

# NORTH CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

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SERVING ADAMS, FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, ONEIDA, PORTAGE, VILAS AND WOOD COUNTIES

May 1, 2019

Andy Erdman, Director  
Jefferson County Land Information Office  
311 S Center Ave. Room 101  
Jefferson County WI 53549

Dear Andy:

Thank you for your interest in participating in the Wisconsin Regional Orthoimagery Consortium (WROC) in 2020. Counties in Wisconsin have had a long history of participation in the Consortium, with 2020 being the fifth time that the consortium members will update their leaf-off orthoimagery base layer on a five year cycle.

The North Central Wisconsin Regional Planning Commission (NCWRPC) once again led a quality-based selection (QBS) process to select a consultant on behalf of WROC participants. In April 2017, NCWRPC published a Request for Qualifications (RFQ) which was both posted on its website and emailed to 23 geospatial firms across the country. Through this competitive process the NCWRPC received Statements of Qualifications (SOQ) from interested firms and conducted a thorough evaluation and scoring process to select the most qualified consultant. The final outcome was the selection of the incumbent firm, Ayres Associates, a Wisconsin-based architectural, engineering, and geospatial firm. Ayres is again teamed with Quantum Spatial, a trusted and experienced aerial acquisition partner of WROC since 2008.

Counties that participate in WROC receive partner cost shares to help offset the cost of their project. NCWRPC and Ayres have secured partner cost shares from state and federal agencies, tribes, utilities, and private partners for participants of WROC. Only counties that participate in the Consortium will receive these partner cost shares for completing an orthoimagery project in 2020.

To participate in WROC, we ask that the County signs a letter of intent (LOI) in 2019. The LOI is a statement that the County plans to participate by doing a flight in 2020 once budgets have been adopted. It is not legally binding. A copy of the standard LOI is included in the attached packet.

The attached PDF packet includes the procurement documentation for the QBS selection process conducted by NCWRPC. The QBS process adheres to industry guidelines for procuring professional services from architectural, engineering, and geospatial firms. All counties that participate in WROC point to this procurement process in order to contract with Ayres Associates for geospatial services.

Thank you for your interest in WROC 2020. If you have additional questions, please contact me, and I would be happy to assist you.

Sincerely,



Andrew Faust, GISP, Senior GIS Analyst  
North Central Wisconsin RPC

## Overview of WROC

The North Central Wisconsin Regional Planning Commission (NCWRPC) created the Wisconsin Regional Orthophotography Consortium (WROC) to assist in coordinating mapping services for members of regional planning commissions across the state. The goal of the consortium is to build and sustain a multi-participant program to acquire digital orthoimagery and elevation data throughout Wisconsin. WROC is planning for imagery projects in 2020. The WROC approach brings several potential benefits to its members, including the following:



1. Cost savings through partnerships
2. Specifications and standards support
3. Data sharing between members
4. Procurement support

To facilitate a cooperative approach for orthoimagery data acquisition, WROC is working with the Wisconsin land information community to strengthen relationships between local, regional, state, and federal entities. This collective effort to acquire orthoimagery and elevation data is a major step forward in the vital task of acquiring and distributing up-to-date geospatial data. The benefits of a consortium approach, however, should not come at the expense of meeting each member's specific needs. To that end, WROC is designed to allow all participants to receive products and services tailored to their individual geospatial needs.

WROC will lead an effort to make geospatial data users aware of potentially redundant orthoimagery efforts – i.e., projects with similar data acquisition times and specifications that can be merged or eliminated. Streamlining orthoimagery efforts prevents duplication of effort, which saves time and money.

## WROC Consultant Selection Process

NCWRPC went through a qualifications-based selection (QBS) process in April 2017 to select a geospatial services consultant. A selection team was formed to evaluate statements of qualifications (SOQs) submitted from interested consultants. From the pool of SOQs, the selection team scored each SOQ based on nine criteria. The selection process resulted in the selection of the Ayres Associates/Quantum Spatial team for the 2020 WROC program.

## Program Activities and Timeline

WROC is planning Spring 2020 leaf-off flights for aerial imagery acquisition using advanced digital mapping sensors. Base product options include 4-band color and color-IR digital orthoimagery at three pixel resolutions (12-inch, 6-inch, and 3-inch) that meet ASPRS accuracy standards for various mapping scales.

Additional geospatial products and services including leaf-on orthoimagery, photogrammetric mapping, LiDAR, and remote sensing data are also available to WROC members.

Over the next 2 years, WROC will work with the consultant team to provide consortium members project specifications and fee estimates. Letters of intent (LOI) will be signed by each WROC member to help the consultant team allocate resources and define the size and scope of

the consortium program. Regional partnerships will be formed based on the LOI. Individual contracts will be created for each project.

### **Partnership**

An important key to the success of the WROC program is the ability to bring partnership funding back to the members of the consortium. WROC has had a track record of securing funding from public and private partners to offset the overall cost of local WROC projects to its members. With the creation of multi-county and regional datasets through the WROC program, it has made it possible to attract many partners that individual counties could not be developed on their own.

### **Conclusion**

The recognition of the inherent problems in discontinuous geospatial data and the lack of a coordinating entity to remedy these problems have led to the creation of WROC. Members of the Wisconsin land information community need to develop a set of common goals to help share the burden of costs and make vital geospatial data more widely available across jurisdictions. WROC is prepared to lead this effort through the 2020 mapping program.

WROC moves the Wisconsin land information community closer to the ultimate goal of a truly statewide mapping initiative. Regardless of when that goal is reached, WROC will continue its effort to foster partnerships and strengthen regional ties. A key feature of a consortium program is that as more and more counties, cities, and others join, a groundswell of support can occur that brings in even more members. And the more participants there are, the more costs can be shared. Increasing awareness of current imagery projects and programs can also help eliminate duplication and wasteful spending.

Orthoimagery is a critical layer in all land information systems in the state. It is vital that we maintain a sustainable program that meets as many of the objectives of the participants as possible. Local governments in Wisconsin have invested tremendous amounts of time and money in their existing map products and geographic information systems. By working together, we can save everyone involved time and money – and at the same time create superior products and help maintain a sound mapping program in Wisconsin.

# WROC 2020



Counties • Municipalities • Tribes • Utilities • Federal Agencies • State Agencies • Universities • Private Sector

## What is WROC?

The Wisconsin Regional Orthoimagery Consortium (WROC) is a multi-entity group organized through the North Central Wisconsin Regional Planning Commission. The Consortium has successfully built and now maintains a multi-participant program to acquire updated digital orthoimagery and elevation data on a five-year cycle. As part of the program, the Consortium representatives can provide assistance in coordinating mapping services for those interested in participating. The Consortium is now preparing for projects in 2018-2020 involving both new and past participants from across the state.



## Benefits of participating

WROC encourages a spirit of cooperation within the Wisconsin land information community and uses the expertise of an all-Wisconsin mapping team led by Ayres Associates. It also brings numerous direct benefits to participants:

- Excellent value through:
  - economy of scale
  - partner funding
  - efficiency in implementation
- Data-sharing among members
- Specifications and support
- QA/QC support
- Cloud-based data delivery



## What is digital orthoimagery?

Digital orthoimagery is the foundation for GIS, forming the base layer from which many additional data layers are created. It combines the characteristics of an aerial image with the geometric qualities of a map. This allows GIS and CAD software to accurately measure all visible ground features in their true geographic position and lets users:

- Make accurate distance and area calculations across the entire image mosaic
- Measure the true position of any feature observed in the orthoimage

## What's it used for?

Digital orthoimagery is used throughout Wisconsin for vital purposes such as emergency planning and response, government decision-making, and sound land use policy development.

### A sampling of applications includes:

- Parcel mapping
- Asset management
- Property assessment
- Utility facility mapping
- Environmental monitoring and management
- Impervious surface mapping
- Building permit tracking
- Zoning enforcement
- Emergency response
- Code enforcement
- Municipal growth planning
- Forest management
- Floodplain mapping
- Preliminary engineering design
- Change detection
- Public meeting displays

## Customize your options and detail

To meet the needs of the largest number of potential participants, a variety of imagery options are available through the WROC program. Aerial imagery will be acquired using a 4-band digital mapping camera to provide participants with options for natural color and color infrared at three different pixel resolutions. All orthoimagery will meet or exceed ASPRS accuracy standards at the 95% confidence level.

<u>Detail Level:</u>	<u>Map Scale:</u>	<u>Horizontal Accuracy:</u>
3-inch pixel resolution	1" = 50'	1.2 feet
6-inch pixel resolution	1" = 100'	2.4 feet
12-inch pixel resolution	1" = 200'	4.8 feet

## How much does it cost?

Imagery options for WROC have been unit-priced so that participants can budget for projects years in advance. The following unit prices are not-to-exceed numbers for budgetary purposes. The actual unit prices will likely decrease as participation increases and partner funding is secured. The table includes unit pricing for 3-inch and 6-inch buy-ups within countywide projects.

### Budget Pricing (Not to Exceed Numbers)

Square Miles	Resolution		
	3"	6"	12"
1-19			
20-30	\$850		
31-50	\$700*	\$320	
51-100	\$550	\$320	
101 to 400	\$350	\$220	
401+ (county-wide)	\$210*	\$80	\$55

- All unit prices apply to contiguous areas only.
- For pricing on projects that fall into the shaded categories, please contact a WROC representative.

\*Unit pricing reduced due to increased participation.

## Additional services

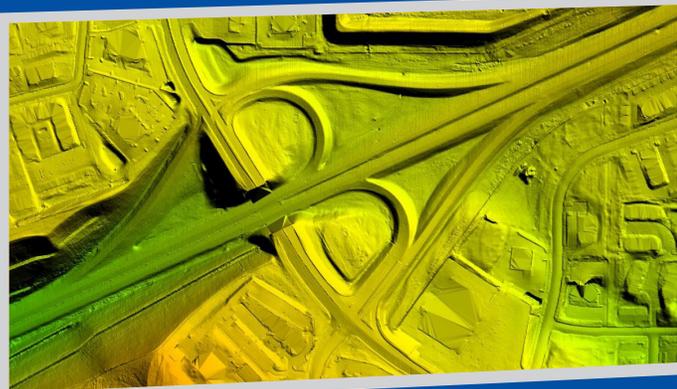
Because each of these services can vary greatly in scope and specifications, costs for additional services will be provided to participants on a project-by-project basis. Additional services include lidar, feature extraction, and planimetric mapping. If you're interested in learning more about additional geospatial services, please reach out to us using the contact information below.

## How can you participate?

Any organization can participate in WROC. For more information, contact one of the following Consortium representatives:

Andrew Faust, GISP  
North Central Wisconsin RPC  
715.849.5510  
afaust@ncwrpc.org

Zach Nienow, GISP  
Ayres Associates  
608.443.1207  
nienowz@ayresassociates.com



For more information, please visit: [ncwrpc.org/WROC2020/](http://ncwrpc.org/WROC2020/)

Revised 2/2019

Zach Nienow, GISP  
Ayres Associates Inc  
5201 E. Terrace Drive, Suite 200  
Madison, WI 53718  
(608) 443-1200

Andrew Faust, GISP  
North Central Wisconsin RPC  
210 McClellan Street, Suite 210  
Wausau, WI 54403  
(715) 849-5510

RE: WROC Statement of Intent

Mr. Nienow and Mr. Faust:

\_\_\_\_\_ County understands that the team of Ayres Associates has been selected to complete mapping projects within the Wisconsin Regional Orthoimagery Consortium (WROC) program and intends to participate in WROC by contracting with Ayres Associates for aerial mapping. \_\_\_\_\_ County cannot proceed with contract documents until future budgets are adopted and funding is available.

\_\_\_\_\_ County understands that the WROC team's ability to attract and secure partner participation in the program is enhanced through this statement of our intent to participate.

\_\_\_\_\_ County intends to contract with Ayres Associates for aerial mapping when the funding becomes available.

Please feel free to contact me at \_\_\_\_\_ if you have any questions.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

# NORTH CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

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## *Request for Qualifications*

*Wisconsin Regional Orthoimagery Consortium (WROC)*

*2020 Digital Orthoimagery/Elevation Data Program*

**Deadline for Statement of Qualifications:** April 7, 2017 by 3:00 pm CDT

**Statement of Qualifications should be addressed to:**

Andrew Faust, Senior GIS Analyst  
*Wisconsin Regional Orthoimagery Consortium (WROC)*  
North Central Wisconsin Regional Planning Commission  
210 McClellan St., Suite 210, Wausau, WI 54403-4820

Technical questions regarding this document or process should be directed via email only to:  
[afaust@ncwrpc.org](mailto:afaust@ncwrpc.org)

**Deadline for all questions:** March 31, 2017 by 3:00 pm CDT  
No phone calls please!

**RFQ Publication Date:** March 17, 2017

## **I. Program Overview**

North Central Wisconsin Regional Planning Commission (NCWRPC) is coordinating the selection of a consultant to manage and facilitate the Wisconsin Regional Orthoimagery Consortium (WROC) Digital Orthoimagery/Elevation Data Program. WROC brings benefits to its members, including cost savings, specifications and standards support, data sharing between members and partners and procurement support. NCWRPC will coordinate the Qualification Based Selection Process and act as the fiscal agent for any federal and state grants.

Statewide imagery coverage is the goal of WROC. Coverage of WROC will be determined by the consultant's ability to build consortium members and partnerships. To achieve that goal the consultant will need to work directly with each local unit of government to determine participation and secure those projects.

## **II. Contact**

Andrew Faust, GISP  
Senior GIS Analyst  
210 McClellan Street, Suite 210, Wausau, WI 54403  
[afaust@ncwrpc.org](mailto:afaust@ncwrpc.org)  
715.849.5510

## **III. Program Area**

Wisconsin's seventy-two counties are very diverse including: National Forest lands, county forest lands, agriculture areas, glacial, and driftless topography. The area also includes varying levels of rural and urban development. This diversity adds to the complexity of this consortium. Rural counties may have different needs for products or services. Some of the more urban counties have had data collection at higher resolutions, and will have greater acquisition needs. The consultant will work with each individual local unit of government that participates in the project to meet their needs.

## **IV. Historical Background Participants and Imagery Products**

WROC assisted 72 counties covering over 56,000 square miles of imagery in 2010. Multiple resolutions / bands of imagery were captured. Resolutions of 3 inch, 6 inch, 12 inch, and 18 inch were acquired with a digital mapping camera. LiDAR, elevation products, and planimetrics were also acquired by many counties as part of the consortium.

WROC assisted 47 counties covering almost 40,000 square miles of high resolution imagery in 2015. Many counties also collected LiDAR data. There were also urban areas that captured 3 inch imagery.

The 2020 effort and any future efforts are expected to vary from previous efforts.

## **V. Program Objectives**

- The consultant will need to complete geospatial work that meets or exceeds consortium member's data needs
- The consultant will need to identify and secure federal, state, local, and private partnerships
- The consultant will need to work with consortium members to secure local projects

## **VI. Program Scope of Services**

The Statement of Qualifications (SOQ) should contain the following:

1. Scheduling with appropriate timetables for product delivery
2. List of references from similar projects
3. Pertinent information on main office facilities and staff used for project management.
4. Resources available for project
5. Approach to secure public and private partners for WROC.
6. Product Specifications: Based on the past WROC programs and product needs, we have decided to leave it to the consultant to make recommendations on product types, product specifications, mapping accuracies, and acquisition methods that they feel would meet or exceed the consortium members needs and facilitate cost savings based on economy of scale. Products may include but not limited to the following: orthoimagery, elevation products, and planimetrics.
7. Strategies used to facilitate meeting the needs of the consortium members.

## **VII. Selection Process**

The selection committee will follow the Qualifications Based Selection process. Interested consultants are being invited to submit Statements of Qualifications (SOQ's). The selection committee will review and evaluate each submission. All selection committee members will rank submissions by qualifications based on the consultant's SOQ submission using the selection criteria in VIII.

The highest ranked consultant will be selected. All others will be notified of the selection made.

## **VIII. Selection Criteria**

Each consultant will be rated on the following:

1. Completeness of SOQ
2. Experience on similar projects
3. References
4. Project management capabilities
5. Production capacity of contractor
6. Product options and specifications that most meet consortium members needs
7. Ability to work with local governments
8. Ability to secure consortium partnerships
9. Ability to secure additional funding to offset local project costs.

Consultants may be asked to perform an oral presentation and be subjected to interviews by the selection committee.

For eligibility, firms will submit **one signed original** and **three copies** to Andrew Faust at NCWRPC by **3:00 pm CDT on April 7, 2017**

**Each consultant that plans to respond to the RFQ must register via email to Andy Faust – [afaust@ncwrpc.org](mailto:afaust@ncwrpc.org). Each registered consultant will be emailed answers to any questions submitted to this RFQ.**

**IX. Selection Schedule**

<u>Item</u>	<u>Date</u>
Distribution of RFQ	March 17, 2017
RFQ Question Deadline	March 31, 2017
SOQ submission deadline	April 7, 2017
SOQ evaluation	April 10-14, 2017
Notification to consultant	April 17, 2017
Negotiations with first consultant begin	April 19, 2017

**X. Program Funding**

The North Central Wisconsin Regional Planning Commission will be responsible for the coordination of the OBS process, from which a suitable consultant may be chosen. Contract specifications may be drafted by NCWRPC.

This process does not guarantee any projects will be completed or that any consultant will be selected. It is at the discretion of the selection committee to choose one consultant or decide not to move forward with the formation of the consortium. Additionally, subsequent agreements may be extended beyond the 2020 effort.

Each county and local unit of government will have the responsibility of working with the consultant to finalize a suitable contract that meets their product needs and has an acceptable delivery date and contract language. Funding of project costs will be the responsibility of the individual counties and local units of government. Consultant will need to help identify federal, state and other funding to help reduce overall costs to local projects.

The selection committee reserves the right to waive any informality or irregularity in the RFQ. The RFQ does not commit the selection committee to award a contract to any consultant or to pay any cost incurred in preparation of the proposal or SOQ submitted in response to this request.

*Wisconsin Regional Orthoimagery Consortium (WROC)*  
*2020 Digital Orthoimagery/Elevation Data Program*  
 Rating Form to Evaluate Firms Submitting Statements of Qualifications

Name of Firm **Ayres / Quantum**

Name of Committee Member **Reviewer 1**

Date of Review **April 13, 2017**

		<u>Score given</u>
1.	Completeness of SOQ (0-5)	4
2.	Experience on similar projects (0-5) 2.1 Past performance in similar projects	5
3.	References (0-5)	5
4.	Project management capabilities (0-5) 4.1 Experience of Project Managers	5
5.	Production capacity of contractor (0-5) 5.1 Equipment and production facilities	4
6.	Product options and specifications (0-5) 6.1 Demonstration of accommodating varying needs	3
7.	Ability to work with local governments (0-5) 7.1 Understanding of Wisconsin's geospatial community	5
8.	Ability to secure consortium partnerships (0-5)	4
9.	Ability to secure additional funding to offset local projects costs (0-5)	4

Overall Evaluation Score **39**

*Wisconsin Regional Orthoimagery Consortium (WROC)*  
*2020 Digital Orthoimagery/Elevation Data Program*  
 Rating Form to Evaluate Firms Submitting Statements of Qualifications

Name of Firm **Ayres / Quantum**

Name of Committee Member **Reviewer 2**

Date of Review **April 13, 2017**

		<u>Score given</u>
1.	Completeness of SOQ (0-5)	5
2.	Experience on similar projects (0-5) 2.1 Past performance in similar projects	5
3.	References (0-5)	5
4.	Project management capabilities (0-5) 4.1 Experience of Project Managers	5
5.	Production capacity of contractor (0-5) 5.1 Equipment and production facilities	4
6.	Product options and specifications (0-5) 6.1 Demonstration of accommodating varying needs	4
7.	Ability to work with local governments (0-5) 7.1 Understanding of Wisconsin's geospatial community	5
8.	Ability to secure consortium partnerships (0-5)	5
9.	Ability to secure additional funding to offset local projects costs (0-5)	5

Overall Evaluation Score **44**

*Wisconsin Regional Orthoimagery Consortium (WROC)*  
*2020 Digital Orthoimagery/Elevation Data Program*  
 Rating Form to Evaluate Firms Submitting Statements of Qualifications

Name of Firm **Ayres / Quantum**

Name of Committee Member **Reviewer 3**

Date of Review **April 13, 2017**

		<u>Score given</u>
1.	Completeness of SOQ (0-5)	4
2.	Experience on similar projects (0-5) 2.1 Past performance in similar projects	4
3.	References (0-5)	4
4.	Project management capabilities (0-5) 4.1 Experience of Project Managers	5
5.	Production capacity of contractor (0-5) 5.1 Equipment and production facilities	5
6.	Product options and specifications (0-5) 6.1 Demonstration of accommodating varying needs	5
7.	Ability to work with local governments (0-5) 7.1 Understanding of Wisconsin's geospatial community	5
8.	Ability to secure consortium partnerships (0-5)	3
9.	Ability to secure additional funding to offset local projects costs (0-5)	3

Overall Evaluation Score **38**

*Wisconsin Regional Orthoimagery Consortium (WROC)*  
*2020 Digital Orthoimagery/Elevation Data Program*  
 Rating Form to Evaluate Firms Submitting Statements of Qualifications

Name of Firm **Surdex**

Name of Committee Member **Reviewer 1**

Date of Review **April 13, 2017**

		<u>Score given</u>
1.	Completeness of SOQ (0-5)	4
2.	Experience on similar projects (0-5) 2.1 Past performance in similar projects	4
3.	References (0-5)	4
4.	Project management capabilities (0-5) 4.1 Experience of Project Managers	3
5.	Production capacity of contractor (0-5) 5.1 Equipment and production facilities	4
6.	Product options and specifications (0-5) 6.1 Demonstration of accommodating varying needs	4
7.	Ability to work with local governments (0-5) 7.1 Understanding of Wisconsin's geospatial community	3
8.	Ability to secure consortium partnerships (0-5)	3
9.	Ability to secure additional funding to offset local projects costs (0-5)	3

Overall Evaluation Score **32**

*Wisconsin Regional Orthoimagery Consortium (WROC)*  
*2020 Digital Orthoimagery/Elevation Data Program*  
 Rating Form to Evaluate Firms Submitting Statements of Qualifications

Name of Firm **Surdex**

Name of Committee Member **Reviewer 2**

Date of Review **April 13, 2017**

		<u>Score given</u>
1.	Completeness of SOQ (0-5)	4
2.	Experience on similar projects (0-5) 2.1 Past performance in similar projects	4
3.	References (0-5)	4
4.	Project management capabilities (0-5) 4.1 Experience of Project Managers	4
5.	Production capacity of contractor (0-5) 5.1 Equipment and production facilities	4
6.	Product options and specifications (0-5) 6.1 Demonstration of accommodating varying needs	4
7.	Ability to work with local governments (0-5) 7.1 Understanding of Wisconsin's geospatial community	5
8.	Ability to secure consortium partnerships (0-5)	4
9.	Ability to secure additional funding to offset local projects costs (0-5)	3

Overall Evaluation Score **36**

*Wisconsin Regional Orthoimagery Consortium (WROC)*  
*2020 Digital Orthoimagery/Elevation Data Program*  
 Rating Form to Evaluate Firms Submitting Statements of Qualifications

Name of Firm **Surdex**

Name of Committee Member **Reviewer 3**

Date of Review **April 13, 2017**

		<u>Score given</u>
1.	Completeness of SOQ (0-5)	3
2.	Experience on similar projects (0-5) 2.1 Past performance in similar projects	4
3.	References (0-5)	4
4.	Project management capabilities (0-5) 4.1 Experience of Project Managers	4
5.	Production capacity of contractor (0-5) 5.1 Equipment and production facilities	5
6.	Product options and specifications (0-5) 6.1 Demonstration of accommodating varying needs	5
7.	Ability to work with local governments (0-5) 7.1 Understanding of Wisconsin's geospatial community	4
8.	Ability to secure consortium partnerships (0-5)	3
9.	Ability to secure additional funding to offset local projects costs (0-5)	2

Overall Evaluation Score **34**

*Wisconsin Regional Orthoimagery Consortium (WROC)  
2020 Digital Orthoimagery/Elevation Data Program*

Table Summarizing Scores from Responding Consultants

	Ayres	Surdex
Reviewer 1	39	32
Reviewer 2	44	36
Reviewer 3	38	34
Totals	121	102

## Consultant Solicitation List

### Consultants that were emailed RFQ

Consultant	Location	Web
Aerial Data Service	Tulsa, Oklahoma	<a href="http://www.aerialdata.com">www.aerialdata.com</a>
Aerial Services, Inc.	Cedar Falls, Iowa	<a href="http://www.aerialservicesinc.com">www.aerialservicesinc.com</a>
Aerographics	SLC, Utah	<a href="http://www.aero-graphics.com">www.aero-graphics.com</a>
Airborne Imaging	Midlothian, Texas	<a href="http://www.airborneimaging.net">www.airborneimaging.net</a>
Ayres	Madison, Wisconsin	<a href="http://www.ayresassociates.com">www.ayresassociates.com</a>
Continental Mapping Consultants	Sun Prairie, Wisconsin	<a href="http://www.continentalmapping.com">www.continentalmapping.com</a>
Digital Aerial Solutions	Riverview, Florida	<a href="http://www.digitalaerial.com">www.digitalaerial.com</a>
Fugro USA	Houston, Texas	<a href="http://www.fugro.com">www.fugro.com</a>
Hexagon Geospatial	Madison, Alabama	<a href="http://www.hexagongeospatial.com">www.hexagongeospatial.com</a>
IMC	Babylon, New York	<a href="http://www.imcmapping.com">www.imcmapping.com</a>
Keystone Aerial	Philadelphia, PA	<a href="http://www.kasurveys.com">www.kasurveys.com</a>
Kucera Int'l	Willoughby, Ohio	<a href="http://www.kucerainternational.com">www.kucerainternational.com</a>
Merrick	Denver, CO	<a href="http://www.merrick.com">www.merrick.com</a>
Pictometry	Bothell, WA	<a href="http://www.eagleview.com">www.eagleview.com</a>
Quantum Spatial	Saint Petersburg, FL	<a href="http://www.quantumspatial.com">www.quantumspatial.com</a>
Richard Crouse & Associates	Frederick, MD	<a href="http://www.richardcrouse.com">www.richardcrouse.com</a>
Sanborn	Colorado Springs, CO	<a href="http://www.sanborn.com">www.sanborn.com</a>
Surdex	Chesterfield, MO	<a href="http://www.surdex.net">www.surdex.net</a>
Towill	Concord, CA	<a href="http://www.towill.com">www.towill.com</a>
Tuck Mapping	Big Stone Gap, VA	<a href="http://www.tuckmapping.com">www.tuckmapping.com</a>
Williams Aerial & Mapping, Inc.	South Bend, IN	<a href="http://www.williamsaerial.com">www.williamsaerial.com</a>
Wilson Company	Albuquerque, New Mexico	<a href="http://www.wilsonco.com">www.wilsonco.com</a>
Woolpert	Beavercreek, OH	<a href="http://www.woolpert.com">www.woolpert.com</a>

The Request for Qualifications (RFQ) was also posted on [www.ncwrpc.org](http://www.ncwrpc.org) from March 17 to March 31, 2017

May 2, 2019

Andy Erdman, Director  
Jefferson County Land Information Office  
311 S Center Ave. Room 101  
Jefferson, WI 53549



Dear Andy:

Thank you for the opportunity to submit a proposal for orthoimagery for Jefferson County as a part of the Wisconsin Regional Orthoimagery Consortium (WROC). We understand that Jefferson County would like to obtain new 4-band digital orthoimagery to enhance and update the County's GIS base mapping layers and to support its land information needs and the needs of its partners. This letter describes the project approach and fees for 6-inch pixel orthoimagery across the County. The total project area is 582 square miles (county-wide). The Wisconsin-based WROC contracting team of Ayres Associates and Quantum Spatial will provide the following services.

### Proposed Project Services – Orthoimagery

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We understand Jefferson County's need to update its orthoimagery base layer, and its desire to do this as part of WROC 2020. Aerial imagery acquisition, processing, and ortho delivery will occur in 2020. We are proposing a county-wide 6-inch pixel orthoimagery project, with options for 3-inch buy-ups for the municipalities that are interested in higher resolution orthos.

### Scope of Work

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The Ayres/Quantum team will provide the County with 4-band orthoimagery at 6-inch pixel resolution across 582 square miles, plus a 500-ft buffer around the County boundary as shown in Exhibit A. The 4-band orthoimagery will be developed from aerial photography that is acquired using a calibrated, digital photogrammetric camera, during leaf-off spring conditions.

The delivered orthoimagery will consist of GeoTIFF tiles based on PLSS quad sections (or other tile format agreed upon). Additionally, we will provide MrSID or alternate format compressed tiles and a project-wide mosaic. The 6-inch orthoimagery will conform to ASPRS Level 2 standards for 1" = 100' scale mapping with an orthoimage ground sample distance (GSD) of less than 6 inches. The orthoimagery will be produced to meet or exceed a horizontal accuracy of 1.4-feet RMSE.

### Orthoimagery DEM

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We will use a digital elevation model (DEM) derived from the countywide LiDAR, which is suitable to achieve the stated accuracy standards for 6-inch orthoimagery. Our technicians will carefully review the DEM and make updates where necessary.

### Ground Control

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The Ayres/Quantum team will collect airborne GNSS and an inertial measurement unit (IMU) data from equipment that is tightly coupled with the digital camera sensor. In addition, we will perform ground control survey for the project at existing control locations or photo-identifiable points.

### 4-band Orthoimagery

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As part of our aerial imagery collection, the near-infrared (NIR) band will be captured along with the RGB natural color bands. We have included 4-band stacked GeoTIFF and MrSID files in our standard delivery. These datasets can be viewed in either natural color or color infrared (CIR) band configurations in a

single file, rather than creating multiple datasets. If you are interested separate deliveries of 3-band natural color or CIR datasets, we can provide budget estimates for those additional services.

### Orthoimagery Project Deliverables:

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Deliverable products included in the estimate are as follows:

- Digital ortho tiles in GeoTIFF format
- Project-wide mosaic in MrSID, JPG2, or ECW format
- Ortho tile index in vector format
- Ground control locations in vector format
- Metadata, FGDC compliant

### Municipal Buy-up Options:

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Municipalities have the option to buy up to higher resolution orthos as part of your countywide project. Under this approach, any buy-up areas are extended favorable WROC pricing because the aircraft and sensor system will be in the County for the 6-inch countywide flight. In return, the County gains access to higher resolution orthos over the urban areas or other townships of interest. We can provide WROC unit pricing for municipal buy-up areas upon your request.

### Partner Funding:

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Partner funding assistance to consortium members is proven as an effective way to aid in the funding of WROC projects. Established relationships with partners from previous consortium efforts present the opportunity of continued funding assistance to WROC program members.

Additionally, by starting our WROC 2020 efforts early, our team is successfully securing new partners at the local, regional, and state levels to provide a larger, more diverse group of funding partners. In the end, organizations of all sizes, from the public and private sector will contribute to the funding assistance success of WROC 2020.

### Proposed Fees – Orthoimagery Services:

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The following fee is a not-to-exceed amount that is calculated using WROC unit pricing. These costs do not include cost shares from WROC partners. Partner funding that is secured through WROC will be provided to the County to help reduce the overall cost of this project.

#### Orthoimagery project

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County-wide 4-band orthos, 6-inch pixel resolution:	\$ 46,560.00
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I hope that we have provided the information you require to proceed with planning for your WROC projects in 2020. In the event that you require additional information or clarification on the proposal details, please feel free to contact me at 608.443.1207.

Sincerely,



Ayres Associates Inc  
Zachary Nienow, GISP  
Project Manager  
Direct: 608.443.1207

**Exhibit A**

Jefferson County Project Area, 582 square miles

