

PERSONAL SERVICES CONTRACT

COUNTY of Nevada, California

This Personal Services Contract is made between the COUNTY OF NEVADA (herein "COUNTY"), and

Geophex, Ltd.

(herein "CONTRACTOR"), wherein COUNTY desires to retain a person or entity to provide the following services, materials and products generally described as follows:

(§1) **Professional photogrammetry services**

SUMMARY OF MATERIAL TERMS

(§2) **Maximum Contract Price:** \$45,000.00

(§3) **Contract Beginning Date:** 06/14/2016 **Contract Termination Date:** 06/30/2017

(§4) **Liquidated Damages:** _____

INSURANCE POLICIES

Designate all required policies:

		Req'd	Not Req'd
(§6)	Commercial General Liability (\$1,000,000)	<u>X</u>	_____
(§7)	Automobile Liability (\$ 300,000) Personal Auto	_____	<u>X</u>
	(\$1,000,000) Business Rated	_____	<u>X</u>
	(\$1,000,000) Commercial Policy	<u>X</u>	_____
(§8)	Worker's Compensation	<u>X</u>	_____
(§Error!	Reference source not found.) Errors and Omissions (\$1,000,000)	_____	<u>X</u>

LICENSES AND PREVAILING WAGES

(§14) Designate all required licenses:

NOTICE & IDENTIFICATION

(§26) **CONTRACTOR:**
Geophex, Ltd.
605 Mercury Street
Raleigh, NC 27603
Contact Person: Farida Raghina
(778) 239-1234
e-mail: fraghina@geophexsurveys.com

COUNTY of Nevada:
Community Development Agency
950 Maidu Avenue, Suite 170
Nevada City, CA 95959
Contact Person: Daniel Chatigny
(530) 470-2799
e-mail: daniel.chatigny@co.nevada.ca.us

CONTRACTOR is a: (check all that apply)

Corporation:	_____ Calif.,	_____ Other,	_____ LLC,	_____ Non-profit
Partnership:	_____ Calif.,	<u>X</u> Other,	_____ LLP,	<u>X</u> Limited
Person:	_____ Indiv.,	_____ Db,	_____ Ass'n	_____ Other

EDD: Independent CONTRACTOR Worksheet Required: _____ Yes X No

HIPAA: Schedule of Required Provisions (Exhibit D): _____ Yes X No

ATTACHMENTS

Designate all required attachments:

	Req'd	Not Req'd
Exhibit A: Schedule of Services (Provided by CONTRACTOR)	<u>X</u>	_____
Exhibit B: Schedule of Charges and Payments (Paid by COUNTY)	<u>X</u>	_____
Exhibit C: Schedule of Changes (Additions, Deletions & Amendments)	<u>X</u>	_____
Exhibit D: Schedule of HIPAA Provisions (Protected Health Information)	_____	<u>X</u>

Terms

Each term of this Contract below specifically incorporates the information set forth in the Summary at page one (1) above as to each respective section (§) therein, as the case may be.

Services

1. **Scope of Services:**

CONTRACTOR shall provide all of the services, materials and products (herein "Services") generally described in **Exhibit "A"**, according to a performance schedule, if applicable, as set forth in said exhibit (herein "Performance Schedule"). If requested, CONTRACTOR agrees to serve as an expert witness for COUNTY in any third party action or proceeding arising out of this Contract.

Payment

2. **Charges and Payments:**

The charges (herein "Charges") for furnishing the aforesaid Services under this Contract are set forth in **Exhibit "B"**, including, if applicable, hourly rates, unit pricing, and expense, mileage and cost limits. Said Charges shall be presented monthly by invoice, and shall be due within thirty (30) days of receipt unless payment is otherwise set forth in said **Exhibit "B"**, and shall remain in effect for the entire term of this Contract, and any extension hereof. In no event will the cost to COUNTY for Services to be provided under this Contract, including direct non-salary expenses, exceed the **Maximum Contract Price** set forth at §2, page one (1), above.

Time for Performance

3. **Contract Term:**

This Contract shall commence on the **Contract Beginning Date** set forth at §3, page one (1), above. All Services required to be provided by this Contract shall be completed and ready for acceptance no later than the **Contract Termination Date** set forth at §3, page one (1), above.

4. **Liquidated Damages:**

COUNTY and CONTRACTOR agree that damages to COUNTY due to delays in timely providing Services in accordance with the aforesaid Performance Schedule and Contract Termination Date are impractical and difficult to ascertain. Therefore, if §4 at page one (1) hereof shall indicate a daily amount as **Liquidated Damages**, COUNTY shall have the right to assess said daily sum, not as a penalty, but as and for damages to COUNTY due to delays in providing Services not in accordance with the said Performance Schedule, or later than the Contract Termination Date (herein "Delay"). Liquidated Damages shall be offset against amounts owing to CONTRACTOR, including retention sums.

To the extent that any Delay is a result of matters or circumstances wholly beyond the control of CONTRACTOR, COUNTY may excuse said Liquidated Damages; provided however, that COUNTY may condition such excuse upon CONTRACTOR having given prompt notice to COUNTY of such delay immediately by telephone and thereafter by written explanation within a reasonable time. The time for CONTRACTOR's performance shall be extended by the period of delay, or such other period as COUNTY may elect.

5. **Time of the Essence:**

Time is of the essence with respect to CONTRACTOR's performance under this Contract. Delay in meeting the time commitments contemplated herein will result in the assessment of liquidated damages, if indicated at §4 at page one (1), hereof. If Liquidated Damages are not so indicated, damages shall be as otherwise provided by law.

Insurance

6. **Commercial General Liability Insurance:** (COUNTY Resolution No. 90674)

If §6 at page one (1) hereof shall indicate a **Commercial General Liability** insurance policy is required, CONTRACTOR shall promptly provide proof of such insurance evidenced by a certificate of insurance with properly executed endorsements attached, which insurance shall include the following:

- (i) Broad form coverage for liability for death or bodily injury to a person or persons, and for property damage, combined single limit coverage, in the minimum amount indicated at said §6;



- (ii) An endorsement naming COUNTY as an additional insured under said policy, with respect to claims or suits arising from the Services provided or the relationships created under this Contract;
- (iii) A provision that said insurance shall be primary and other insurance maintained by the COUNTY of Nevada shall be excess only and not contributing with CONTRACTOR's insurance;
- (iv) A provision that said insurance shall provide for thirty (30) days written notice to COUNTY of any termination or change in coverage protection, or reduction in coverage limits (except ten (10) days notice for non-payment of premium).

7. Automobile Liability Insurance: (COUNTY Resolution No. 90676)

If §7 at page one (1) hereof shall require either a Business Rated or a Commercial Automobile Liability insurance policy, for each vehicle used including non-owned and hired automobiles, CONTRACTOR shall promptly provide proof of such insurance evidenced by a certificate of insurance with properly executed endorsements attached, which insurance shall include the following provisions:

- (i) Liability protection for death or bodily injury to a person or persons, property damage, and uninsured and underinsured coverage, combined single limit coverage, in the minimum amount indicated at said §7;
- (ii) An endorsement naming COUNTY as an additional insured under said policy, with respect to claims or suits arising from the Services provided or the relationships created under this Contract;
- (iii) A provision that said insurance shall be primary and other insurance maintained by the COUNTY of Nevada shall be excess only and not contributing with CONTRACTOR's insurance;
- (iv) A provision that said insurance shall provide for thirty (30) days written notice to COUNTY of any termination or change in coverage protection, or reduction in coverage limits (except ten (10) days notice for non-payment of premium).

If §7 at page one (1) hereof shall require a Personal Auto policy, for each vehicle used including non-owned and hired automobiles, CONTRACTOR shall promptly provide proof of such insurance for a minimum of three hundred thousand dollars, (\$300,000), in combined single limits, and naming the COUNTY as additionally insured.

8. Worker's Compensation: (COUNTY Resolution No. 90674)

If §8 at page one (1) hereof shall indicate a **Worker's Compensation** insurance policy is required, CONTRACTOR shall maintain said policy as required by law, and shall promptly provide proof of such insurance evidenced by a certificate of insurance, or other documentation acceptable to COUNTY.

Before commencing to utilize employees in providing Services under this Contract, CONTRACTOR warrants that it will comply with the provisions of the California Labor Code, requiring CONTRACTOR to be insured for worker's compensation liability or to undertake a program of self-insurance therefor.

9. Errors and Omissions:

If §9 at page one (1) hereof shall indicate **Errors and Omissions** insurance is required, Contractor shall maintain either a professional liability or errors & omissions policy in the minimum amount indicated, and shall promptly provide proof of such insurance evidenced by a certificate of insurance, or other documentation acceptable to County.

10. Miscellaneous Insurance Provisions: (COUNTY Resolution No. 90675)

All policies of insurance required by this Contract shall remain in full force and effect throughout the life of this Contract and shall be payable on a "per occurrence" basis unless COUNTY specifically consents to "claims made" coverage. If the COUNTY does consent to "claims made" coverage and if CONTRACTOR changes insurance carriers during the term of this Contract or any extensions hereof, then CONTRACTOR shall carry prior acts coverage.



Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by COUNTY, its officers, agents and/or employees, shall be excess only and not contributing with insurance required or provided under this agreement.

At all times, CONTRACTOR shall keep and maintain in full force and effect throughout the duration of this Contract, policies of insurance required by this Contract which policies shall be issued by companies with a Best's Rating of B+ or higher (B+, B++, A-, A, A+ or A++), or a Best's Financial Performance Rating (FPR) of 6 or higher (6, 7, 8 or 9) according to the current Best's Key Rating Guide, or shall be issued by companies approved by the COUNTY Risk Manager. In the event the Best's Rating or Best's FPR shall fall below the rating required by this paragraph, CONTRACTOR shall be required to forthwith secure alternate policies which comply with the rating required by this paragraph, or be in material breach of this Contract.

Failure to provide and maintain the insurance policies (including Best's ratings), endorsements, or certificates of insurance required by this Contract shall constitute a material breach of this agreement (herein "Material Breach"); and, in addition to any other remedy available at law or otherwise, shall serve as a basis upon which COUNTY may elect to suspend payments hereunder, or terminate this Contract, or both. (See §13, ¶2, below, as these provisions additionally apply to subCONTRACTORS.)

11. Indemnity:

Nothing herein shall be construed as a limitation of CONTRACTOR's liability, and CONTRACTOR shall indemnify, defend and hold harmless the COUNTY and its officers, officials, employees, agents and volunteers from any and all liabilities, claims, demands, damages, losses and expenses (including, without limitation, defense costs and attorney fees of litigation) which result from the negligent act, willful misconduct, or error or omission of CONTRACTOR, except such loss or damage which was caused by the sole negligence or willful misconduct of COUNTY or its officers, officials, employees, agents and volunteers.

Personal Services

12. CONTRACTOR as Independent:

In providing services herein, CONTRACTOR, and the agents and employees thereof, shall act in an independent capacity and as an independent CONTRACTOR and not as agents or employees of COUNTY.

13. Assignment and Subcontracting:

Except as specifically provided herein, the rights, responsibilities, duties and Services to be performed under this Contract are personal to the CONTRACTOR and may not be transferred, subcontracted, or assigned without the prior written consent of COUNTY. CONTRACTOR shall not substitute nor replace any personnel for those specifically named herein or in its proposal without the prior written consent of COUNTY.

CONTRACTOR shall cause and require each transferee, subCONTRACTOR and assignee to comply with the insurance provisions set forth herein at §§6, 7, 8, 9 and 10, to the extent such insurance provisions are required of CONTRACTOR under this Contract. Failure of CONTRACTOR to so cause and require such compliance by each transferee, subCONTRACTOR and assignee shall constitute a Material Breach of this agreement, and, in addition to any other remedy available at law or otherwise, shall serve as a basis upon which COUNTY may elect to suspend payments hereunder, or terminate this Contract, or both.

14. Licensing and Permits:

CONTRACTOR warrants (i) CONTRACTOR is qualified and competent to provide all Services under this contract; (ii) CONTRACTOR and all employees of CONTRACTOR hold all necessary and appropriate licenses therefor, including those licenses set forth at §14, page one (1) hereof; and, (iii) CONTRACTOR shall obtain, and remain in compliance with, all permits necessary and appropriate to provide said Services. CONTRACTOR shall cause said licenses and permits to be maintained throughout the life of this Contract. Failure to do so shall constitute a Material Breach of this agreement, and, in addition to any other remedy available at law or otherwise, shall serve as a basis upon which COUNTY may elect to suspend payments hereunder, or terminate this Contract, or both.



Public Contracts

15. Prevailing Wage and Apprentices:

To the extent made applicable by law, performance of this Contract shall be in conformity with the provisions of California Labor Code, Division 2, Part 7, Chapter 1, commencing with Section 1720 relating to prevailing wages which must be paid to workers employed on a public work as defined in Labor Code §§1720, et seq.; and shall be in conformity with Title 8 of the California Code of Regulations §§200 et seq., relating to apprenticeship. Where applicable:

(i) CONTRACTOR shall comply with the provisions thereof at the commencement of Services to be provided herein, and thereafter during the term of this Contract. A breach of the requirements of this section shall be deemed a material breach of this contract. Applicable prevailing wage determinations are available on the California Department of Industrial Relations website at <http://www.dir.ca.gov/OPRL/PWD>.

(ii) CONTRACTOR and all subCONTRACTORS must comply with the requirements of Labor Code Section 1771.1(a) pertaining to registration of CONTRACTORS pursuant to Section 1725.5. Registration and all related requirements of those Sections must be maintained throughout the performance of the Contract.

(iii) Contracts to which these prevailing wage requirements apply are subject to compliance monitoring and enforcement by the Department of Industrial Relations. Each CONTRACTOR and subCONTRACTOR must furnish certified payroll records to the Labor Commissioner at least monthly.

(iv) The COUNTY is required to provide notice to the Department of Industrial Relations of any public work contract subject to prevailing wages within five (5) days of award.

16. Accessibility (COUNTY Resolution No. 00190):

It is the policy of the COUNTY of Nevada that all COUNTY services, programs, meetings, activities and facilities shall be accessible to all persons, and shall be in compliance with the provisions of the Americans With Disabilities Act and Title 24, California Code of Regulations. To the extent this Contract shall call for CONTRACTOR to provide COUNTY contracted services directly to the public, CONTRACTOR shall certify that said direct Services are and shall be accessible to all persons.

17. Nondiscriminatory Employment:

In providing Services hereunder, CONTRACTOR shall not discriminate against any employee or applicant for employment because of race, color, religion, age, sex, national origin, political affiliation, ancestry, marital status or disability. This policy does not require the employment of unqualified persons.

18. Prior Nevada COUNTY Employment (COUNTY Resolution No. 03-353):

Effective July 22, 2003, it is the policy of the COUNTY of Nevada that former members of the Board of Supervisors, a former CEO, or a former Purchasing Agent, for a period of twelve (12) months following the last day of employment, shall not enter into any relationship wherein that former employee or former Board member receives direct remuneration from a legal entity that, during the last twelve (12) months of said employment or Board member's service, entered into a contract with, or received a grant from the COUNTY of Nevada. Provided however, that this prohibition shall not apply to any employee that did not personally approve a contract with or grant to said legal entity during the last twelve (12) months of said employment, and shall not apply when the Board of Supervisors did not approve a contract with or grant to said legal entity during the last twelve (12) months of said Board member's service.

A violation of this policy shall subject CONTRACTOR to all of the remedies enumerated in said resolution and as otherwise provided in law, which remedies shall include but not be limited to injunctive relief, cancellation and voiding of this contract by COUNTY, a return of grant money, a cause of action for breach of contract, and entitlement to costs and reasonable attorney fees in any action based upon a breach of contract under this provision.

19. Cost Disclosure:

In accordance with Government Code Section 7550, should a written report be prepared under or required by the provisions of this Contract, CONTRACTOR agrees to state in a separate section of said



report the numbers and dollar amounts of all contracts and subcontracts relating to the preparation of said report

Default and Termination

20. Termination:

A Material Breach of this Contract pursuant to the terms hereof or otherwise, in addition to any other remedy available at law or otherwise, shall serve as a basis upon which COUNTY may elect to immediately suspend payments hereunder, or terminate this contract, or both, **without notice**.

If CONTRACTOR fails to timely provide in any manner the services materials and products required under this Contract, or otherwise fails to promptly comply with the terms of this Contract, or violates any ordinance, regulation or other law which applies to its performance herein, COUNTY may terminate this Contract by giving **five (5) days written notice** to CONTRACTOR.

Either party may terminate this Contract for any reason, or without cause, by giving **thirty (30) calendar days written notice** to the other, which notice shall be sent by registered mail in conformity with the notice provisions, below. In the event of termination not the fault of the CONTRACTOR, the CONTRACTOR shall be paid for services performed to the date of termination in accordance with the terms of this Contract. CONTRACTOR shall be excused for failure to perform services herein if such performance is prevented by acts of God, strikes, labor disputes or other forces over which the CONTRACTOR has no control.

COUNTY, upon giving **sixty (60) calendar days written notice** to CONTRACTOR, shall have the right to terminate its obligations under this Contract at the end of any fiscal year if the COUNTY or the State of California, as the case may be, does not appropriate funds sufficient to discharge COUNTY's obligations coming due under this contract.

Miscellaneous

21. Books of Record and Audit Provision:

CONTRACTOR shall maintain complete records relating to this Contract for a period of five (5) years from the completion of Services hereunder. Said records shall include but not be limited to bids and all supporting documents, original entry books, canceled checks, receipts, invoices, payroll records including subsistence, travel and field expenses, together with a general ledger itemizing all debits and credits

CONTRACTOR shall permit COUNTY to audit said records as well as such related records of any business entity controlled by CONTRACTOR. Said audit may be conducted on CONTRACTOR's premises or at a location designated by COUNTY, upon fifteen (15) days notice. CONTRACTOR shall promptly refund any moneys erroneously charged and shall be liable for the costs of audit if the audit establishes an over-charged of five percent (5%) or more of the Maximum Contract Price.

22. Intellectual Property:

All original photographs, diagrams, plans, documents, information, reports, computer code and all recordable media together with all copyright interests thereto (herein "Intellectual Property"), which concern or relate to this Contract and which have been prepared by, for or submitted to CONTRACTOR, shall be the property of COUNTY, and upon fifteen (15) days demand therefor, shall be promptly delivered to COUNTY without exception. Provided however, for personal purposes only and not for commercial, economic or any other purpose, CONTRACTOR may retain a copy of CONTRACTOR's work product hereunder.

23. Entire Agreement:

This Contract represents the entire agreement of the parties, and no representations have been made or relied upon except as set forth herein. This Contract may be amended or modified only by written, fully executed agreement of the parties.

24. Jurisdiction and Venue:

This Contract shall be construed in accordance with the laws of the State of California and the parties hereto agree that venue shall be in Nevada COUNTY, California.



25. Compliance with Applicable Laws:

The CONTRACTOR shall comply with any and all federal, state and local laws, codes, ordinances, rules and regulations which relate to, concern or affect the Services to be provided by this Contract.

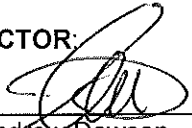
26. Notices:

This Contract shall be managed and administered on COUNTY's behalf by the department and the person set forth at §26, page one (1) of this Contract, and all invoices shall be submitted to and approved by this Department. In addition to personal service, all notices may be given to COUNTY and to CONTRACTOR by first class mail addressed as set forth at said §26 Said notices shall be deemed received the fifth (5th) day following the date of mailing or the earlier date of personal service, as the case may be.

27. Authority:

All individuals executing this Contract on behalf of CONTRACTOR represent and warrant that they are authorized to execute and deliver this Contract on behalf of CONTRACTOR.

IN WITNESS WHEREOF, the parties have executed this Contract effective on the Beginning Date, above.

CONTRACTOR: 

Name: Andrew Dawson
Title: President

Dated: May 25, 2016

COUNTY OF NEVADA:

Honorable Dan Miller
Chair, Board of Supervisors

Dated: _____

Attest: _____
Julie Patterson Hunter
Clerk of the Board

EXHIBIT "A"

SCHEDULE OF SERVICES

(Provided By CONTRACTOR)

The scope of work involves capturing 6 inch aerial imagery, from a large format mapping camera, and process that data into orthophotography for input into the COUNTY's GIS. The specifications for the project are as follows:

1. General Scope of Work and Deliverable
 - a. Six-inch pixel resolution ortho imagery coverage at 1" = 200' map scale (ASPRS Class II).
 - i. The absolute horizontal accuracy of the orthophotography will be 4 ft at 68% confidence interval.
 - b. Imagery to be delivered as 24 bit three band color GeoTIFF and TFW files corresponding to each ortho tile in the tile grid generated by the contractor. A 24 bit color SID mosaic file and world header of the area will be delivered in California State Plane NAD '83.
 - c. Federal Geographic Data Committee (FGDC) compliant metadata.
2. Imagery Collection
 - a. After the flight, Contractor shall deliver a small subset of the raw imagery and supply those tiles for review and approval of County.
 - b. Contractor shall submit aerial triangulation report and processes and preliminary report of the least squares adjustment for review by County before orthorectifying imagery.
 - c. Imagery should not be obtained when the ground is obscured by haze, snow, dust, floodwaters, or environmental factors that may misrepresent ground features.
 - d. If any major fires are occurring during the flight mission, the aerial mission should be discontinued.
 - e. Clouds and/or shadows of clouds shall not appear in the image.
 - f. The mission should be flown during desirable weather conditions and at a minimum of 30 degree sun angle.
 - g. Contractor shall supply exposure coordinates of photography after the flight in shapefile format with Time/Date stamp, altitude, and exposure name within 2 business weeks of the flight.
3. Camera Specifications
 - a. Aerial imagery shall be collected using direct digital collection. The camera system must be supported by a forward motion compensation device.
 - b. A manufacturer's calibration report, no more than three (3) years old, shall be submitted to the County for each aerial camera to be used to assure that the camera, lens, and photography format are all adequate and within acceptable standards.
 - c. Contractor shall supply specifications for base station used for the Airborne GPS.
4. Flight Planning and Requirements
 - a. The Contractor is required to gain all necessary aircraft clearances for flying over the Project Area.
 - b. Contractor will take all reasonable measures to ensure that imagery is acquired over consecutive days unless weather conditions preclude.



- c. The County shall be supplied with one original set of flight maps prior to the flight in a shapefile format. The flight maps will show the lines to be flown, the flight altitude of each line above mean sea level, datum and/or flight breaks, and the tile grid boundary covering the project area.
- d. The flight shall be executed at the altitude specified in the flight maps. It is the responsibility of the Contractor to review the flight maps and specified flying altitudes provided to the County, and to ensure that the resulting image scale shall meet the specified project scale. If any change to flight parameters are made such that the specified project scale cannot be met, the Contractor must notify the County immediately.
- e. Flight lines shall be executed in a consistent and logical pattern. Flight lines and imagery acquisition will be executed with sufficient endlap and sidelap to ensure no gaps in stereo coverage, particularly in areas of high relief.
- f. Apparent crab of images (yaw, pitch, roll) is not to exceed 5 degrees.

5. Tonal and Color Balance

- a. Digital imagery of consistent tone and contrast will be produced throughout the Project Area, with the orthophoto data set being a radiometrically seamless mosaic.
- b. The radiometric characteristics shall be verified by the County by processing small prototype pilot areas of a minimum of two to four adjacent tiles in GeoTIF format in an area chosen by the County. Before orthorectification begins these prototype areas shall be submitted to the County for review. Once the optimal characteristics have been approved by the County, all other tiles shall have their brightness and contrast values adjusted to that of the prototype signatures. To clarify, the orthophotography pilots will be the color balancing vehicle, not raw images.
- c. Sun flares on water bodies shall be removed prior to delivery by inserting non-flared pixels of similar characteristics to the greatest extent commercially practicable.

6. Data Quality Requirements

- a. Gaps within the mosaic will not be acceptable. In those areas where imagery over water cannot be orthorectified, pixels of comparable tonal quality will be inserted to complete the image for that area.
- b. There shall be no overlap or underlap of pixels within or between match lines. Adjacent imagery along match lines shall not be relatively displaced by more than three (3) GSD units.
- c. No data will be deemed acceptable that is obscured by clouds, cloud shadows, haze, fog or dust.
- d. The imagery shall be free of out-of-focus areas, posterizing, banding, smears, streaks, scratches and any other artifacts unless otherwise accepted by the County.
- e. All tiles will be full tiles; boundary tiles will be cropped to project limits plus 250'. The non-image area of the tile will be transparent.

7. Aerial Triangulation

- a. The photography shall be mathematically and physically tied and associated to the coordinate system. The entire photo set shall be evaluated and point anomalies shall be reported to the County. This process also will serve as a quality control check for the survey data.
- b. The Contractor will generate a preliminary AT report for review by the County before proceeding with the final AT adjustment.
- c. A final, detailed Aerial Triangulation report will be delivered to the County for approval. The report will include a brief narrative showing all mis-closures at ground control points, computed coordinates of all model and check points and the weighting factors applied to all points used in the final solution. In addition, significant misfits encountered at control points and steps taken to analyze such misfits and to rectify the discrepancies will be fully



described. Final aerial triangulation x,y image measurement residuals shall be no greater than 5 to 10 microns or sub pixel accuracy and the root mean square error of the ground control coordinates shall meet the criteria of 1/10,000 of the flying height above mean terrain.

8. Orthorectification Requirements

- a. Orthorectification of the imagery shall use a DEM (digital elevation model) of sufficient quality and accuracy to produce orthophotography to meet the accuracy specifications.
- b. To minimize vertical distortion of above-ground features, orthorectification will be restricted to the 'best nadir area' of captured images, using the centers of each photo rather than every other photo.
- c. Bridges and overpasses will be imaged by ensuring that the captured non-distorted feature from the nadir-most perspective is incorporated into the final image mosaic.
- d. Orthorectified imagery shall have a pixel value of 6" (.5') in both the X and Y dimensions. All tile index features must have the same dimensions (unless clipped by AOI boundary). The corners of full image tiles within the tile index will snap to integer values. Tile size will be 6000 feet by 4000 feet. Tile naming will reflect the truncated coordinates of the lower left corner of each tile.

9. Data Ownership

- a. All finished products and final deliverables will be delivered to the County upon completion of the work. The County retains full ownership of the final products. The County has full rights to reproduce, reformat, or otherwise disseminate in any fashion or for any purpose, the data or final deliverables as it sees fit.

10. Project Schedule

Phase	June	July	August	September	October
Project Start-up	■				
Photo Acquisition	■ ■ ■ ■				
Aerial Triangulation		■ ■ ■ ■ ■ ■ ■ ■			
Orthorectification			■ ■ ■ ■ ■ ■ ■ ■		
Quality Assurance/Quality Control					■ ■ ■ ■ ■ ■ ■ ■

Summary of Deliverables

Aerial Photography Deliverables

- Copy of camera calibration report
- Specifications for base station used for the Airborne GPS
- Flight Plan with ground control in shapefile format prior to flight for review
- Exposure coordinates of photography after the flight in shapefile format with Time/Date stamp, altitude & exposure name.
- Collection progress reports
- Sample imagery for review to be determined by the county

Aerial Triangulation Deliverables

- Final detailed AT report and processes



- Preliminary report of the least squares adjustment

Pilot Area Deliverables

- A minimum of four adjacent tiles in GeoTIF format

Orthophotography Deliverables

- Three Band color GeoTIF file and world header for each tile
- Three Band color Mr SID mosaic file and world header of project area.


A handwritten signature in black ink, consisting of a stylized, cursive letter 'A' followed by a horizontal line.

EXHIBIT "B"

SCHEDULE OF CHARGES AND PAYMENTS

(Paid by COUNTY)

Payments will be made by COUNTY to CONTRACTOR upon receipt of an approved invoice indicating satisfactory completion of milestones noted below and in **Exhibit "A"**, above.

Milestone Payments

Imagery Orthophotography Services	Area	Price
Aerial Photo Acquisition	Approx. 439 sq. miles	\$28,708.00
6 inch Orthophotography	Approx. 439 sq. miles	\$16,292.00
	Total	\$45,000.00

Notes:

- *Applicable taxes not included*
- *Electronic Deliverables will be sent via FTP*



EXHIBIT "C"

SCHEDULE OF CHANGES

(Amendments and Additions to Contract)

Paragraphs 6-11 Insurance.

For this project, Geophex, Ltd. will be subcontracting the aerial work to Valley Air Photos.

Valley Air Photos shall promptly provide proof of such insurance evidenced by a certificate of insurance with properly executed endorsements attached, which insurance shall include the following:

- (i) CSL aircraft liability for Bodily Injury and Property Damage for liability for death or bodily injury to a person or persons, and for property damage, combined single limit coverage, in the minimum amount of \$1,000,000;
- (ii) An endorsement naming County as an additional insured under said policy, with respect to claims or suits arising from the Services provided or the relationships created under this Contract;
- (iii) A provision that said insurance shall be primary and other insurance maintained by the County of Nevada shall be excess only and not contributing with Valley Air Photos's insurance;
- (iv) A provision that said insurance shall provide for thirty (30) days written notice to County of any termination or change in coverage protection, or reduction in coverage limits (except ten (10) days notice for non-payment of premium).

Approved by COUNTY Counsel

