiation	January 21, 2020
City Comm. Approval of Consultant Selection & Contract	January 27, 2020

B. Project Development

Notice to Proceed	January 28, 2020
Flight for Acquisition	April, 2020
Project Completion	
Imagery	August 1, 2020
Planimetrics, Contours, Impervious Surface	October 30, 2020

IV. EVALUATION CRITERIA

A. Criteria

The Selection Committee will evaluate and validate all qualifying proposals. The proposal evaluation process will permit the Selection Committee to identify the proposal that best meets the needs of the Project. Selection will rely on the Committee's assessment of the proposal's compliance with the requirements and intent of this Request for Proposals. The assessment will be based on the following criteria:

	<u>Points</u>
1. Understanding of project objectives	20
2. Technical and management approach to project	25
3. Past performance on other projects	20
4. Response of references	15
5. Expertise of the technical and professional staff assigned to the project	20

B. Each proposal will be evaluated and ranked on the above criteria by the Evaluation Committee. After review, the Committee may schedule oral interviews with the top ranking firms if deemed necessary.

C. The City of Fargo is an Equal Opportunity Employer.

V. TERMS & CONDITIONS

- A. The City reserves the right to reject any or all proposals or to award the contract to the next most qualified firm if the successful firm does not execute a contract within forty-five (45) days after the award of the proposal.
- B. The City reserves the right to request clarification of information submitted and to request additional information of one or more applicants.
- C. Any proposal may be withdrawn up until the date and time set above for opening of the proposals. Any proposals not so withdrawn shall constitute an irrevocable offer, for a period of 90 days, to provide to the City the services set forth in the attached specifications, or until one or more of the proposals have been approved by the City Commission.
- D. If, through any cause, the firm shall fail to fulfill in timely and proper manner the obligations agreed to, the City shall have the right to terminate its contract by specifying the date of termination in a written notice to the firm at least ninety (90) working days before the termination date. In this event, the firm shall be entitled to just and equitable compensation for any satisfactory work completed.
- E. Any agreement or contract resulting from the acceptance of a proposal shall be on forms either supplied by or approved by the City and shall contain, as a minimum, applicable provisions of the Request for Proposals. The City reserves the right to reject any agreement that does not conform to the Request for Proposals and any City requirements for agreements and contracts.
- F. The firm shall not assign any interest in the contract and shall not transfer any interest in the same without prior written consent of the City.

VI. **PROPOSAL FORMAT AND CONTENT**

Proposals shall be as concise as possible.

Proposals should include at a minimum the following sections:

- 1. Introduction
- 2. Response to Administrative Questions
- 3. Summary of Technical Process
- 4. Summary of Quality Control Procedures
- 5. Project Staff
- 6. Description of Similar Projects
- 7. References
- 8. Proof of Insurance

9. Cost Proposal

Detailed requirements and directions for preparation of each section are outlined below:

1. Introduction

Provide the following information relative to your company:

- Company name and business address, including telephone number and website URL if available.
- Year established (include former company names and year established, if applicable)
- Type of ownership and parent company, if any.
- Project manager's name, mailing address, and telephone number, if different from Item 1. Project manager's experience.

2. Administrative Questions

In your response to each of the following questions, please cite the question before each answer.

- Who will serve as the respondent's authorized negotiator?

Give name, title, address, e-mail address, and telephone number of the respondent's authorized negotiator. The person cited shall be empowered to make binding commitments for the respondent firm.

- Provide workload and manpower summary to define respondent's ability to meet project timeline.

3. Summary of Technical Process

Provide a detailed description of the technical steps involved to include project management, ground control, imagery acquisition/processing, deliverables, project schedule etc.

4. Quality Control

Provide a detailed description of the QA/QC phases of the project.

5. Project Staff

Provide a complete project staff description in the form of a graphic

organization chart, and a staff summary that addresses individual roles, responsibilities and job titles for project participants. It is critical that contractors commit to particular levels of individual staff member's time to be applied to work on this project. Variance from these commitments must be requested in writing from the City and reviewed/approved in terms of project schedule impact.

The completion of the scope of work in this agreement by the contractor must be done without any adverse effect in any way on other contracts that the contractor currently has in place with the City.

6. Similar Project Experience

Provide descriptions of similar type projects that are completed or currently under contract by your company.

7. References

Provide references of three clients for whom similar work has been completed.

Reference information should contain at least the following information:

- Agency/Organization Name & Address
- Contact Person/Phone Number
- Project Title/Project Location
- Project Duration (Start Date – Finish Date)
- Population & size (in square miles) of the Project area
- Brief Description of work performed

8. Proof of Insurance

At time of contract the respondent is required to provide certificate of insurance with the City being listed as named and insured.

9. Cost Proposals/Negotiations

a. Cost Proposals

Cost proposals shall be organized on a "per item deliverable", using **Appendix A** on page 21 as a guideline.

b. Contract Negotiations

The City will negotiate a price for the project after the Selection Committee completes its final ranking of the consultants. Negotiation

will begin with the most qualified consultant. If the City is unable to negotiate a fair and reasonable contract for services with the highest ranking firm, negotiations will be formally terminated, and will begin with the next most qualified firm. This process will continue until a satisfactory contract has been negotiated.

The City reserves the right to reject any, or all, submittals.

VII. **PROJECT DESCRIPTION**

The greater Fargo - Moorhead Metropolitan Area is located in the Red River Valley of North Dakota and Minnesota. Situated on the border between the two states the metropolitan area is divided by the Red River of the North and includes the Cities of Fargo, West Fargo, and portions of Cass County, North Dakota, and the Cities of Moorhead and Dilworth, and portions of Clay County, Minnesota.

The area is experiencing tremendous growth and this places pressure on jurisdictional governments, their infrastructure, and planning needs. Every two to three years a multi-jurisdictional project occurs to update color digital aerial orthophotography, 1 foot interval contour mapping derived from LiDAR, planimetrics, and impervious surfaces for the greater Fargo Moorhead Metropolitan area. In order to keep this data current, the City of Fargo is requesting responses for these professional services for a project that will take place in the spring of 2020. The specifics are described in this document.

This project will encompass 563.25 total square miles, the coverage area of the different project deliverables are as follows:

Three inch (0.25 foot) resolution orthophotos	6.00 square miles
Six inch (0.5 foot) resolution orthophotos	563.25 square miles (includes 0.25' tile area)
LiDAR, 1 Foot Contours, & DTM	487.50 square miles
Planimetrics:	
Building footprints	490.00 square miles
Road paving edges	490.00 square miles
Impervious Surfaces	98.25 square miles

Note - All area calculations are calculated from the provided Public Land Survey System (PLSS) shapefile grid and all quarter sections are assumed to be quarter mile squares.

The flights to capture the aerial imagery and the LiDAR data will commence as soon as possible after all snow cover is gone and the Red River of the North is below flood action stage (< 17 feet), which is typically late March; and shall be finished on or before May 8, 2020.

VIII. **SCOPE OF WORK**

Aerial Orthophotography

The scope of work for this part of the project includes color aerial imagery to be collected at the appropriate flying height to produce digital orthoimagery at the scale of 1"=100' for the entire extent of the project. Said imagery will be used for the rectification of the 0.5' resolution color digital orthophotography. All TIF image files will be delivered in quarter-section formatted tiles (See Imagery Delivery Grid Tile section below).

A 6 square mile area around the Fargo Airport will be collected at a 3" or 0.25' resolution. Reference the quarter-section shapefile grid for the exact tiles.

Deliverables shall include an additional TIF for each quarter-section in a pixel resolution of 1 foot for just the North Dakota State Plane South and Fargo Ground Coordinate systems.

Inspection of the original images to check for tilt, overlap, crab, cloud cover, snow cover, and proper sun angle must be carried out by the respondent before the images are compiled for the creation of digital orthoimages. Immediately after the aerial mission, the consultant shall review the images to determine if the camera functioned properly during the mission. If the review indicates a malfunction, the aerial mission must be reflown at no additional cost to the City. Unacceptable aerial imagery (as determined by the City) shall be reflown by the consultant at no additional cost to the City, with the reflight coverage overlapping the acceptable digital images. Reflights (if needed) shall be performed immediately, weather and ground conditions permitting.

Prior to undertaking full digital orthophoto production, the consultant shall furnish the City with sample digital images to evaluate and accept as examples of overall image quality. The City will perform a quality review of the images to ensure they are acceptable.

Ground Control

Ground control checkpoints exist from previous projects, and these must be recovered and verified to ensure network currency. The number of ground control checkpoints may be expanded depending on project needs. The respondent shall be responsible for any and all control survey necessary to produce an accurate and acceptable product that meets the standards set forth in this document. These ground control checkpoints will validate the accuracy requirements of the project as well as ensure meeting the 1" to 100'

scale National Map Accuracy Standards (NMAS) for all deliverable products. Any fieldwork must be supervised by a Registered Land Surveyor (registered in either the State of North Dakota or Minnesota).

Consultant will generate a "Ground Control Report" which documents the results of the GPS survey. This report will include a brief narrative of all aspects of the GPS data collection process.

Coordinate Systems

All project deliverables will be initially referenced to the NAD83 North Dakota State Plane Coordinate System, South Zone, US Foot, adjusted in 1996 (NAD 83/96). The projected vertical control datum will be based on the North American Vertical Datum of 1988 (NAVD 88).

Subsequently, all deliverables will also be re-projected to the Fargo Ground Coordinate System, the Minnesota State Plane Coordinate Systems: NAD83 (1986) MN Clay County Coordinate System, and the NAD83 (1996) MN Clay County Coordinate System.

Horizontal accuracy of the ground control shall be Second Order, Class II, GPS. Vertical Accuracy of the ground control will meet Third Order specifications.

Delivery Grid Tile

The City possesses an ESRI polygon shapefile of PLSS Sections and quarter-sections that is available upon request. The polygon shapefile contains necessary attribution to show all the required deliverables for each participating agency for each quarter-section. All imagery will be buffered an additional 100 feet outside of each quarter-section tile. The PLSS quarter-section naming convention on each tile in the shapefile will be the naming convention used for each quarter-section TIF image file, TFW geo-referencing "world" file, each individual MrSID file, and each AutoCAD drawing file.

LiDAR and 1 Foot Contours

It is preferred that the acquisition of the LiDAR will coincide with the acquisition of the aerial imagery. This simultaneous capture helps to ensure that breaklines captured from the digital imagery represents the terrain exactly at the time of the LiDAR collection. The acquired LiDAR data will support the design requirements for engineering projects in the coverage area.

Deliverable products will meet or exceed a verified horizontal accuracy of 3.8 feet at the 95% confidence interval (2.2 feet RMSE) as specified in the

FGDC Geospatial Positioning Accuracy Standards, Part 3: National Standard for Spatial Data Accuracy (NSSDA).

Horizontal - meet NSSDA RMSE(r) of 2.2' (67cm)

- Accuracy(r) of 3.8' (116cm) at 95% confidence

The LiDAR ground (Class 2) will meet or exceed a verified vertical accuracy of 0.6 feet at the 95% confidence interval (0.3 feet RMSE) as specified in the FGDC Geospatial Positioning Accuracy Standards, Part 3: National Standard for Spatial Data Accuracy (NSSDA).

Vertical - meet NSSDA RMSE(z) of 0.3' (9.25cm)

- Accuracy(z) of 0.6' (18cm) at 95% confidence
- Assume in well-defined open terrain

The LiDAR accuracy shall be as follows:

- Density or Ground Sample Distance (GSD)
 - 4ppsm
 - 0.5m Nominal Point Spacing (NPS)
 - DTM and contour area (support deliverables)
 - Must support the NMAS equivalent contour interval of 1 foot contours
- $\leq 30^\circ$ FOV requirement
 - $\leq 15^\circ$ each side of nadir
- Relative Accuracy
 - ≤ 7 cm within individual swaths
 - ≤ 10 cm within swath overlap

The LiDAR data will be submitted in the ASPRS LAS 1.4 format (raw and classified) and will include the following classifications:

ASPRS Standard LiDAR Point Classes:

Classification Value	Meaning
0	Never Classified
1	Unassigned
2	Ground
3	Low Vegetation (0 to 8 feet)

4	Medium Vegetation (8.1 to 20 feet)
5	High Vegetation (20.1 ft and higher)
6	Building
7	Noise
8	Model Key
9	Water
10	Reserved for ASPRS Definition
11	Reserved for ASPRS Definition
13-31	Reserved for ASPRS Definition
65	Flood Wall

The consultant will provide a description of their technical equipment and processes in the capture and formatting of their LiDAR and DTM deliverables.

1 Foot Contours

Following the collection, and verification of the newly developed DTM data (derived from the LiDAR DSM and the new breaklines), 1 foot contour AutoCAD drawings will be generated. All AutoCAD drawings will be named using the quarter-section naming format provided in the ESRI polygon shapefile of delivery grid PLSS quarter-section tiles. All 1 foot contour AutoCAD drawings will be edge-matched to neighboring contour drawings. Respondent will provide examples of the different layer naming schema for the attribution of the contour data.

The 1 Foot contours will also be delivered as a project-wide Feature Class in a File Geodatabase for each coordinate system. The project-wide Feature Class will have the elevation included as an attribute on the contour lines. The attribute field will be called "Elevation" and the value will be to two decimal places or 1/100 of a foot.

Planimetrics

In the described coverage area, building footprints will be generated. Respondent will provide technical description of the processes used to generate building footprints. All building footprint features greater than 100 square feet will be captured if clearly visible on the imagery. Existing features will be supplied to contractor for assistance in the update. The attribution of the building footprint file will clearly indicate existing footprints, footprints that have changed, and new footprints. Something similar to the following image:

Modification
Existing
New
Changed

Building footprints will be delivered as a project-wide ESRI Feature Class in a file geodatabase for each coordinate system.

Pavement edges will also be generated for described areas. Respondent will provide technical description of the processes used to generate the pavement edge lines. Pavement edges will be delivered as a project-wide ESRI Feature Class in a file geodatabase for each coordinate system.

Impervious Surfaces

In the described coverage area, impervious surfaces will be generated. Technical description of the processes used to generate the impervious surfaces will be provided. The impervious surface update totals approximately 98.25 square miles.

The impervious surface file will be delivered using the following data schema for surface type:

Surface Type	Surface Description
1	Existing Paving
2	Existing Gravel
3	Alley with Paving
4	Alley without Paving
5	Median
6	Asphalt Path
7	Concrete Pad
8	Hard Packed Gravel
9	Park

10	Parking Lot
11	Patio
12	Private Street
13	Misc
14	Sidewalk
15	Building
16	Railroad Hard Packed Gravel
17	Driveway
18	Existing Paving Bridge
21	Sidewalk Bridge
22	Pool

The following outlines the City's assumptions and criteria for developing the impervious surface feature class:

- a. The City assumes that the building footprints and paving edges will be coincident with the same features in the impervious surface feature class.
- b. The Consultant will collect and update existing features listed in the Surface Type schema listed in the above table, including:
 - All sidewalks and paths 3 feet in width or greater
 - All building footprints 100 square feet in size or greater
- c. The delivered feature class must include attributes clearly indicating features which are new or have been modified from the City's current impervious surface file
- d. Metadata must be provided explaining the collection/creation process for the impervious surface file

IX. **PROJECT DELIVERABLES**

A. **Project Administration**

The consultant shall prepare all working papers, technical memos and progress reports as required in the scope of work.

B. **Product Deliverables**

The following is a list of suggested deliverables, but is not inclusive. The respondent is expected to augment the list.

- The cost of all deliveries shall be borne by the respondent.
- Digital and paper copy of Ground Control Report. Digital copy should be a project-wide ESRI Feature Class in a file geodatabase.
- USGS camera calibration report for the camera used.
- Final flight line map with photo centers (as a point) in digital format.
- FGDC compliant metadata files for each product as XML (or other approved) file format.

As a minimum, the project metadata records shall detail all flight lines, flight dates and times, datums, projections, processing steps, field records, and positional accuracy.

The Vertical Positional Accuracy should be reported as follows:

"Tested ___ft Vertical Accuracy at 95 percent confidence level."

The Horizontal Positional Accuracy should be reported as follows:

"Tested ___ft Horizontal Accuracy at 95 percent confidence level."

The metadata records shall conform to the Content Standards for Digital Geospatial Metadata (FGDC-STD-00 1-1998) as published on May 1, 2000 by the FGDC, or to any format that supersedes it as determined by the FGDC.

List of all deliverable file formats by product for each coordinate system

Product	File format
LiDAR – Classified LAS files	Section *.las
1 Foot Contours	Quarter-Section *.dwg
3D 1 Foot Contours	Project-wide Feature Class *.gdb
3D Attributed Break Lines	Project-wide Feature Class *.gdb
DEM – 10 FT Floating Point Grid	ESRI Float Grid *.flt
Orthoimagery	Quarter-Section *.tif & *.tfw
Building Footprint Polygons	Project-wide Feature Class *.gdb
Pavement Edge Lines	Project-wide Feature Class *.gdb
Individual MrSIDs	Section *.sid
Project-wide MrSID	*.sid
Project-wide Imagery Mosaic	*.ecw
Impervious Surface Polygons	Project-wide Feature Class *.gdb

TABLE 1

C. Project Administration

The consultant shall provide a qualified project manager. The project manager will be responsible for coordinating all project activities and responsible for keeping the project on schedule. The project manager will coordinate all project activities with the assigned project manager from the City of Fargo.

The project manager will provide the City's project manager with progress reports once a month. As a minimum, the progress reports will recap activities completed to date, identify any problems that may delay the project, list data or decisions necessary to keep the project on time and identify any problem budget concerns.

X. **AVAILABLE INFORMATION**

A. **General Information**

The following resource data/information is available for all project areas:

1. Tax parcels in ESRI shapefile or file geodatabase format.
2. PLSS Sections and Quarter Sections in ESRI shapefile or file geodatabase format.
3. ESRI Projection files (*.prj) for all four coordinate systems.
4. Previous project Ground Control points in ESRI shapefile or file geodatabase format.
5. Existing LiDAR points in LAS format and 1-foot contour AutoCAD drawings and 1-foot contour feature class in a file geodatabase format.
6. Street centerlines in ESRI shapefile or file geodatabase format.
7. Shapefile of Flood Wall locations.
8. Existing Impervious Surface feature class in an ESRI file geodatabase format. These feature classes must be referenced by the Consultant in order to categorized features as new, modified, or existing, as described in the Scope of Work in this RFP.
9. Existing building footprint features class in an ESRI file geodatabase format. This must be referenced by the Consultant in order to categorized features as new, modified, or existing, as described in the Scope of Work in this RFP.

Appendix A
 Cost Proposal Form
 Project No. MS-19-H1

	Area (Square Miles)	Unit Cost	Total
1.	Color Digital Ortho Imagery 563.25	_____	_____
	<ul style="list-style-type: none"> • 0.5' Pixel Resolution • Ground Control with Checkpoints • DEM for photo control • Compressed MrSID • File Geodatabase Raster Dataset • TIFF (with world file, AutoCAD compatible) • Multiple coordinate projections 		
2.	Color Digital Ortho Imagery 6.00	_____	_____
	<ul style="list-style-type: none"> • 0.25' Pixel Resolution 		
3.	LiDAR/Elevation/Contour Mapping 487.50	_____	_____
	<ul style="list-style-type: none"> • 1.0' Contour • AutoCAD and File Geodatabase format • NAVD88 • Breaklines • Edge matched • DEM Floating Point Grid • Multiple coordinate projections • LIDAR <ul style="list-style-type: none"> ➤ Mass point data in .LAS format ➤ Separated surface and canopy data ➤ Proprietary Software as needed 		
4.	Planimetric Compilation Updates 490.00	_____	_____
	<ul style="list-style-type: none"> • Building Footprint and Pavement Edge 		
5.	Impervious Surface Polygons 98.25	_____	_____
	Grand Total	_____	_____

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