

**CITY OF WEST RICHLAND  
RESOLUTION NO. 03-22**

**A RESOLUTION OF THE CITY OF WEST RICHLAND, WASHINGTON,  
AUTHORIZING THE MAYOR TO EXECUTE INTER-LOCAL AGREEMENT  
REGARDING AERIAL PHOTOGRAPHY AND ORTHOPHOTO MAPPING  
PROJECT WITH BENTON COUNTY.**

**WHEREAS**, the Interlocal Cooperation Act, as amended, and codified in Chapter 39.34 of the Revised Code of Washington provides for interlocal cooperation between governmental agencies; and

**WHEREAS**, the purpose of this Agreement is to cooperatively undertake and complete an aerial photography and orthophoto mapping project of portions of BENTON COUNTY, including the areas lying within the CITY OF WEST RICHLAND; and

**WHEREAS**, this project will benefit both, because the COUNTY has a need to update its urban ortho-imagery of the County in 2022, and the CITY OF WEST RICHLAND has a need to update its ortho-imagery of those areas lying within the limits of the West Richland Urban Growth Boundary; and

**WHEREAS**, both parties have the capability to independently acquire and/or produce 2022 ortho-imagery, but if each acted independently, the results would involve significant redundancies and increased costs; and

**WHEREAS**, a major goal of this Agreement is to reduce and/or eliminate duplication and save governmental costs; and

**NOW, THEREFORE**, the City Council of the City of West Richland, Washington, hereby resolves as follows:

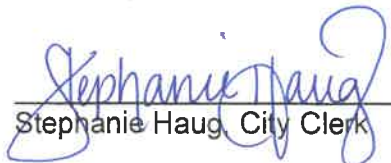
**Section 1.** That the Mayor is hereby authorized to execute Inter-Local Agreement regarding Aerial Photography and Orthophoto Mapping with Benton County.

**Section 2.** This Resolution will take effect upon the date of approval and signature.

**PASSED BY THE CITY COUNCIL OF THE CITY OF WEST RICHLAND, WASHINGTON**, at a regular meeting thereof held this 18<sup>th</sup> day of January, 2022.

  
\_\_\_\_\_  
Brent Gerry, Mayor

ATTEST:

  
\_\_\_\_\_  
Stephanie Haug, City Clerk

APPROVED AS TO FORM:

  
\_\_\_\_\_  
Bronson Brown, City Attorney

## INTERGOVERNMENTAL COOPERATION AGREEMENT

**THIS AGREEMENT** is between Benton County ("COUNTY"), a political subdivision of the State of Washington, and the City of WEST RICHLAND, a municipal corporation.

### WITNESSETH:

**WHEREAS**, the Interlocal Cooperation Act, as amended, and codified in Chapter 39.34 of the Revised Code of Washington provides for interlocal cooperation between governmental agencies; and

**WHEREAS**, the purpose of this Agreement is to cooperatively undertake and complete an aerial photography and orthophoto mapping project of portions of BENTON and FRANKLIN COUNTIES, including the areas lying within the CITY OF WEST RICHLAND; and

**WHEREAS**, this project will benefit both, because the COUNTY has a need to update its urban ortho-imagery of the County in 2022, and the CITY OF WEST RICHLAND has a need to update its ortho-imagery of those areas lying within the limits of the WEST RICHLAND Urban Growth Boundary; and

**WHEREAS**, both parties have the capability to independently acquire and/or produce 2022 ortho-imagery, but if each acted independently, the results would involve significant redundancies and increased costs; and

**WHEREAS**, a major goal of this Agreement is to reduce and/or eliminate duplication and save governmental costs; and

**WHEREAS**, the CITY OF WEST RICHLAND has requested that the COUNTY provide and deliver to them the ortho-imagery of the WEST RICHLAND Urban Growth Boundary, with 4-inch or better pixel resolution; and

**WHEREAS**, the COUNTY has entered into a personal services contract with GEOPHEX, LTD., for the purpose of undertaking and completing an aerial photography and urban orthophoto mapping project of portions of Benton and Franklin Counties; and

**WHEREAS**, the COUNTY has included, as part of the contract it has entered into with GEOPHEX, LTD., all provisions necessary to deliver ortho-imagery of the areas lying within several local urban growth areas to the CITY OF WEST RICHLAND at the requested 4-inch or better pixel resolution and the delivery of the Benton County 1 foot or better pixel resolution; and

**WHEREAS**, the CITY OF WEST RICHLAND has agreed to pay the COUNTY the amount of the cost of the delivery of ortho-imagery of the area within the WEST RICHLAND Urban Growth Boundary, with 4-inch or better pixel resolution; and

**NOW, THEREFORE**, the parties agree as follows:


1. The COUNTY shall provide all data and resources necessary for GEOPHEX, LTD., to complete the work as outlined in the personal services contract it entered into with GEOPHEX, LTD., for the purpose of undertaking and completing an aerial photography and urban orthophoto mapping project of portions of Benton and Franklin Counties.
2. The COUNTY shall provide all preliminary data received from GEOPHEX, LTD., for the WEST RICHLAND Project Area, as described in the attached Exhibit B, to the CITY OF WEST RICHLAND for their review and comment.
3. The COUNTY shall relay the CITY OF WEST RICHLAND's concerns regarding accuracies and visual issues such as seams or structures with edge or displacement effects to GEOPHEX, LTD. and assure that such concerns are addressed in the final product produced by the COUNTY'S contract with GEOPHEX, LTD.
4. The COUNTY shall deliver to the CITY OF WEST RICHLAND a copy of all project deliverables across the entire extent of the Project Area as described in Exhibit A (Attached), including both project documentation and project data, as described in the personal services contract to be entered with GEOPHEX, LTD.
5. The CITY OF WEST RICHLAND shall reimburse the COUNTY for the cost of the delivery of ortho-imagery with 4-inch or better pixel resolution across the WEST RICHLAND Project Area as described in Exhibit B (Attached). The amount to be reimbursed by the CITY OF WEST RICHLAND to the COUNTY shall be Four Thousand One Hundred and Forty dollars and Zero cents (\$4,140.00), plus B&O tax.
6. The COUNTY shall submit an invoice to the CITY OF WEST RICHLAND for reimbursement to the COUNTY upon the successful delivery of the project documentation and project data, which shall be payable within thirty (30) days.
7. This Agreement does not involve the creation of a separate legal or administrative entity. Except as otherwise provided herein, there will be no real or personal property acquired, held, or disposed of relating to this Agreement, unless agreed upon in writing by the Parties. In the event that joint property is acquired, then it shall be distributed, when the Agreement is terminated, to the Parties in proportion to that Party's contribution to purchase such property, except as may otherwise be provided herein.

8. The duration of this Agreement will be from the date last signed until December 31, 2022.
9. The administrator of this Agreement will be the Benton County Information Technology Manager.
10. Upon execution of this Agreement, each party will provide the other with a certified copy of the resolution, ordinance, or other authority given to execute this Agreement pursuant to RCW 39.34.030(2), and those documents will be attached hereto and incorporated herein as Exhibit "C" (COUNTY) and Exhibit "D" (CITY OF WEST RICHLAND).
11. A copy of this Agreement will be filed with the Benton County Auditor's Office or posted on the COUNTY's or CITY OF WEST RICHLAND's website as provided in RCW 39.34.040.

BOARD OF COUNTY COMMISSIONERS  
BENTON COUNTY, WASHINGTON

CITY OF WEST RICHLAND  
WEST RICHLAND, WASHINGTON

\_\_\_\_\_  
Chairman

  
\_\_\_\_\_  
City Representative

\_\_\_\_\_  
Chair Pro-Tem

Mayor  
\_\_\_\_\_  
Title

\_\_\_\_\_  
Member

Date: 1-18-2022  
\_\_\_\_\_

Date: \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Clerk to the Board

APPROVED AS TO FORM:

\_\_\_\_\_  
Deputy Prosecuting Attorney

# EXHIBIT A PROJECT AREA

## Legend

- City Limits
- UGA
- Project Area

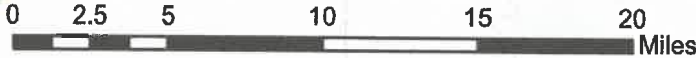
Brosses

West Richland Richland

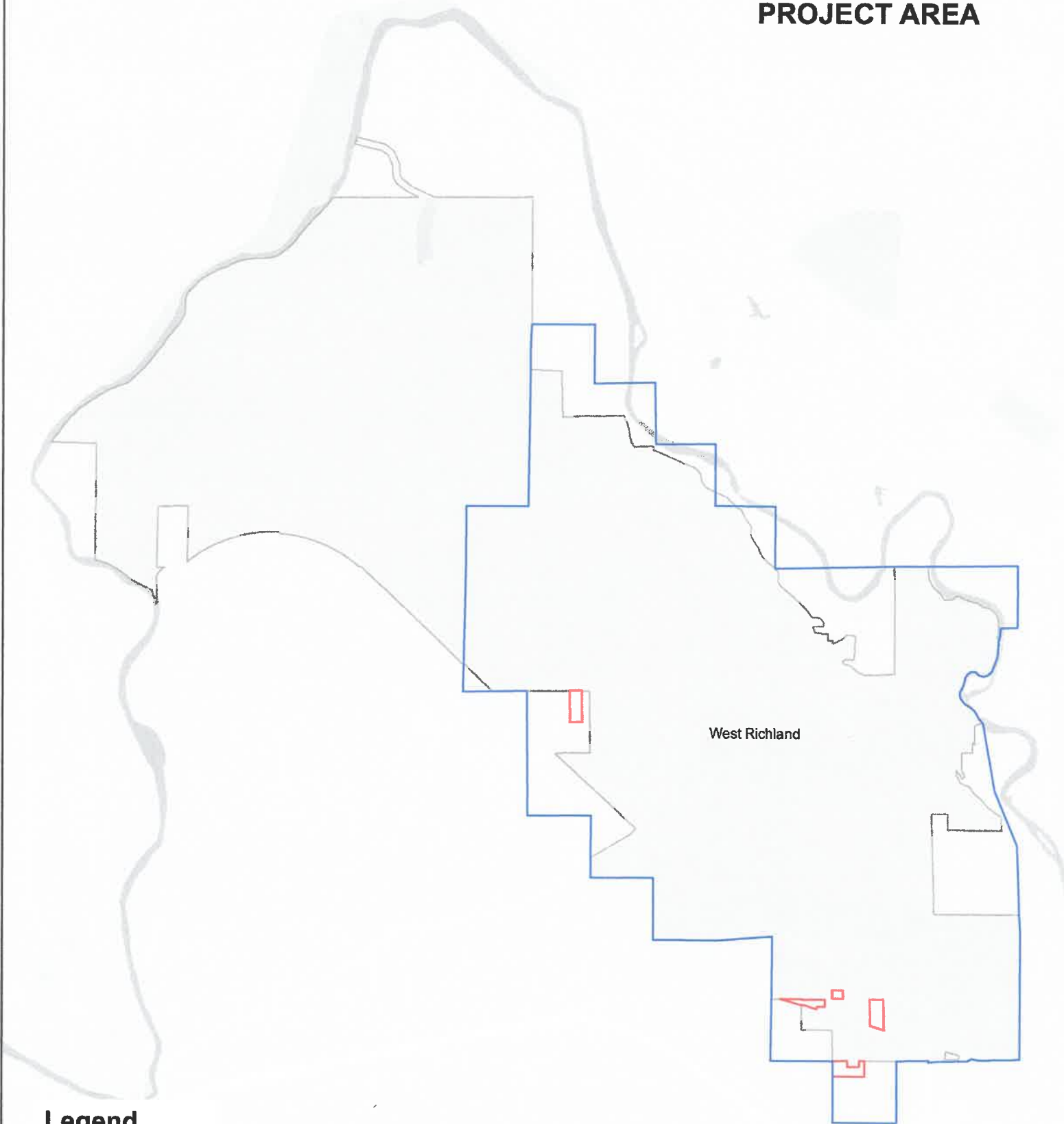
Pasco

Kennewick




Rural Area

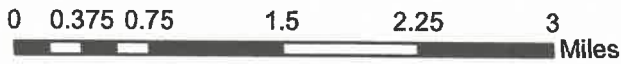


# EXHIBIT B CITY OF WEST RICHLAND PROJECT AREA



## Legend

-  City Limits
-  UGA
-  Project Area

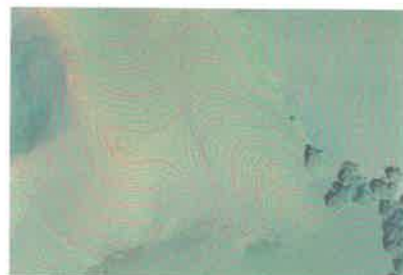




*Geophex*  
*Surveys*

## **Benton County WA**

2022 Orthophoto Update – Revised 2 Quote



Submitted to:

**Benton County GIS Department**  
620 Market Street  
Prosser WA 99350

**Anthony Von Moos**, GIS Supervisor  
Benton County Information Technology

Email: [Anthony.VonMoos@co.benton.wa.us](mailto:Anthony.VonMoos@co.benton.wa.us)

Submitted by:

**Geophex, Ltd.**  
605 Mercury Street  
Raleigh, North Carolina 27603

**Andrew Dawson**  
President

Email: [adawson@geophexsurveys.com](mailto:adawson@geophexsurveys.com)

Ph: (919) 578-8857 (ext. 101)

Fax: (919) 578-8849



November 19, 2021

Quote# 20210004

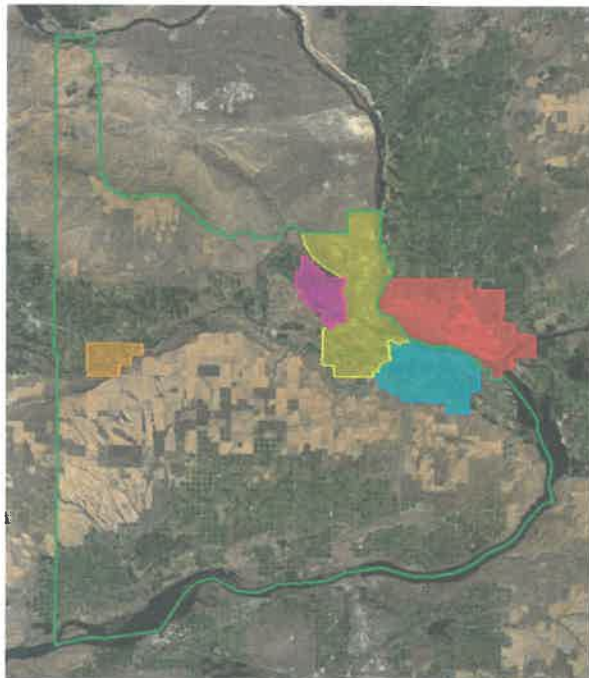
Subject: 2022 Orthophoto Update – Revised 2 Quote







To Anthony Von Moos,

Geophex Surveys would like to offer Benton County our professional orthophoto and photogrammetry services for the County’s 2022 Orthophoto Update project. These services will include 4-inch orthophotography for the urban areas of the City of Pasco, Prosser, Richland, West Richland and Kennewick, and 1-foot resolution orthophotography for the entire Benton County area.

**Project Areas**

The Benton Country project areas are defined by the following diagram.



Benton Project Areas		
	Kennewick (4-inch)	42.61 mi <sup>2</sup>
	Pasco (4-inch)	72.71 mi <sup>2</sup>
	Prosser (4-inch)	11.91 mi <sup>2</sup>
	Richland (4-inch)	73.60 mi <sup>2</sup>
	West Richland (4-inch)	16.35 mi <sup>2</sup>
<b>Total Urban Area:</b>		<b>217.18 mi<sup>2</sup></b>
	Rural Area (1-foot)	1,333 mi <sup>2</sup>

**Acquisition**

The Benton County imagery will be captured by a Vexcel UltraCam Eagle M3 large format digital aerial camera. The 4-inch photography will be flown with industry standard 60% forward and 30% side overlap and the 1-foot photography will be flown with 80% forward and 30% side overlap. The 1-foot resolution imagery is to be flown with higher forward overlap as autocorrelation methodology will be utilized to generate the DEM for the orthophotography.

The aerial photography will be flown in early spring (late February to mid-March) weather permitting and with a minimum sun angle of 28°.

**Ground Control**

The 2022 orthophoto update project will use existing ground control from previous projects wherever possible, with airborne GPS and IMU data being utilized as a secondary control source for the aerial photography. Any additional ground control required to meet the project accuracies will be provided by Benton County in consultation with Geophex Surveys.

## **DEM**

Geophex Surveys will utilize and update the existing DEM for the 4-inch project areas, using the same methodology and processes that we have done for the 2014, 2016, 2018 and 2020 Benton County projects. The 1-foot resolution imagery will be rectified using an autocorrelated DEM generated from the high forward overlap aerial photography. The autocorrelation methodology will provide a DEM that will be generated faster and at a cost savings as compared to a traditionally collected DEM, while still providing high accuracy data that will meet the project specifications for the 1-foot rectifications.

Please note that the auto-correlated 1-foot DEM is an internally generated software product used for the orthorectifications, and is unavailable for delivery and unusable for other applications.

## **Processing**

All aerial photography will undergo full aerial triangulation processing and will be rectified with current DEMs to generate high accuracy orthophotography. All imagery will be also be radiometrically balanced and seamlessly mosaiced to provide orthophotography that is even in tone and consistency. Prior to delivery, all data will undergo a thorough quality control procedure.

## **Accuracy**

The 2020 Benton County orthophoto update project will meet the required project accuracies of  $\pm 1\text{ft}$  RMSE for the 4-inch resolution and  $\pm 3\text{ft}$  RMSE for the 1-foot resolution.

## **Deliverables**

All project areas shall include:

- 4-band color (R,G,B,NiR) orthophoto imagery in 4-inch and 1-ft resolution as required
- Digital orthophoto tiles delivered in uncompressed, rectified GeoTIFF format
- Compressed tiles in ECW, JPG2000 and MrSID formats
- Updated DEM for the 4-inch orthophotography
- An ESRI shapefile containing all seamlines used for the orthophoto tiles
- Final digital data (orthophotography, 4-inch DEM ) shall be delivered on a USB 3 with USB 2 compatible external hard drive

## **Schedule**

- The flight schedule is to be:
  - Late February to early March and no later than mid-March
  - Minimum sun angle of 28°
  - Weather permitting
- Final deliverables will be completed approximately 16 weeks following confirmation of successful acquisition of the aerial imagery.

## **Ownership**

- Benton County and its partner cities will retain 100% ownership of the delivered data with no restriction on use.

## **Project Experience**

Geophex Surveys has extensive experience successfully providing orthophoto data to Benton County, with our 2014, 2016, 2018 and 2020 projects meeting all project and accuracy specifications. Providing geospatial data over multiple years allows for familiarity with specific project requirements resulting in a more efficient workflow, and accumulation of valuable data including ground control. Geophex Surveys would look forward to working with Benton County again for their 2022 orthophoto update program.

**Pricing**

<b>4-Inch Urban Orthophoto</b>	<b>Area (mi<sup>2</sup>)</b>	<b>% area</b>	<b>Total cost</b>
Pasco	72.71	33.5	\$ 18,412.00
Kennewick	42.61	19.6	\$ 10,790.00
Richland	73.60	33.9	\$ 18,638.00
W Richland	16.35	7.5	\$ 4,140.00
Prosser	11.91	5.5	\$ 3,016.00
<b>Total Benton Franklin Cities</b>	<b>217.18</b>	<b>100%</b>	<b>\$ 54,996.00</b>

<b>12-Inch County Orthophoto</b>	<b>Area (mi<sup>2</sup>)</b>	<b>% area</b>	<b>Total cost</b>
County Orthophoto	1333.00	100%	\$ 57,483.00
<b>Total cost</b>			<b>\$ 112,479.00</b>

- Applicable taxes not included.
- Invoicing will be monthly based on work complete
- This price is valid for 90 days

Sincerely,



**Andrew Dawson**

Email: [adawson@geophexsurveys.com](mailto:adawson@geophexsurveys.com)

Ph: (919) 578-8857 (ext. 101)

Fax: (919) 578-8849