COUNTY OF KENDALL, ILLINOIS
ADMIN HR COMMITTEE
County Office Building
County Board Room 210
Monday, December 2, 2019 at 5:30p.m.

MEETING AGENDA

1. **Call to Order**
2. **Roll Call:** Elizabeth Flowers (Chair), Scott Gengler, Judy Gilmour, Matthew Prochaska, Robyn Vickers
3. **Approval of Agenda**
4. **Approval of Minutes from November 20, 2019**
5. **Department Head and Elected Official Reports**
6. **Public Comment**
7. **Committee Business**
   - Discussion of Combining the Tuberculosis and Health Board
   - Discussion and Approval/Rejection of Ariel Invitations to Bid Documents
8. **Executive Session**
9. **Items for Committee of the Whole**
10. **Action Items for County Board**
11. **Adjournment**

If special accommodations or arrangements are needed to attend this County meeting, please contact the Administration Office at 630-553-4171, a minimum of 24-hours prior to the meeting time

COUNTY OF KENDALL, ILLINOIS
ADMIN HR MEETING
County Office Building
111 W. Fox Street, Room 210; Yorkville
Wednesday, November 20, 2019

CALL TO ORDER - Committee Chair Elizabeth Flowers called the meeting to order at 5:30p.m.

ROLL CALL

Attendee	Status	Arrived	Left Meeting
Elizabeth Flowers	Present		
Scott Gengler		5:36pm	
Judy Gilmour	ABSENT		
Matthew Prochaska	Here		
Robyn Vickers	Here		

Others in Attendance: Meagan Briganti, Scott Koeppel, Tracy Page.

APPROVAL OF AGENDA – Motion made by Member Vickers second by Member Prochaska to approve the agenda. **With three members voting aye, the agenda was approved by a 3-0 vote**.

APPROVAL OF MINUTES – Motion made by Member Vickers, second by Member Prochaska to approve the November 4, 2019 minutes. **With three members voting aye, the minutes were approved by a 3-0 vote.**

DEPARTMENT HEAD AND ELECTED OFFICIAL REPORTS

- *Administration* – Mr. Koeppel explained that he was looking for direction from the Committee regarding the new change in Liability Insurance, with the Forest Preserve moving would Administration still support them? Mr. Koeppel noted that they don't have many claims, however if they do not retain a broker and need more support in terms of COIs there may need to be a true split. Member Prochaska noted that he would like to see Administration continue to support the Forest Preserve especially since they have retained the same Insurance company. Mr. Koeppel will do more research and discuss with Member Gilmour and Director Guritz to determine the best course of action.

PUBLIC COMMENT - None

COMMITTEE BUSINESS

- *Discussion of Emergency Management Coordinator Job Description* – Mr. Koeppel explained that due to retirement and the fact that this position has always been part time the need has arisen for a full time position. From discussion with the Chairman and the

Sheriff this position is needed because of the growth in the County. There can be changes made to the grant increasing the amount we submit. The position will report to the County Administrator for budget and day to day and to the Chairman in emergency situations. Ms. Page indicated that this position is needed to improve EMA operations in the County. Member Prochaska inquired about the position being a Director versus Coordinator and the position reporting to the Administrator in other Counties. Mr. Koeppel responded that typically a Director title is used if the position supervises other positions. Member Flowers asked about the salary. Mr. Koeppel indicated he did a salary survey and set the salary at $70,000. **Motion made by Member Vickers, second by Member Prochaska to forward the EMA Coordinator job description to the State's Attorney Office and to the Board for approval. With all members present voting aye the motion carried.**

Member Gengler arrived at 5:36pm

- *Discussion and Approval of MOU between Waubonsee Community College and Kendall County for Strategic Planning* – Mr. Koeppel explained that a Strategic Plan for the Board is an excellent idea to give the public an idea of policy priorities. Also it gives staff direction to implement the Board's goals. He further explained that usually the initial plan is done by an objective third party. This attached MOU is with Waubonsee and the price of $4200 is well below what many consulting firms charge. After the initial plan is complete staff can update it after each election cycle as new Board Members join the Board. Mr. Koeppel provided a timeline if the process is approved. The initial meeting with the Board is February with wrap up and completion by May. Member Vickers noted that she looked for a Strategic Plan and could not find one so this is a good idea to get a baseline. **Motion made by Member Vickers, second by Member Gengler to forward the Strategic Plan MOU to the County Board for approval. With 4 members present voting aye the motion carried unanimously.**

- *Discussion of Cerity Partners Services for Financial Wellness and Retirement Solutions* – Cerity Financial Wellness partners come highly recommended by Kane County. They have offered to look at the current program with Nationwide and see if there are any savings to be had. If the County were to switch to them they will also provide one on one Financial advising to employees. Horton our broker also recommends Cerity. Mr. Koeppel recommended they look at our current program and if they believe there is saving to be had in a change the County can do an RFP process. **The consensus of the Committee was to work with the Treasurer's Office to get an analysis done and report back to the Committee.**

- *Discussion and Approval of Update IGA between Kendall County and Kencom for Technology Support Services* – Mr. Koeppel explained that this item came before the Committee in the Spring. However, because the scope of services had changed with IT servicing the phones and the fact that the Treasury Agreement needed to be separated and changed because Kencom is it's own entity there has been some delay. This agreement provides an increase in payments to the County from Kencom with an annual opt out window. **Motion made by Member Vickers, second by Member Prochaska. With all 4 members present voting aye the motion carried 4-0.**

- *Discussion and Approval of IGA Between Kendall County and Kencom for GIS Services* – Mr. Koeppel explained that in an effort to cost share and assist other government entities Kencom is requesting the County provided GIS Services to them at a fee of $60 an hour. Member Gengler asked if the $60 fee was sufficient and how much additional work was anticipated. Ms. Briganti indicated that much of the work the Department is already doing so it would only be a few additional hours a month. **Motion made by Member Vickers, second by Member Prochaska to send the agreement to the State's Attorney Office for review, then on to the Board for approval. With all members present voting aye the motion carried unanimously.**

- *Discussion and Approval of Updated GIS Website Disclaimer* – Ms. Briganti presented a revised GIS website disclaimer. The previous document was a few pages long. The revised disclaimer is what Kane County GIS uses. **Motion made by Member Prochaska, second by Member Gengler to change the GIS website disclaimer to staff's recommendation. With all members present voting aye, the motion carried.**

- *Discussion of Aerial Subscription Invitation to Bid* – Ms. Briganti explained that after attending a Conference she discovered a new aerial subscription product that would provide better images more often to the County. The County would also be able to keep the images, which is not the case with the current system. The subscription is a bit more expensive but Ms. Briganti outlined several benefits. Staff is recommending going out to bid for both traditional aerial and the subscription. A timeline of the process was reviewed. The plan is to do a presentation at the COW to show Board members how it works. **Member Vickers made a motion, second by Member Prochaska to go out to bid for Aerial Subscription and bring the results back along with traditional Aerial at the next Committee meeting. With all 4 members present voting aye the motion carried 4-0.**

- *Discussion and Approval of Kendall County Drug and Alcohol Policy* – Ms. Johnson went over the State's Attorney Office review of the proposed Kendall County Drug and Alcohol Policy. The main change in the policy is pre-employment testing only safety sensitive positions. **Member Prochaska made a motion, second by Member Gengler to accept the changes recommend by the State's Attorney Office and forward the Policy to the Board for approval. With all 4 members present voting aye the motion carried 4-0.**

EXECUTIVE SESSION - None

ITEMS FOR COMMITTEE OF THE WHOLE - None

ACTION ITEMS FOR COUNTY BOARD

- *Emergency Management Coordinator Job Description*
- *Approval of MOU between Waubonsee Community College and Kendall County for Strategic Planning*

- *Approval of Update IGA between Kendall County and Kencom for Technology Support Services*
- *Approval of IGA Between Kendall County and Kencom for GIS Services*
- *Approval of Kendall County Drug and Alcohol Policy*

ADJOURNMENT – Member Gengler made a motion to adjourn the meeting, second by Member Prochaska. **With four members voting aye, the meeting adjourned at 6:45p.m**.

Respectfully Submitted,

Mera Johnson
Risk Management and Compliance Coordinator

Board of Health

(55 ILCS 5/5-23002) (from Ch. 34, par. 5-23002)

Sec. 5-23002. Abolishment of board of directors. The county board of each county which has appointed a board pursuant to this Division may, by resolution abolish such board provided such resolution also provides that:

(a) in counties which have established a county or multiple-county health department in accordance with Division 5-25 or its predecessor and have an existing Board of Health:

(1) The membership of the Board of Health in single counties be increased to 11 in counties where present membership is 8 and to 15 in counties where present membership is 12, a majority of which shall be members of the general public,

(2) The employees, records, assets and liabilities of the board be transferred and assumed by the Board of Health, and

(3) an additional tax be imposed by the county board at a rate, which shall not be increased at any time, which is equal to the greater of (A) the average tax rate imposed in the county pursuant to this Division over the most recent 5 year period, or (B) the rate that would have been necessary to raise the average amount that has been spent annually for the most recent 5 year period regardless of whether a tax was levied under this Division during such 5 year period; or

(b) in counties which have not established a county or multiple-county health department in accordance with Division 5-25 or its predecessor and do not have an existing Board of Health:

(1) a county or multiple-county health department be established and a Board of Health be appointed pursuant to Division 5-25,

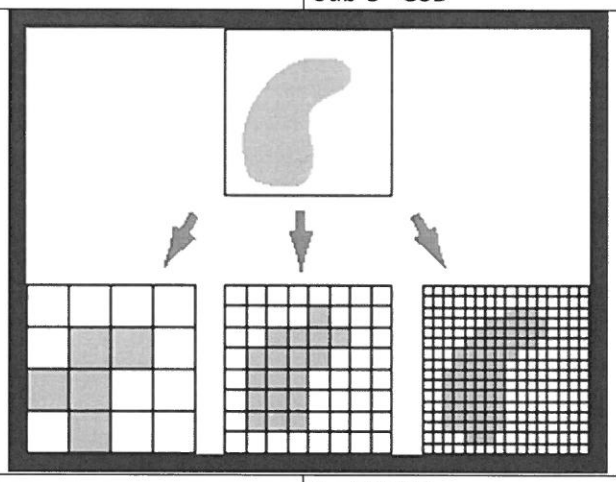
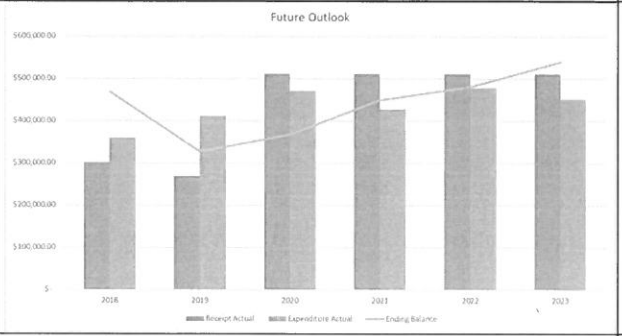
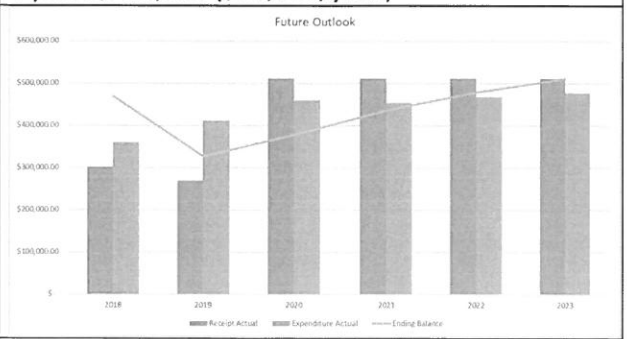
(2) the employees, records, assets and liabilities of the board be transferred and assumed by the newly created Board of Health, and

(3) A tax be imposed by the county board up to the maximum rate which had been authorized to be imposed by a referendum approved under this Division.

(Source: P.A. 86-962; 86-1475.)

Invitations for Bid

Comparison

ITB	2020 Aerial Imagery ITB	Aerial Subscription ITB
Vendor	Surdex	NearMap
Experience	Yes – collected our 2018 aerials	Yes – ESRI "Best New Content Provider" 2017
Met bid requirements	Yes	Yes
On-Premise Copy	Yes	Yes (full county in spring on even year)
Resolution	6" GSD	Sub-3" GSD
		
Estimated Delivery	June 2020 2-3 months after flight	April 2020 2-3 weeks after flight
Pricing	2 year: $33,000 ($16,500/year)	2 year: $55,000 ($27,500/year) 4 year: $100,000 ($25,000/year)
Budget **2 year: $36,000 ($18,000/year)**		
Quantity of aerials over 2 year period	One full county in spring on even year Total: 1 flight	One full county in spring on even year Five urbanized county in spring/summer/fall Total: 6 flights (3 flights per year over urbanized county, one of the 3 flights will include oblique capture, spring flight on even years will be full county)

Staff recommends going with NearMap for a 4 year contract.

Bid

SURDEX CORPORATION

Kendall County, Illinois

2020 Aerial Imagery

Submission Deadline: December 2, 2019 – 08:00 a.m. CDT

Submitted to

GIS Coordinator
Kendall County GIS Department
111 W. Fox Street, Room 308
Yorkville, Illinois 60560

Submitted by

Tim Donze, VP Business Development
Surdex Corporation
520 Spirit of St. Louis Blvd.
Chesterfield, MO 63005
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E-mail: TimD@surdex.com

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COVER LETTER

December 2, 2019

Kendall County GIS Department
111 W. Fox Street, Room 308
Yorkville, Illinois 60560

Regarding: Invitation to Bid (ITB) – 2020 Aerial Imagery

Dear Kendall County GIS Department Staff,

Surdex is pleased to provide this fully compliant response to the County GIS Department's ITB. We believe there are compelling reasons why Surdex should be selected for this project:

- Surdex successfully collected digital aerial imagery and produced highly accurate orthoimagery for Kendall County in 2018. We recommend using the same flight plans so that the 2020 imagery can integrate seamlessly into the GIS Department's existing database with all ground features being collected from the same perspective. Our repeat clients give very positive feedback about the benefit of this approach.
- Surdex brings extensive experience in Illinois and our neighboring home state of Missouri:
  - Surdex is prequalified with the Illinois DOT under Special Services - Aerial Mapping, and we have completed over 15 task orders for them including 0.14' to 1.1' Ground Sample Distance (GSD) imagery. In 2015-2017 we also completed a 12" GSD statewide imagery project for Illinois DOT.
  - We have also completed 6" GSD imagery projects for several Illinois counties within the last few years, including Jo Daviess, Whiteside, Carroll, Sangamon, St. Clair, Madison, and Kankakee counties, as well as the Western Illinois University Consortium.
  - Surdex has completed the St. Louis County Imagery Consortium project three times, and we are contracted for the 2020 project as well. This project consists of 6" GSD imagery over an area ranging from ~700-1,200 square miles in the St. Louis area.
  - Surdex is finalizing a project for the Quad Cities Region that included 3" and 1.5" GSD imagery as well as LiDAR data.

- Surdex owns and operates a fleet of ten aircraft and eight large format digital image sensors, including five Leica ADS100 pushbroom sensors that are ideal for acquiring the imagery for this project. We also have in-house maintenance, inspection, and repair staff that ensures maximum aircraft availability.

Our investment in state-of-the-art equipment and proven technology enables us to optimize acquisition and processing, providing you with aggressive, attainable schedules without compromising quality.

- We have the staffing resources that ensure successful performance on this project. Our staff includes numerous ASPRS Certified Photogrammetrists (CP) and Registered Land Surveyors (RLS), and many have advanced degrees in the mapping fields.
- Our staff and equipment resources provide a significant production capacity, ensuring we have the ability to meet your schedules without compromising quality.
- Our R&D staff continuously develops and refines custom production software, resulting in improved functionality and efficiency. This includes an underlying central database and processes executed in a heavily distributed processing environment.

If you have any questions or if I may assist you in any way, please do not hesitate to contact me.

Sincerely,

Tim Donze
Vice President, Business Development
Direct: (314) 422-7616
Office: (636) 368-4424
Email: TimD@surdex.com

Ronald C. Hoffmann
President, Authorized Agent
Office: (636) 368-4400

SCOPE OF WORK

Surdex understands that the 2020 Aerial Imagery project for the Kendall County GIS Department will include survey control, aerial imagery acquisition, analytical triangulation, digital elevation model preparation, digital orthoimagery production (4-band and panchromatic), geodatabase design and metadata development. The project specifications are detailed in the table below.

OVERVIEW OF PROJECT		
Parameter	**Value**	**Comments**
Area (square miles)	Approximately 324 square miles	Includes 300' buffer beyond county boundary
Acquisition timeframe	Spring 2020, leaf-off conditions	
Minimum sun angle	30 degrees	This will meet industry standards and minimize shadows
Ground conditions	Not obscured by snow, haze, smoke, dust, cloud shadows or other ground cover	Should snow still be present near the end of the data capture window, Surdex will contact Kendall County GIS to determine the best course of action
Sky conditions	Sufficiently clear; less than 5% cloud cover and/or shadows	
Resolution(s)	6" GSD	
Bands	Four-band: R, G, B, IR	
Reference frame	Illinois State Plane East	
Accuracy standard	Orthoimagery will meet or exceed ASPRS Standard Mapping and GIS Work horizontal accuracy at the 95% confidence level	
Deliverables	Orthoimagery in GeoTIFF and MrSID formats Metadata	
Radial displacement	Radial displacement of vertical features will be minimized	

EXPERIENCE

Surdex has extensive experience providing county-wide 6" GSD imagery in Illinois as well as neighboring Missouri. A summary table is provided below, followed by detailed project writeups for two of the projects from the table.

SIMILAR, RECENT SURDEX PROJECTS			
Client Name	**Project Year**	**Orthoimagery Resolution (GSD)**	**Project Area (square miles)**
Boone County Consortium (Missouri)	2019	6"	2,500
		3"	5
	2015	12"	3,148
		6"	1,373
		3"	5
Sangamon County, Illinois	2019	6"	949
	2015		877
Kendall County, Illinois	2018	6"	322
St. Louis Imagery Consortium	2018	6"	1,181
	2016		665
	2014		708
Mid-America Regional Council (MARC)	2018	6"	2,678
	2016		2,526
Newton County, Missouri	2018	6"	627
	2016		
	2014		
St. Clair County, Illinois	2017	6"	835
Jo Daviess, Whiteside, Carroll Counties, Illinois	2016	6"	1,800
Kankakee County, Illinois	2015	6"	747
Western Illinois University	2015	6"	2,409

REFERENCE #1	
Client	**Contact**
Sangamon County, Illinois	Tracy Garrison (217) 535-3137 TracyG@co.sangamon.il.us Sangamon County I.S. Department 200 South 9th, Room 312 Springfield, IL 62701

Project Narrative

In 2019, Surdex acquired 6" GSD aerial imagery in Sangamon County and produced orthoimagery. This project included 40% sidelap to ensure minimal building lean.

In 2015, Sangamon County was acquired at 6" GSD as a buy-up partner of the Illinois DOT's Statewide imagery program. Additional flights were included to minimize building lean in Springfield, the capital of Illinois and the county seat of Sangamon County. Surdex provided all services, including survey ground control, airborne imagery acquisition and image processing.

Year	Sensor	GSD	≈ Sq. Mi.	Acquisition Conditions	Approximate Population
2019	ADS100	6"	949	Leaf off, no clouds or shadows	200,000
2015			877		
Project Deliverables				6" GSD 4-band digital orthoimagery as GeoTIFF tiles and MrSID mosaic	
Completion Date				Current project in client review stage, February 2016 (prior project)	
Subcontractors				None	

REFERENCE #2	
Client	**Contact**
St. Louis County Imagery Consortium	Madhukar Mohan (314) 768-6278 MMohan@stlmsd.com Metropolitan St. Louis Sewer District (MSD) 2350 Market Street St. Louis, MO 63103

Project Narrative

Surdex has provided orthoimagery for municipalities in the St. Louis region since 2010. City planners use the imagery for decision-making for everything from fixing roads to new building developments. This project is a regional collaboration between 27 St. Louis entities. In 2017, Surdex began spearheading the collaboration.

In 2018, 2016, and 2014, Surdex acquired 6" GSD 3-band digital orthoimagery for the consortium using the ADS100 sensor. The area ranged from 665-1,181 square miles. We utilized existing control and created the surface from existing LiDAR.

A similar project was conducted in 2010 as well.

Year	Sensor	GSD	≈ Sq. Mi.	Acquisition Conditions
2018	ADS100	6"	1,181	No snow, clouds/cloud shadows or flooding, minimum 30° sun angle
2016			665	
2014			708	
Project Deliverables				• 6" GSD 3-band (optional 4-band) digital orthoimagery in GeoTIFF and MrSID formats • Mosaic seamlines as ESRI shapefile • Tile layout as ESRI shapefile
Completion Dates				October 2018, October 2016, October 2014
Subcontractors				None
Highlights				Surdex planned additional flight lines over areas with many tall buildings and flew as close to midday and late in the season as possible to minimize shadows

PROJECT PLAN

Flight Planning

Flight planning is the responsibility of Surdex's Flight Acquisition Manager, and each flight plan is reviewed and approved by the Project Manager. Surdex uses the Leica MissionPro flight planning software for acquisition planning with the ADS100. This software utilizes an elevation model to rigorously check for adequate forward overlap and sidelap coverage as well as desired product GSD. Flights are planned against the buffered coverage for the desired seasonal window portion for the project area.

The flight planning software addresses rugged or uneven terrain in two ways:

- The targeted GSD is treated as a "maximum" value by the software and is never exceeded when compared to the terrain model. This may require "line breaks" to alter the flying height in very rugged terrain.
- The sidelap setting is treated as a "maximum" value and the spacing between lines is modified to ensure the value is not exceeded.

Acquisition of imagery is one of the most critical phases of any project. The most important facet of acquisition is the focus on an extremely high degree of communication between Surdex's Chief Pilot and all aircrews. Flight plans are updated each evening in the central database and re-distributed to aircrews via the internet and/or e-mail. Daily communication and coordination between the Chief Pilot and aircrews ensure that acquisition is maximized.

Surdex's Chief Pilot will inform the local Air Traffic Control (ATC) and/or military air traffic control authority in advance of flight operations. This includes providing aircraft tail numbers and flight designs to ensure the local authority is fully informed.

Before each acquisition day several activities are undertaken by the aircrew:

- Aircraft, GNSS, IMU, and camera are all inspected for proper operation
- Final weather checks are made
- Up-to-date flight plans are downloaded and reviewed
- Flight plans are filed with the local airport/FAA
- If required, base stations are set up

At the end of each acquisition day:

- Aircraft, GNSS, IMU, and camera are all inspected for proper operation
- Aircraft mission logs are completed
- Data drives are shipped overnight to the production center

To maintain a clear report on the remaining work, we combine the daily progress each plane has made with the results from inspection of acquisition from previous days. This is all done in the database, so an up-to-date view of the data is always available.

Aircrews generate a flight report for each mission that is used by the production center to appraise the results of each day's acquisition. For example, if extreme turbulence or cloud cover is cited by the aircrew for specific areas of the acquisition, prioritized attention is paid to these areas by the inspectors.

It is critical to collect GNSS/IMU data with the highest possible integrity, considering these primary factors:

- Operation of base stations to maintain a reasonable distance to the project area
- Avoiding IMU drift by limiting the length of lines – generally less than 20 minutes
- Using CORS (Continuously Operating Reference Stations) and/or local GNSS reference networks to provide multiple observations

Ground Survey Design

After the flight design is complete, Surdex will determine the number and placement of control points required to ensure product accuracy and check points required for validation of the deliverables.

Ground control points are used in triangulation to refine the Global Navigation Satellite System/Inertial Measurement Unit (GNSS/IMU) derived sensor positions and attitudes to match the control ground coordinate system. All imagery will be acquired with a geodetic-grade GNSS receiver on the aircraft and IMU on the sensor to reduce the number of ground control points required to meet the product accuracy. Surdex will target and place ground control points in an evenly distributed pattern throughout the project area.

As a quality check process, Surdex will also target and survey additional Quality Check (QC) check points. These points, independent of the control points, are to be used exclusively in the QC process to evaluate the accuracy of the aerial triangulation solution and the final digital orthoimagery. This QC process will ensure that the digital orthophotography meets the American Society for Photogrammetry and Remote Sensing (ASPRS) Positional Accuracy Standards for Digital Geospatial Data.

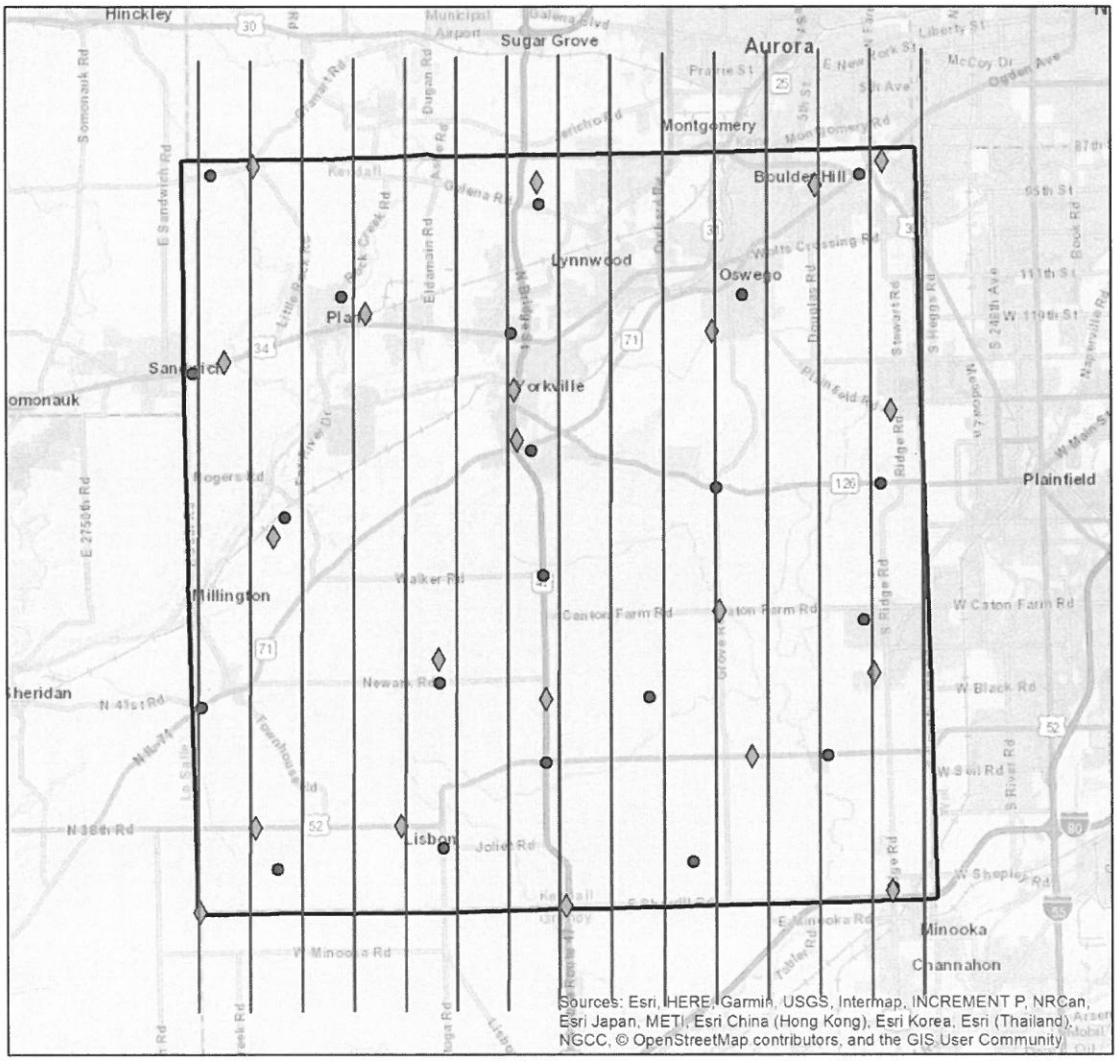
Our preliminary approach includes:

- 21 ground control points for triangulation to refine the GNSS/IMU-based positions
- 22 QC check points to be used to validate the accuracy of the orthoimagery
- Individual control/check points will be either paneled or photo-identifiable
- Utilization of existing survey points, some of which may be unrecoverable and may need replacement
- Overall uniform dispersion of control over the entire project
- Focus on placing control at junctions of strips, maximizing the number of observations of control points during triangulation to strengthen the solution.

Flight and Control

The diagram on the following page contains our preliminary flight and control plan. This plan includes 21 control points and 22 QC check points for survey. Existing control will be used where possible; however, we will check and resurvey targets as needed.

Flight and Control Diagram
6" GSD Kendall County 2020 Aerial Imagery



Schedule

The following is our preliminary schedule for this project:

PRELIMINARY PROJECT SCHEDULE		
Task	**Start Date**	**End Date**
Survey control	February 15, 2020	February 28, 2020
Flight acquisition*	March 1, 2020	March 30, 2020
Triangulation	April 1, 2020	April 10, 2020
Ortho production	April 10, 2020	June 30, 2020
Ortho pilot delivery	April 27, 2020	
Orthoimagery posted to SurCheck	June 1, 2020	
Client review	June 1, 2020	June 20, 2020
Ortho final deliverables	June 30, 2020	
*Approximate flight windows weather permitting		

METHODOLOGY

Project Management

Mr. Aaron Garibaldi will be the project manager and serve as the primary point of contact to your designated representative(s). Aaron has been with Surdex for 13 years and is extremely knowledgeable in the orthoimagery production process. He will be the direct point of contact, drawing upon others within the team when required. He reports to Mr. Wade Williams, Surdex's Director of Project Management.

Surdex's project management approach is founded on providing relevant information backed by frequent communication. Each of our project managers has experience in nearly all phases of production. They are guided by the philosophy that they must support the objectives of their clients and efficiently manage internal resources.

Communication can take the form of face-to-face meetings, e-mails, telephone calls, webcasts, etc. Our project managers are required to communicate with each of their clients at least once each week and to respond to a client's communication within 24 hours of receipt.

If an issue becomes evident to Surdex, our project managers will take the following course of action:

- Inform Kendall County GIS Department that an issue has arisen and define the situation
- Develop a set of suggested solutions or actions, consulting internal resources and experts
- Convey the suggested solutions or actions for discussion and approval

Surdex has developed custom software based on a central database implementation that provides real-time status to our internal production and management staff. This includes tracking acquisition designs, acquisition progress, and inspection results throughout the production chain. During the critical acquisition phase, acquisition will be reported daily via graphical and textual reports. Since image inspection occurs in parallel with acquisition, daily reports include an update on inspection status and the possibility of isolating re-flights in a timely fashion.

During acquisition, formal status reports show short- to medium-range forecasts for upcoming weather but are reviewed daily as long as the flight window is open. The following graphic is an example of the Project Overview section of a Project Status Report.

Project Overview

Status by Phase

Project Area	Survey	Imagery Flown	Digital Orthos Produced	
6 inch - west	100%	100%	0%	
6 inch - east	100%	100%	N/A	
12 inch	100%	100%	0%	
Status by Task	**0%**	**0%**	**0%**	
Legend	Not Started	In Progress	Complete	Issues/Concerns

Airborne Acquisition

Aircraft Facilities, Maintenance and Repair

Surdex's aircraft are housed in our 18,000 square foot hangar at Spirit of St. Louis Airport, only blocks from Surdex's headquarters in the St. Louis area. Our full-time aircraft maintenance staff is certified for A&P (Aircraft and Powerplant) with Inspection Authorization (IA) to support our fleet. This staff is qualified and licensed to perform FAA-mandated inspections, maintenance, and repair. Therefore, we are not reliant on the schedule and cost of third parties. We have even transported maintenance personnel to project areas to perform inspection, maintenance, or repair in the field.

Aircraft

Surdex is widely regarded by clients and colleagues as one of the premier aerial acquisition companies in North America. The makeup of our all-Cessna fleet of aircraft is based on:

- Ability to host each of our aerial data acquisition instruments (imagery and LiDAR).
- All aircraft are made by the same manufacturer to standardize maintenance, repair, inspection, and operation.
- A mix of slower/lower and faster/higher aircraft to address our versatile acquisition equipment and maximize our resources.

Since weather/acquisition conditions heavily impact the ability to collect imagery and data during the project's acquisition window, it is imperative that assets be available and "ready to go" when favorable weather conditions prevail. Our aircraft are based at Spirit of St. Louis Airport, only blocks from Surdex's headquarters in the St. Louis area. With this centralized location we can efficiently handle projects throughout North America.

SURDEX'S ACQUISITION AIRCRAFT				
No.	**Aircraft Type**	**Category**	**Specifications**	**Image**
4	Cessna 441 Conquest II-10 (with RVSM *)	Twin-Turbine Pressurized	Flight Range: 2,193 nm Altitude: 1,200 - 35,000 AGL Certified Altitude: 35,000 MSL Approximate Cruise Speed: 310 knots	
1	Cessna 414A Chancellor III	Twin-Piston Pressurized	Flight Range: 900 nm Altitude: 1,200 - 25,000 AGL Certified Altitude: 30,200 MSL Approximate Cruise Speed: 235 knots	

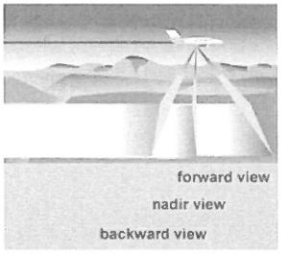
SURDEX'S ACQUISITION AIRCRAFT				
No.	**Aircraft Type**	**Category**	**Specifications**	**Image**
1	Cessna 335 II	Twin-Piston	Flight Range: 928 nm Altitude: 1,200 - 18,000 AGL Certified Altitude: 26,800 MSL Approximate Cruise Speed: 215 knots	
4	Cessna TU-206F Turbo Stationair	Single-Engine	Flight Range: 720 nm Altitude: 1,000 - 10,000 AGL Certified Altitude: 26,300 MSL Approximate Cruise Speed: 148 knots	
* RVSM: Reduced Vertical Separation Module. This FAA-certified equipment allows operation above 28,000' (MSL).				

The Cessna 441 (Conquest) aircraft are the highest performing and most versatile aircraft in our fleet for imagery acquisition and will likely play a key role in this project given the planned altitude for imagery collection. Our ADS100 pushbroom sensors, which we will use to acquire imagery for Kendall County GIS Department, are hosted in our Conquests for precisely this type of project. The Cessna 414 is also suited for use in this project.

SENSORS

Surdex owns five (5) Leica ADS100 Airborne Digital Sensors, one of the industry's premier sensors. The following figures portray the pushbroom imaging geometry of the ADS100. All arrays in the forward, nadir, and back configurations are collected simultaneously, providing alternative views of the ground scene and generating stereoscopic views.

Leica ADS100 imaging operations (courtesy Leica Geosystems)



LEICA ADS100 IMAGING ARRAYS				
Array	**Bands**	**From Nadir**	**FOV**	**Pixels**
Forward	RGBN	25.6°	65.2°	16,000
Nadir	RGGBN	0°	77.3°	20,000
Backward	RGBN	19.4°	72.5°	18,000

Pushbroom systems present optimal imaging geometry for digital orthoimages and support highly efficient production:

Leica ADS100 installation in a Surdex Cessna 441 (Conquest)

- The "pixel carpet" acquired by the ADS100 substantially reduces the number of seamlines required to mosaic the orthoimages together. This reduces and simplifies the production effort involved in the minimizing of artifacts surrounding seamlines.
- The ADS100 stereoscopic geometry yields the highest attainable horizontal and vertical accuracies and will easily meet all ASPRS standards.
- With the telecentric design of the ADS100 series, all light rays strike the focal plane at a right angle and yield the same radiometry response at all points. This avoids the well-known "fall-off" issues at the edge of the exposure encountered by the lenses of conventional frame-format digital cameras. This simplifies balancing during the mosaicking step by minimizing the image-to-image fall-off issue.
- With each band (R,G,B,NIR) in each array collecting at full resolution, features imaged by the ADS100 are sharp and do not exhibit the blooming and smearing attributed to the pan-sharpening approach taken by virtually every large-format digital frame camera on the market today. This enhances interpretation and results in an aesthetically pleasing rendition of color.

SURDEX'S FIVE ADS100 SENSORS			
Sensor Make/Model	**Serial #**	**Calibration Date**	**IMU Make**
Leica ADS100	10510	07/14/2018	CUS6
	10515	05/29/2018	
	10522	1/24/2019	
	10530	3/13/2019	
	10552	1/25/2019	

LEICA ADS100 SPECIFICATIONS	
Parameter	**Value**
Sensor Type	Pushbroom
Pan-sharpening	None
Cross-track pixels	Fwd: 16,000 Nadir: 20,000 Backward: 18,000
Focal length	62.7 mm
F-number	f4
Pixel size	5.0 um
Pixel registration accuracy	1 um
Integration time	≥ 0.5 ms
Height: GSD ratio	12,500:1
Cross-track field of view (FOV)	77.3°
Three view angles	Fwd: 25.6° Back: 19.4° Stereo: 43.3°
B/H Ratio	0.80 (Traditional film cameras: 0.6)
Radiometric resolution	14 bits/pixel
Imaging arrays: **R= red** **G = green** **B = blue** **N = near infrared**	13 Arrays: Fwd: RGBN Nadir: RGGBN Back: RGBN
Radiometric response (nm): **R= red** **G = green** **B = blue** **N = near infrared**	 619-651 525-585 435-495 808-882

Using a calibration range near our headquarters, each ADS100 has been "bore-sighted" to determine the alignment and position of the sensor with respect to the GPS antenna and Inertial Measurement Unit (IMU). Flight lines are designed to limit the operation of the ABGPS/IMU within 20-30 minutes during on-line acquisition. ABGPS/IMU information is collected at fine intervals that support the derivation of sensor attitude and position for each line that is acquired. The automatic exposure mechanism is monitored by the sensor operator to avoid over-reaction to ground scenes that bias the settings for the project area. At the end of each day, aircrews transfer data from the on-board mass memory unit to hard drives which are shipped overnight to Surdex's production center.

GEOMETRIC PROCESSING

Geometric processing is the application of the most recent sensor calibration data to the imagery using the sensor manufacturer's software. This includes provisions for principle point offsets, focal length, lens distortion, and position of the CCD pixels.

GROUND SURVEY OPERATIONS

Surdex staff reviews all geospatial projects with respect to product accuracy. A ground survey will be designed to meet the project accuracy requirements, which determine the survey methods that will be utilized by the Surdex field crews. These may include GNSS static techniques, GNSS stand-alone OPUS solutions, GNSS RTK methods, precision total stations and/or leveling. All survey projects within Surdex will be performed under the direct supervision of a licensed land surveyor. All field data will be post-processed in the office and reviewed for quality and consistency with the required accuracy.

SURVEY EQUIPMENT AND POST-PROCESSING SOFTWARE	
Number / Type	
• 13 – Trimble 5700 Dual frequency GPS receivers • 6 – Trimble TSC1 data collectors running Survey Controller data collection software • 1 – Leica 5 TCR03 second total station • 4 – Trimble R8 GNSS receivers • 4 – Trimble R10 GNSS receivers • 1 – Trimble R8 GNSS VRS rover with at TSC2 data collector running Access field data collection software • 1 – Trimble R8 GNSS VRS rover with at TSC3 data collector running Access field data collection software	• 4 – TOPCON Hiper IV GNSS receivers • 10 – CHC OPUS RN GNSS receivers with Trimble internal boards • 2 – Trimble Business Center (TBC) post-processing software • 2 – Novatel Waypoint GrafNAV/GrafNet GNSS post-processing software • CORPSCON • Blue Marble Geographics Geographic Calculator • 1 – CHC N71 GNSS CORS base station • 1 – Trimmark RTK base radio

ACQUISITION INSPECTION

After acquisition, imagery inspection is the most critical aspect to the overall success of the project. In the interest of timely and efficient completion of project areas, all imagery is viewed, graded, and stored in the central database, typically within 24-48 hours after being downloaded in the office, and results are immediately available for all production personnel and downstream production.

Should re-flights be necessary, Surdex will prioritize them to be acquired as quickly as possible after the initial flights to minimize changes in ground conditions over time. If the re-flight is not a full line, it will include full stereoscopic overlap with the remaining portions of the line.

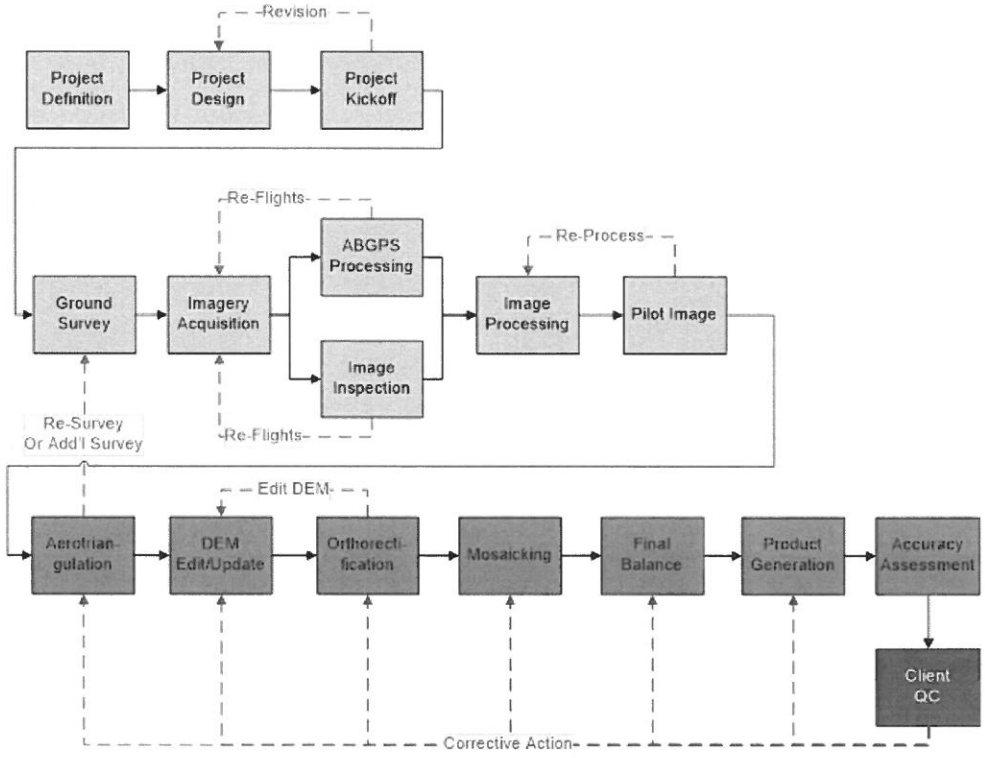
EXAMPLE IMAGERY INSPECTION ITEMS		
Items Inspected Visually	**Items Inspected Analytically**	**Items Inspected Visually and Analytically**
• Clouds/cloud shadow • Smoke/haze • Excessive flooding/standing water • Excessive ice/snow • Image motion • Specular reflection	• Verify acquisition parameters are met • Sun angle • Forward lap • Sidelap • Crab • Tilt	• Trajectory processing • Pixel/band registration • Camera misfires • Image artifacts

Hand-in-hand with image inspection is the processing of GNSS/IMU data for pushbroom cameras. These measurements along with the GNSS and IMU data captured on each flight are processed using Novatel Inertial Explorer software. Inertial Explorer produces a differential solution for the airborne positions and attitude more than a hundred times a second for the duration of the flight. As the Leica ADS100 is a line scanner, there are no individual stations, but rather a stream of epochs or fixes produced at a rate of 128 per second. Only during aerial triangulation are discrete fixes calculated at a spacing dictated by image measurement density.

Post-Flight Processing

STEP-BY-STEP PROCESS

The Surdex orthophoto workflow is best illustrated by the flowchart below and equipment list, followed by more detailed information on the quality control process.



The following is a list of equipment owned and operated by Surdex Corporation.

EQUIPMENT AND SOFTWARE	
Photogrammetric/Ortho	**Processing Computers**
• Leica XPro Triangulation • Leica XPro Ortho • ImageStation Aerial Triangulation (ISAT) • Surdex Group Tool • Surdex Ortho • Surdex Web Inspection	• 100 Servers with more than 1,200 total cores • 2.5 Petabytes of Storage • 2 Quantum Scalar i500 Tape Library Systems • 200Gb Network
Stereo Compilation and Mapping	**GIS /CADD**
• 4 – Workstations • 4 – Summit Evolution 3D Stereo software • 2 – Stereo Analyst for Arc • Direct collection into Arc GIS • Direct collection into Microstation	• 13 – ESRI ArcGIS for Desktop • Safe Software FME • 3 – AutoCAD • 16 – Bentley MicroStation • 1 – GEOPAK Survey • 1 – GEOPAK Site • 2 – Descartes • 1 – InRoads

TRIANGULATION

Since triangulation provides the foundation accuracy for the project, it involves checks and balances to ensure accurate results are provided to the production process to avoid costly and time-consuming re-work. The inputs to triangulation include GNSS+INS data, sensor boresight data, sensor calibration data, ground control and check point data, and the imagery itself.

The triangulation process involves the following steps:

- Automated measurement of pass and tie points appearing in the overlaps of the imagery
- Interactive editing of pass and tie points
- Measurement of control and check points
- Bundle adjustment yielding refined imagery position, attitude and all point positions
- If required, re-measurement of points and repetition of the adjustment

The triangulation solution is based on a sophisticated bundle adjustment employing a mathematical model of the imaging geometry. It relies on the use of far more observations (observed/recorded values such as GNSS+INS, ground control, and image measurements) than are required for a unique solution. Using a least squares optimization approach, the observations are refined for a best fit. Careful inspection is made of the various residuals (differences between observed and adjusted values of parameters) reported by the solution.

Analysis of the quality of the triangulation solution is performed by a Certified Photogrammetrist who is highly skilled and experienced with the process. Upon completion of the triangulation process, the results are stored in the central database and published for use in the following production steps.

Elevation Model Preparation

Surdex will use the updated Digital Elevation Model (DEM) that we used to produce our 2018 project for orthorectification and update if needed, unless the county has more recent elevation data available in which case we will use that for DEM creation. The master DEM is projected into the native projection and segmented into buffered extents of each accepted line segment for orthorectification in Surdex's distributed processing environment for file size efficiency of processing.

Orthorectification

Orthorectification will be performed using Leica XPro software, which operates in a highly distributed processing environment. All resampling is performed using bi-cubic resampling to ensure pixel location accuracy and to avoid aliasing effects commonly seen with nearest-neighbor or bilinear resampling techniques.

Radiometric Processing

Radiometric processing corrects defective pixels and adjusts the differing sensitivity of the pixels to a uniform result. It includes the application of all radiometric calibration information provided for each camera head from the supplier.

Surdex limits sensor-specific processing to the front end of the production chain, and all imagery is retained in 4-band and 12 bpp (bits/pixel) format until the final tiles are produced. This allows us to make localized adjustments to color, tone, contrast, etc. without compromising the overall quality of the deliverable product.

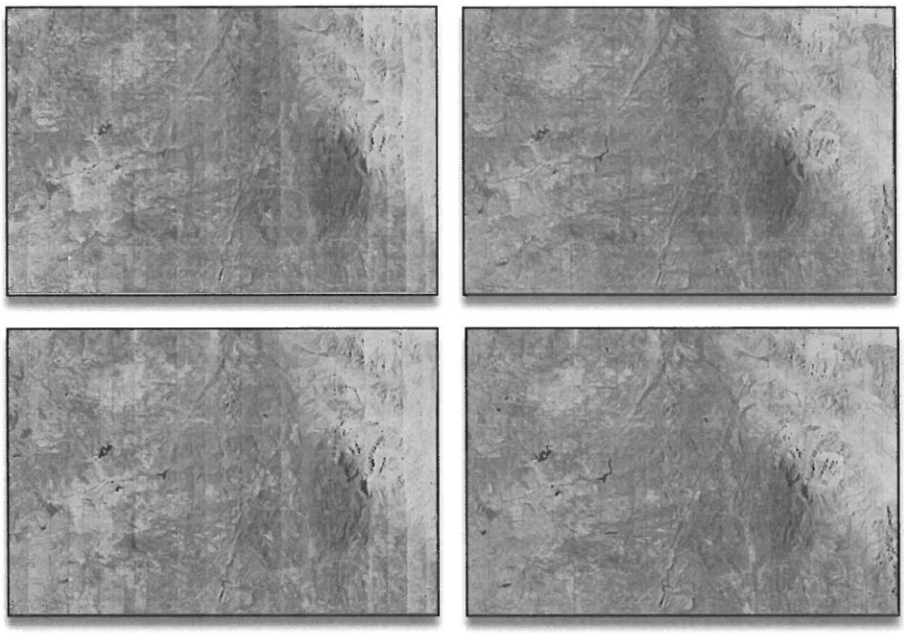
Using our own interface and database schema, image processing technicians organize large blocks of orthoimagery into groups with common characteristics, which do not necessarily coincide with individual flight missions. The tool can display images in ground space, allowing operators to see the relative image quality between neighboring images and imagery can be viewed in either color or CIR to ensure 4-band continuity. The atmospheric conditions during capture may result in imagery covering regions of differing degradation caused by haze.

Surdex's custom-developed Block and Global Balance software eliminates any residual issues evident after application of Bi-Directional Reflectance Distribution (BRDF) and atmospheric corrections. This is handled by two functions:

- **Block Balance** fits correction models to each strip of images with a single simultaneous bundle adjustment.
- **Global Balance** is then run to correct local differences in illumination between strips, and the results can be previewed in Group Tool without the need to generate intermediate files.

Global Balance uses a "rigid body model" correction calculated for each orthoimage that best forms a normalized block fitting neighboring orthoimages.

Before and after global balancing for RGB and CIR



INFRARED PROCESSING

Surdex's image processing approach supports 4-band (R-G-B-NIR), color (R-G-B), and color infrared (CIR: NIR-R-G) products by retaining imagery in 4-band x 12 bpp form until generation of the final deliverables. Since the red and green bands are common to the color and CIR renditions within a 4-band file, care must be taken to ensure proper appearance of both. In general, this is accomplished by limiting changes to the NIR band as much as possible. The approach is to first lock down the color rendition (ordered R-G-B or bands 1-2-3) and then process the NIR band to achieve the CIR rendition (ordered NIR-R-G or bands 4-1-2).

SEAMLINE GENERATION PROCESS TO CREATE MOSAICS

There are three steps in the seamline process:

- Automatic generation of seamlines
- Editing of seamlines from within Group Tool
- Application of the seamlines to create the Master Tiles

After all imagery in a completed triangulation block is orthorectified, automatic seams are generated, and then technicians must review the results and correct if necessary, prior to writing out the Master Tiles. Once an area of seams has been accepted, the user selects tiles to be generated and adds them to a distributed processing queue.

Surdex's custom ray trace module is used to detect potential occlusions and smearing that may occur in rugged terrain. This software creates a graphical overlay that directs technicians to examine pixels that may be incorrect, avoiding the manual task of inspecting imagery for such issues. If an occluded or smeared area is encountered, the corresponding imagery from an overlapping orthoimage is inserted to replace it during the mosaicking process.

Surdex will supply an ESRI shapefile that fully delineates the seamlines used to merge overlapping digital orthoimages during the mosaicking process. Surdex's custom software automatically generates the seamline data during production, made possible by our software integrating automatic seamline generation and manual editing into a single application and interface.

After mosaicking, imagery is produced to an internal tile layout that encompasses the project area with adequate buffering. Master Tiles are 8,192 x 8,192 pixels in size, in 4-band x 12-bit format, and in the dominant reference frame of the project. Once the Master Tiles are completed, they are used to generate all delivery tile layouts, a process that includes re-projection into the final datum and re-mapping to the 8-bit depth for the final product.

GEODATABASE DESIGN

Surdex can create a geodatabase for Kendall County GIS Department with the desired structure and deliverables, with all spatial data projected in the Illinois State Plane East coordinate system.

METADATA

Metadata is created at Surdex using Esri ArcCatalog, incorporating all project details such as acquisition ranges, process descriptions to summarize production workflows and results of our accuracy assessments, among other tasks. Information is gathered and entered based on product deliverables and tiling requirements to appropriately connect with project-wide or tile-based metadata in all required coordinate datums and can be delivered in all common formats such as .met, .xml or .txt. Samples for client review are provided after proper validation through USGS metadata parsing (mp) to ensure error-free files prior to final delivery.

DELIVERABLES

SUMMARY OF DELIVERABLES	
Description	**Format**
Orthoimagery	4-band GeoTIFFs and MrSID files at 6" GSD
Geodatabase	As desired by Kendall County GIS Department
Metadata	XML or other desired format

SurCheck℠

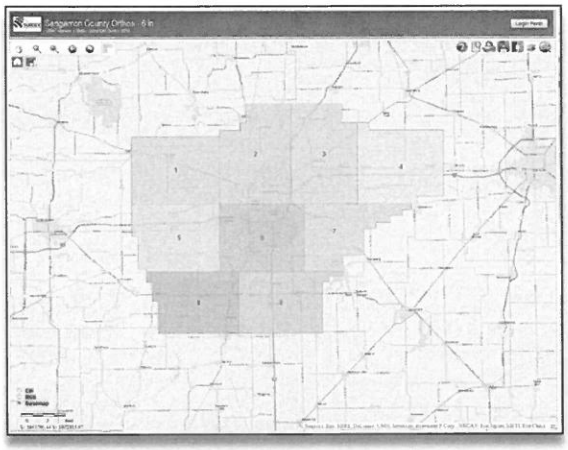
To assist our clients with the inspection of their preliminary or final imagery, Surdex can provide our web-based image inspection tool, SurCheck℠. This tool is the result of years of continuous improvement based on user requests for enhancement. It is implemented in HTML5, JavaScript, php, and the ArcGIS API for JavaScript, providing flexibility for enhancements in the future.

SurCheck streamlines the inspection, remedial action, and delivery timelines. As call-outs are reported by reviewers, Surdex resolves each and allows reviewers to confirm the issue has been corrected. When all call-outs are resolved for the final orthorectified data, it can be shipped on hard drives for final delivery. In many cases, clients choose to have orthoimagery added to SurCheck incrementally, further expediting inspection and allowing leveling of inspection resources.

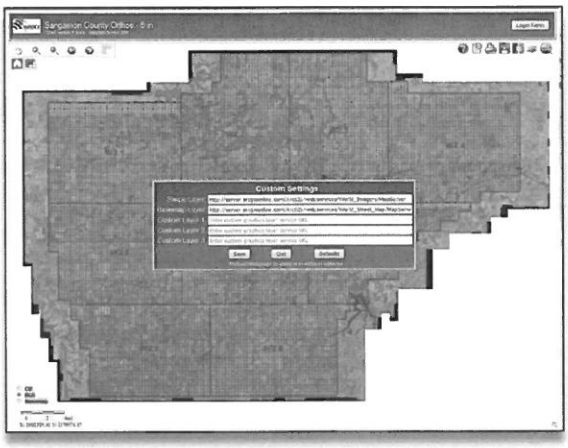
Upon request, Surdex can provide a video and PowerPoint presentation to familiarize and train users on the tool's use, as well as access to a sample project.

SURCHECK℠	
Feature	**Benefit**
Administrative	
Data access	Password protected access for client and reviewers.
Work zone control	Allows multiple reviewers to expedite schedule and support multiple partners. Prioritization of work zones. Managers can view call-outs from reviewers to ensure a consistent approach.
Call hierarchy: 1. Client inspector 2. Client manager 3. Surdex reviewer 4. Final client review	Covers entire life cycle of inspection process, ensuring protocol to acceptance. Client manager can override client reviewers. Surdex disposition of a call-out (natural feature, out of scope, etc.).
Help menu	Easy access to common questions and instructions.
General Interface	
Compatibility	Operates in Internet Explorer, Firefox, Chrome, Edge, and Safari. Full functionality on tablets or desktops. No browser plug-in or software installations required. Flexibility for future enhancements requested by users or implemented by Surdex.
Interface	Full-screen capability. No pop-up windows. Availability of common GIS tools.
Seamline overlay	Assist QC as most artifacts occur near seamlines.
Flexibility	Allowance of user provided layers including historical imagery, vector overlays, ground survey, parcels, other public layers, etc.
Change detection	Swipe function allows comparison of multiple data sets. Color and CIR renditions to review consistency and quality.
Magnifier	Enlargement on critical areas without latency of zoom in/out.
Histogram	Adherence to project-specific image metrics.
Progress tracking	Methodical approach to viewing and identifying status.
Redline export	Export call-outs to .shp file for future reference; .csv file easily imported into Excel.
Printing	Functionality for printing graphics to reports.

Project / workzone overview



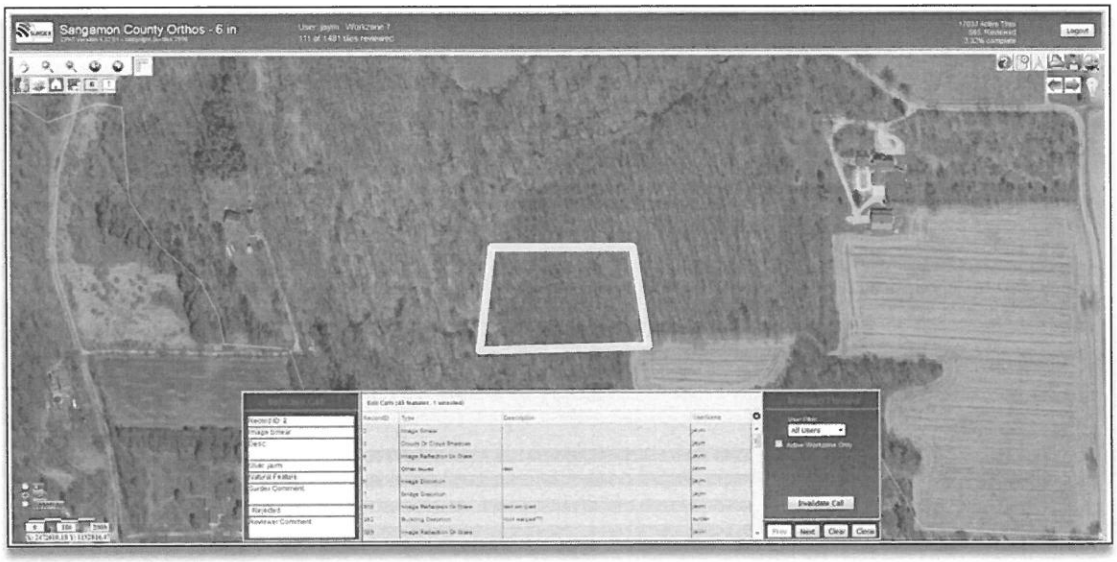
Custom layer integration



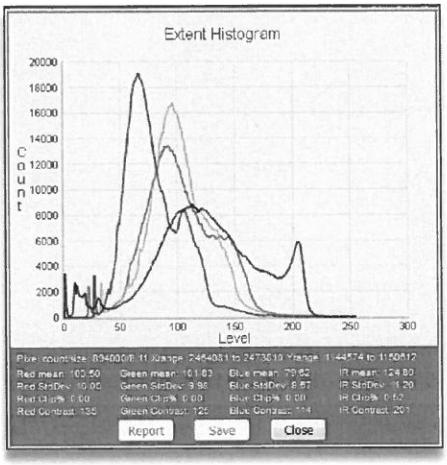
Swipe RGB-CIR

Swipe other sources

Redline placement & review

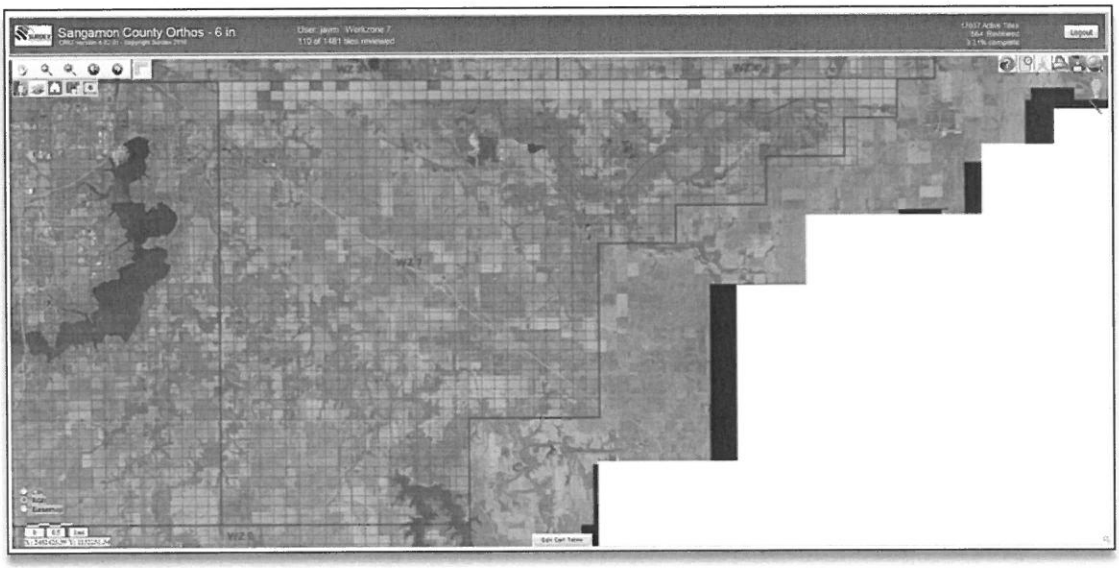


Histogram view



Magnifier tool

Inspection status tracking



COSTS

COST BY TASK	
Task	**Cost**
Project Management (including, if any, site visits, data handling, overhead, etc.)	$1,000
Control	$8,000
Aerial Imagery Acquisition	$14,900
Aerotriangulation	$2,200
Orthoimagery Production (includes quality assurance and metadata production)	$6,900
Total Bid Amount	**$33,000**

nearmap

WE CHANGE THE WAY PEOPLE VIEW THE WORLD, SO THEY CAN PROFOUNDLY CHANGE THE WAY THEY WORK.

November 27, 2019

Kendall County GIS Department
Attn. GIS Coordinator
111 W Fox St, Rm 308
Yorkville, IL 60560

Dear Ms. Briganti,

Nearmap US, Inc. (**Nearmap**) is pleased to submit this proposal to the Kendall County GIS Department (County) in response to the Invitation to Bid (**ITB**) of "Aerial Subscription ITB".

This response delivers:

- capture and delivery of sub-three (3) inch Ground Sampling Distance (**GSD**) orthogonal and oblique imagery;
- historical captures dating back to 2015; and
- online access to unlimited users throughout the Kendall County GIS Department staff.

The information contained within this proposal has been completed to the best of our knowledge and understanding of the desired scope.

This proposal includes the following:

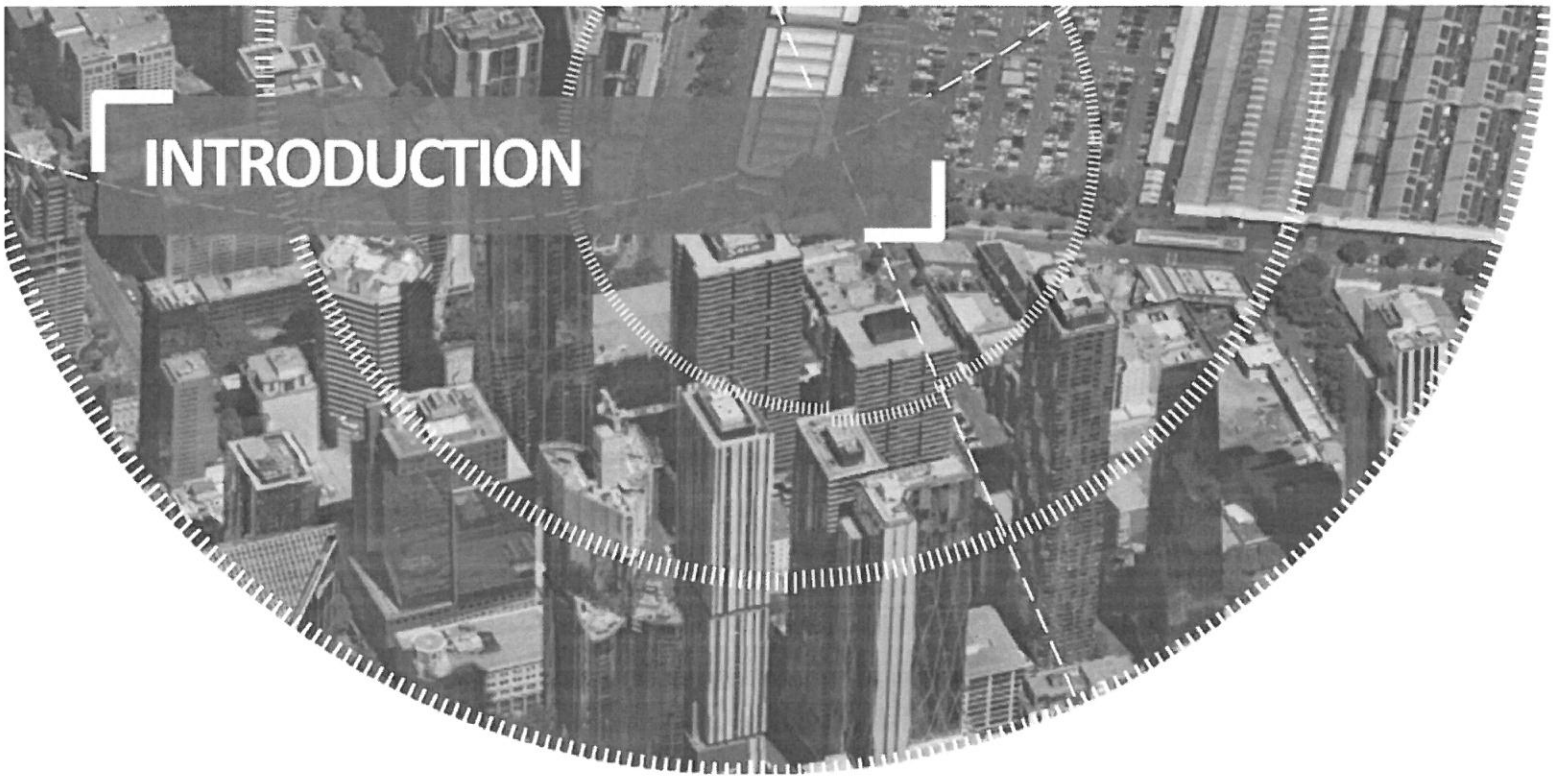
- Nearmap's background, experience, and qualifications;
- product specifications including methodology; and
- cost proposal.

Nearmap's response has been provided to County on a "commercial in confidence" basis, which includes details specifically relating to Nearmap's camera systems, operations, and references. To the extent County required by law to disclose Nearmap's response, Nearmap maintains confidentiality in respect to its response.

Thank you for the time and consideration. We look forward to hearing back from you.

Best Regards,

Horace Wu
Assistant General Counsel (Americas)
For and on behalf of Nearmap US, Inc.



INTRODUCTION

Executive Summary

Nearmap is a leading provider of cloud-based geospatial information services with offices in the United States and Australia and ranked one of the ten largest aerial survey companies in the world for annual data collection volumes. Nearmap is part of a group of entities where its parent company, Nearmap Limited, is a publicly traded company listed on the Australia Stock Exchange where it is listed as one of the 200 largest ASX listed stocks in Australia. The Nearmap group recently announced to the market its FY19 results where it recorded AUD$90.2 million in revenue, with North America now comprising more than one third of the total portfolio, and global customer numbers of over 8,300 where a vast number of these customers being government bodies and agencies. The Nearmap group is currently valued at a market cap of AUD$1.233 billion.

Started in 2007 by a group of leading remote sensing technologists in Australia, Nearmap expanded into the US market in October 2014 and launched its nationwide urban capture program. Since this time, Nearmap has developed scalable and optimized high-resolution (up to 3-inch GSD) aerial imagery collection and processing capabilities resulting in surveys of over 457 US urban areas, (approx. 71% of the population) and multiple times a year. In 2017, ESRI named Nearmap "Best New Content Provider" at their annual international user conference and has recently been admitted as an ESRI Gold Partner.

Unlike other providers, Nearmap builds its own camera systems that allow for capture elevations over 10,000 feet in Class E airspace minimizing delays and is above most Air Traffic Control restriction zones. Upon completion of a vertical imagery survey capture, the image cartridges are shipped to our office in Virginia for processing and within a week's time is hosted within Nearmap's MapBrowser website for customers to view (unlike any other aerial imagery provider in the marketplace). For vertical imagery, Nearmap can provide seamless integration access to content through the Open Geospatial Consortium (OGC) compliant WMS, WMTS and Tile API. Nearmap's consistent up to 3-inch resolution and cloud-based model allows our customers to streamline workflows and increase efficacy of GIS, CAD, and custom applications. Nearmap's creation of its cloud-based delivery system has eliminated the need for customers to increase the memory storage on their computers resulting in additional IT savings.

Nearmap's HyperCamera1 ("HC1") and HyperCamera2 ("HC2") sensor systems, which are both approved by the Federal Aviation Administration, allow for accelerated capture plans and provide an archived library with multi-

directional oblique views as well as high-resolution 3D models. This breakthrough technology will further solidify Nearmap's foothold in the market as a leader in high-resolution aerial imagery. Nearmap does not specialize in custom capture aerial imagery which enables Nearmap to fly areas independently of a customer's funding. Nearmap's resolution, frequency and clarity brings a unique trifecta to the industry. Nearmap is driving innovation in the ever-changing imagery market by launching Nearmap 3D products which are not available at scale from any other provider in the industry. Nearmap 3D enables our customers to view on demand 3D content and export 3D in various formats directly from MapBrowser for consumption within 3D applications. Further details of Nearmap's current coverage can be found at https://go.nearmap.com/coverage.

Nearmap currently has 168 government customers across the US, and this continues to grow each month as Nearmap meets the business requirements within this sector. Nearmap's dedicated strategic accounts team has the experience and background to help support government customers. It is through this team that Nearmap has listened and adapted its offering for use within the government environment.

Experience & Qualifications

Mission Statement

Nearmap captures reality, so you can reinvent it.

We provide industry-leading aerial imagery and data insights move location analysis out of the field and into the office, giving businesses the tools to bring their most important initiatives to life.

Find more information about our company and our mission statement at https://www.nearmap.com/us/en/aerial-view-maps-about-us

Company Background

Nearmap is an innovative location intelligence company capturing a rich data set about the real world, providing high value insights to a diverse range of businesses and government organizations.

Using its own patented camera systems and processing software, Nearmap captures wide-scale urban areas in Australia, New Zealand, and the US multiple times each year. This fresh content, together with a range of analytics and tools, is instantly available in the cloud via web app or API integration.

Every day, Nearmap helps thousands of users conduct virtual site visits for deep, data-driven insights – enabling informed decisions, streamlined operations, and robust bottom lines.

Nearmap is one of the ten largest aerial survey companies in the world by annual data collection volume.

Further background about Nearmap has been provided above in the executive summary section.

Organization Structure

Nearmap US, Inc. is a subsidiary of Nearmap Ltd (ASX: NEA), an Australian company listed on the Australian Securities Exchange.

Nearmap currently operates in four countries:

- Australia
- United States
- New Zealand
- Canada

The members of our leadership team are:

BOARD OF DIRECTORS

- Mr. Peter James (Non-Executive Chairman)
- Dr. Rob Newman (Managing Director)
- Ms. Sue Klose (Non-Executive Director)
- Mr. Ian Morris (Non-Executive Director)
- Mr. Ross Norgard (Non-Executive Director)
- Mr. Cliff Rosenberg (Non-Executive Director)

COMPANY SECRETARY

- Ms. Shannon Coates

EXECUTIVE MANAGEMENT

- Dr. Rob Newman (Chief Executive Officer)
- Mr. Andy Watt (Chief Financial Officer)
- Mr. Harvey Sanchez (Chief Marketing Officer)
- Mr. Shane Preston (Executive Vice President, Sales - Australia)
- Mr. Patrick Quigley (Executive Vice President & General Manager, International and Partners)
- Dr. Tom Celinski (Executive Vice President, Technology & Engineering)
- Mr. Tony Agresta (Executive Vice President, Product)
- Ms. Simone Shugg (Executive Vice President, People & Culture)

Details and background of each member of our leadership team can be found at
https://www.nearmap.com/us/en/investors/key-facts

Number of Employees

As at November 1, 2019, Nearmap has approximately 300 employees globally.

Project Team

Nearmap has experienced personnel who will be able to deliver the services to the County, namely the Project Management Team consists of:

- Dedicated Project Account manager, Tyler Behle, who manages government customers;
- Survey Operations Manager, Sean Kelly, who manages the daily operations of Nearmap's aerial imagery program and ensures our geospatial data is captured on schedule, within the constraints of civil aviation regulations, weather, subcontracted flight services, and equipment availability;
- Business Strategy Leader and Technical Operations Executive, Sanchit Agarwhal, who provides technical, strategic and operations oversight to Technology, International Partnerships & Expansion. Sanchit holds certifications for ASPRS Certified Photogrammetrist, ASPRS Certified Mapping Scientist LiDAR, ASPRS Certified Mapping Scientist GIS/LIS, and Geographic Information Systems Professional (GISP); and
- Survey Operations Division that is experienced in handling survey capture and aerial imagery, including a Director of Survey Operations for the US and Canada, and a Director of Global Survey Operations.

Nearmap has all appropriate remote support staff who can handle queries in a timely manner.

Nearmap's Technology

Nearmap has fully automated the process of creating very high definition photo maps, developing a complete pipeline of technologies which enable coverage of vast areas with unprecedented currency and clarity. The key elements of this technology solution include:

- Nearmap's proprietary aerial camera system, HC1 and HC2, which has been designed and developed internally by Nearmap. These aerial camera systems are designed to capture about 1 gigabyte of raw image data every second, at a small fraction of the operating and capital costs of alternative camera systems;
- Nearmap's HyperVision processing solution runs on super-computer hardware clusters which automatically performs image analysis to process the individual photos, aerial triangulation, geo-positioning, bundle adjustment, color-balancing, and mosaicking within the reliable, secure Amazon Web Services cloud computing platform. HyperVision can produce a complete city-wide coverage within a few days, compared to several months with alternative solutions, creating orthorectified and multi-view imagery as well as terrain data simultaneously; and
- Nearmap's innovative imagery delivery solution, which serves the many terabytes of aerial imagery to online consumers through the Nearmap web portal, MapBrowser, and is designed to support hundreds of thousands of simultaneous users which enables fast and secure access to any historic imagery captured by Nearmap.

The technology developed by Nearmap creates very high-resolution aerial imagery with multiple angle views at a fraction of the cost compared to traditional solutions. Our breakthrough technology enables our aerial imagery to be updated much more frequently than other providers, whose images can be, at best, many months if not years out of date. As a result, for the first-time people can see the environment change over time, as Nearmap's aerial imagery within MapBrowser allows users to move back and forward through time to see changes occur in specific locations or across a wide area.

Ortho Imagery

Nearmap imagery is a mosaic of orthorectified images. This means that each raw photo that goes into making up our final, consumable imagery has had the full orthorectification process applied, including removal of terrain distortions and lens distortions. Individual orthoimages are then merged together into a mosaic, which is the imagery that is published in MapBrowser. To accomplish the removal of these terrain distortions, we generate high resolution elevation maps as a necessary part of the rectification process.

During Nearmap's processing adjustments, using our patented processing system, the processing system performs full interior and exterior orientation of cameras and photos, including self-calibration of cameras. Self-calibration is the most accurate form of computing the metric camera interior orientation and lens parameters.

A unique feature of Nearmap's imagery that comes from our HyperCamera systems is the capturing of several photos observing a given point on the ground (e.g. very high photo redundancy) compared to older aerial camera systems. Nearmap employs consistent color adjustment and exposure balancing across our surveys to achieve natural-looking imagery with attention to fine scale features. Nearmap's imagery processing solution is fully automated and designed to create consumable imagery anywhere in the world, generally without requiring any ground control point data whatsoever. This also allows the collection of accurate imagery in adverse conditions where ground point data is not available, is obscured, has moved, or is inaccurate.

Control Processes

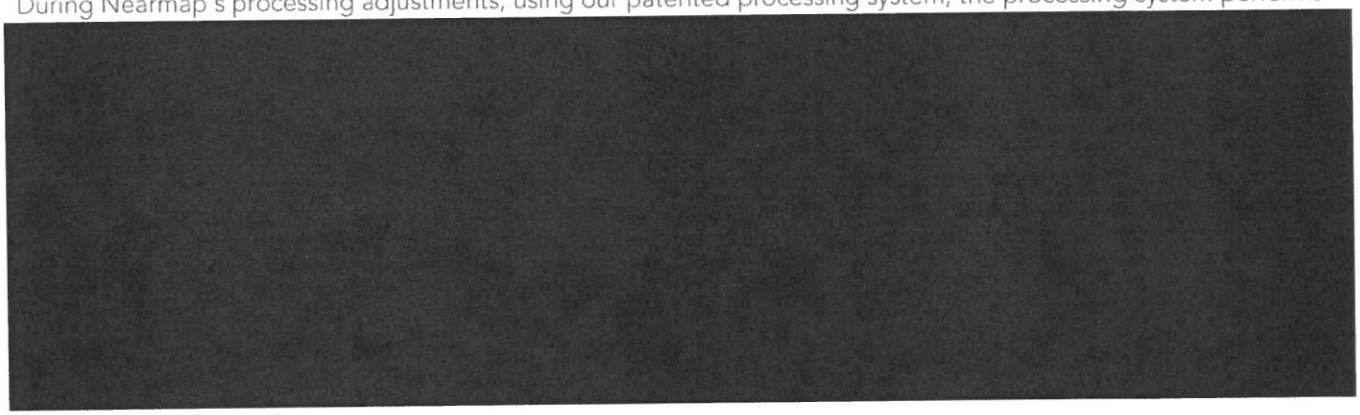
Changes to the operating environment that require a more immediate response will be communicated and managed by Nearmap's account manager. These may include, but are not limited to, day-to-day changes relating to weather, major aircraft or equipment maintenance of an unscheduled nature and minor changes in capture priorities.

Due to the nature of its business, Nearmap is adept at identifying and adapting to changes in prevailing weather conditions. Our experience in conducting work for other Government departments has been that this issue requires constant monitoring, communication and a flexible approach to ensure deliverables can be achieved.

Quality Assurance and Quality Control

Nearmap imagery, for a technical description, are mosaics of orthorectified images. This means that each process applied, including removal of terrain distortions, lens distortions, etc. Individual orthoimages are then merged together into a mosaic, which is the imagery that is published to Nearmap's MapBrowser. To accomplish the removal of these terrain distortions, we generate high resolution elevations maps as a necessary part of the rectification process.

During Nearmap's processing adjustments, using our patented processing system, the processing system performs



Delivery Schedule Risk

With all the moving parts in any aerial mapping program, delivery on schedule is identified as a potential risk. Any possible delay on deliveries will be communicated to the County.

Cloud Processing

The Amazon Web-based cloud processing pipeline allows Nearmap to scale infinitely to speed up production. The access to cloud processing pipelines significantly reduces the schedule risk on the program.

Nearmap's formal QA/QC process is an important part of delivering our high-quality imagery. The flow chart below illustrates the measures we take.

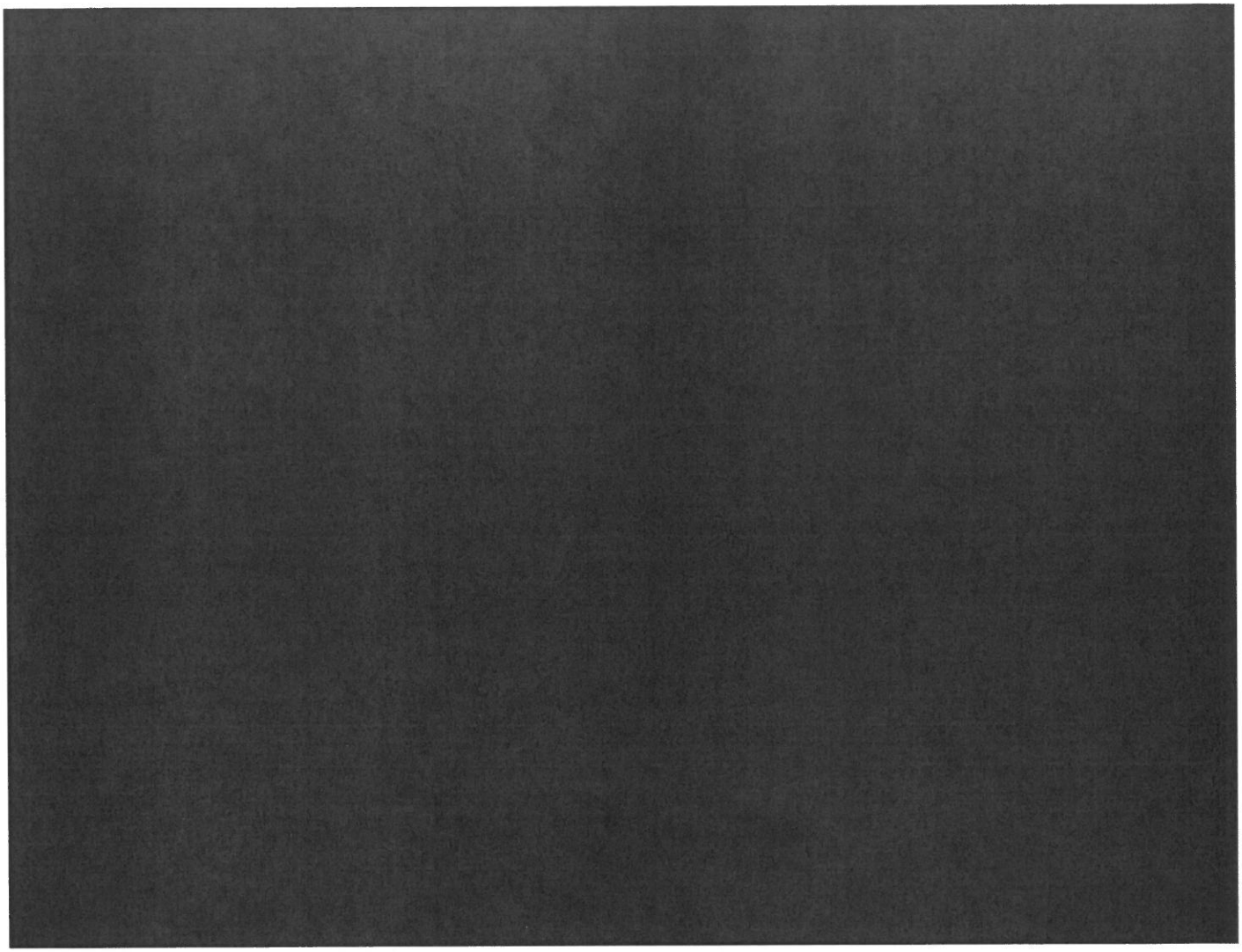
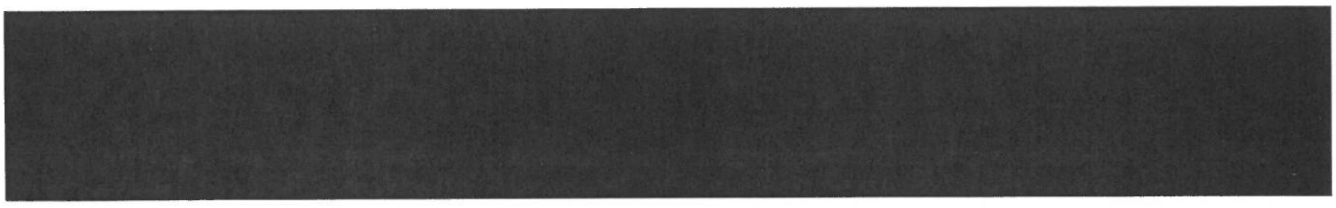
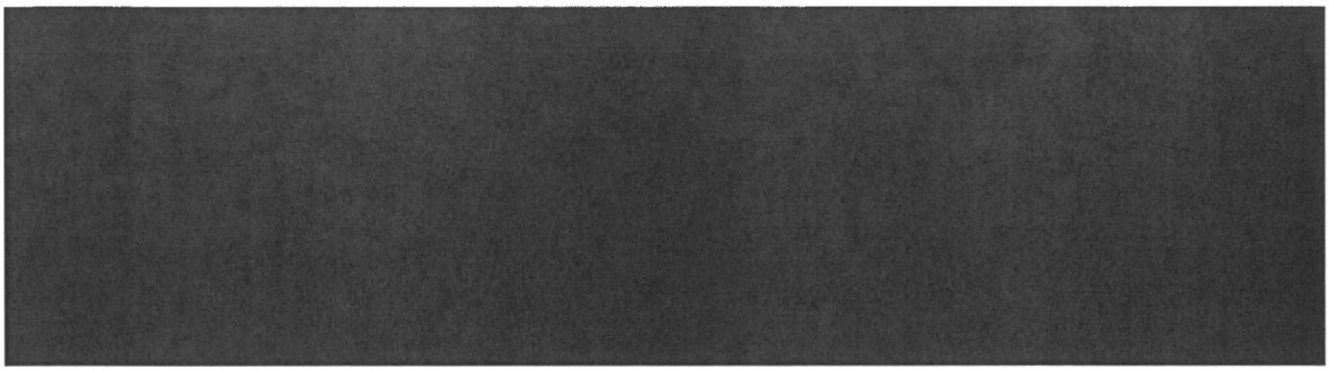


Figure 1. QA/QC Process

Risk Management

Nearmap maintains an integrated system of risk management arrangements at both a corporate level and in conjunction with our flight operators to minimize risk across our business. In terms of our operational activities, Nearmap has rapidly developed a deep understanding of the risks involved in flying, processing and serving very high-resolution aerial imagery and terrain data and how they are most effectively mitigated. As part of our regular operations, we capture, process and serve aerial imagery covering around 1,360,000 km2 globally for FY20 at a resolution of typically captured at 7.5cm GSD or better for both aerial camera systems used by Nearmap. Since our commercial launch in 2008, we have implemented a number of mitigation strategies that treat those risks that are likely to occur and would result in unacceptable consequences. These mitigation strategies include treatment of risks relating to:





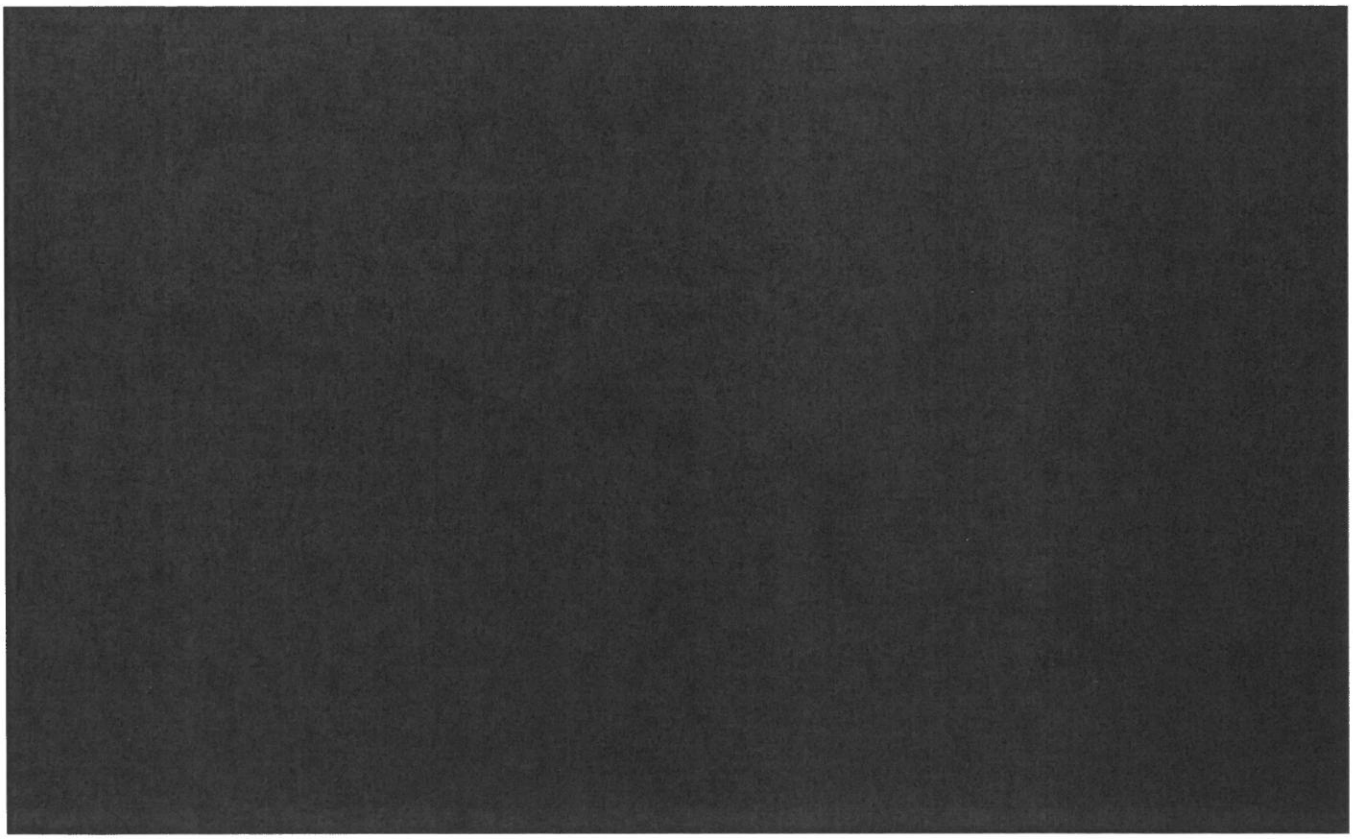
Camera Malfunction

To further mitigate the unlikely risks of camera failures, we ensure that our flight operators have a sufficient supply of cameras and data recorders. Due to our ability to capture vast areas at high resolution, if the data we process isn't to our standards, we recapture the area of interest promptly and at our cost. On the few occasions this has occurred, this remedial action had not impeded capture schedules significantly.

Survey Operations

Nearmap captures imagery in favorable conditions to allow for optimal image quality, avoiding cloud cover, haze, smoke and scheduling captures around air traffic control as required. Our survey operations manager reviews each Nearmap flights dashboard and consults with the pilot at the time of capture. Capturing our surveys with a sun elevation of 30-degrees or greater enables Nearmap to collect imagery with minimal environmental obstructions.

Project References



Project Specifications

Nearmap is offering the Kendall County GIS Department the following:

- Nearmap Subscription for Vertical, Panorama, and Oblique imagery to include:
    - coverage for the County's area of interest for Nearmap vertical imagery of the urbanized County three times a year plus oblique imagery of the urbanized County once per year
    - expansion to cover the full County for vertical imagery in the spring on even years
    - imagery to be provided to the County no later than 30 days after aerial imagery is captured and processed
    - consistent Ground Sampling Distance (GSD) of 3" or better
    - absolute accuracy of 11" RMSE x/y (or better) horizontal, and 16" RMSEz (or better) vertical
    - horizontal measurement accuracy of 4.6" (or better) within one photo and 23" (or better) between photos
    - online access to MapBrowser for assigned users
    - Nearmap supported API access and interoperability with ESRI suite of product plus other CAD, GIS, and 3rd party applications
    - access to historical imagery for area of interest dating back to 2015
    - on premise hard copy of the full County spring aerial (see Cost Summary for full details)
    - multi-year agreement either for a two (2) or four (4) year agreement with the County for vertical expansion in the first year (2 year term) or first and third year (4 year term)
    - coverage and frequency which can be viewed at https://www.nearmap.com/us/en/current-aerial-maps-coverage

The offer under this ITB will be subject to Nearmap's standard licensing terms, which are published at https://www.nearmap.com/us/en/legal/product-agreements.

PRODUCT STANDARD SPECIFICATIONS

Nearmap provides the following high-resolution (~3-inch) frequently-updated aerial imagery:

Vertical (ortho imagery)

Covering more than 71% of the total US population - over 330,000 square miles collected annually.

VERTICAL SPECIFICATIONS		
	HyperCamera 1	HyperCamera 2
Ground Sampling Distance (GSD)	3" or 7.5 cm (or better)	2.3" or 5.8 cm (or better)
Absolute Horizontal Accuracy	25" or 64 cm RMSEx/y	11" or 25.3 cm RMSEx/y
Horizontal Measurement Accuracy	6" or 15 cm within one photo (30" or 76 cm between photos)	4.6" or 11.5 cm within one photo (23" or 58 cm between photos)
Image Export Projection	WGS84 / Spherical Mercator WGS84 / UTM NAD83 / UTM GDA94 / UTM	WGS84 / UTM NAD83 / UTM GDA94 / UTM
Image Bands	Natural RGB Color	Natural RGB Color

Figure 2. Vertical Specifications

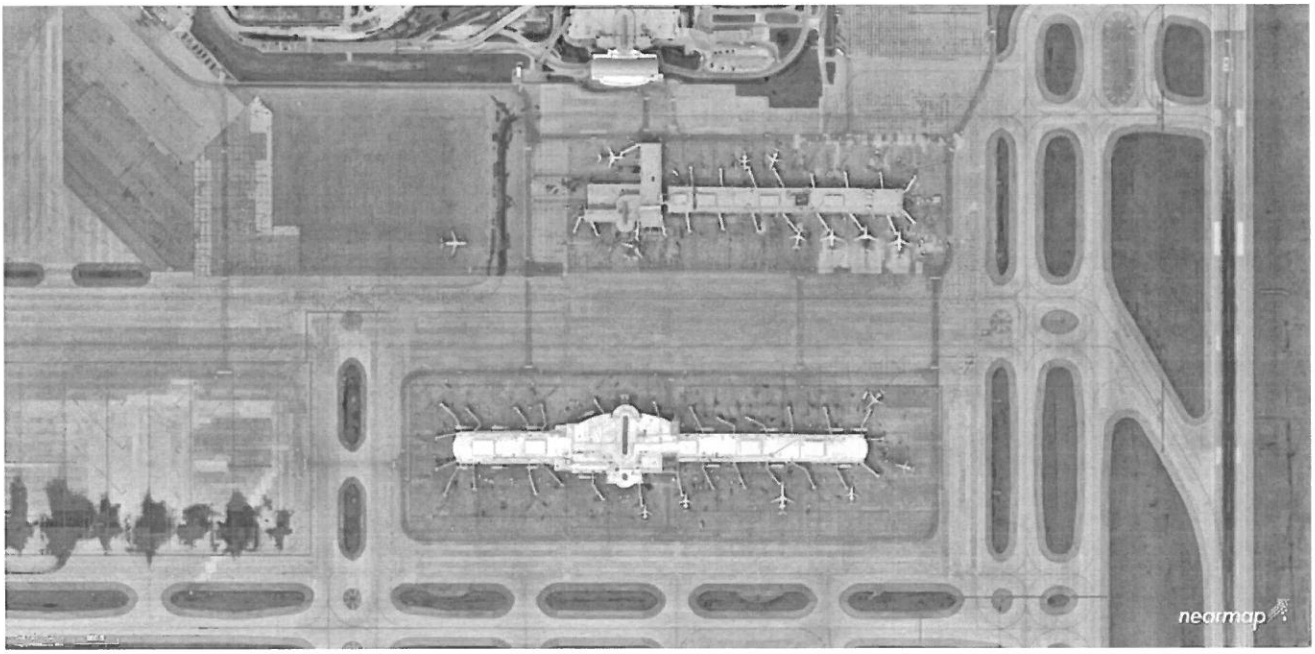


Figure 3. Vertical Imagery – CVG Cincinnati/Northern Kentucky International Airport, Capture Date: February 19, 2019

Figure 4. Vertical Imagery – Paul Brown Stadium, Cincinnati, Ohio, Capture Date: November 8, 2014

Oblique / Panorama

Covering more than 66% of the total US population - over 99,000 square miles collected annually.

Nearmap Panorama imagery is an uninterrupted perspective map for each cardinal direction, giving users the ability to zoom from a regional view, to a community level, down to a neighborhood view. This proposal also includes access to Nearmap Oblique which are the unaltered images as captured by the HC2 system. Nearmap Oblique enables multiple view angles (typically from 15° to 45°) giving users options to see features. Users can access and save Panorama and Oblique images in PNG or JPG image format. The patented HC2 system uses a unique sweeping frame camera system that photographs points of interest at multiple view angles such as 15°, 30°, and 45° from nadir, providing multiple viewing options for the user and minimizing feature obscuration.

OBLIQUE SPECIFICATIONS	
Ground Sampling Distance (GSD)	3" or 7.5 cm
Vertical Measurement Accuracy	6" or 15 cm within one photo
Datum / Projection	WGS84 / Spherical Mercator
Image Bands	Natural RGB Color

Figure 5. Oblique Specifications

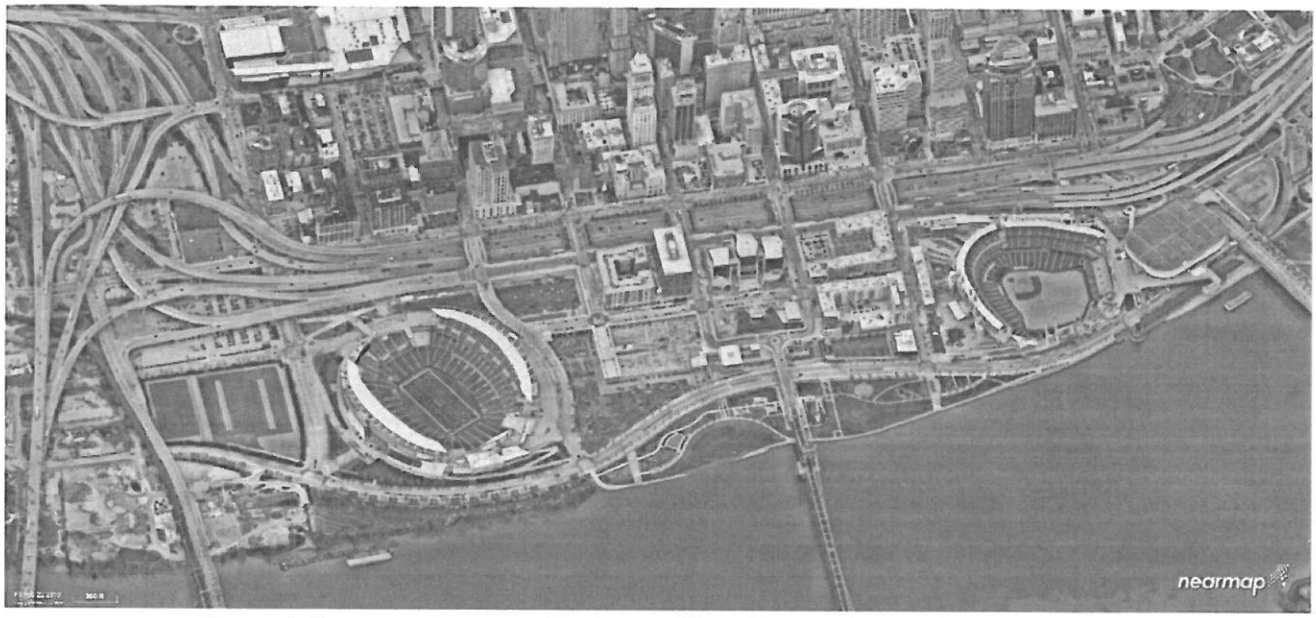


Figure 6. Panorama Imagery – Cincinnati, Ohio, Capture Date: February 22, 2019

Nearmap's coverage area for vertical (orthogonal) and oblique imagery that will be available to the County through its subscription is set out below:

Total Area of Interest: 324 mi²

Total Nearmap current coverage for vertical and oblique imagery (approx.): 158 mi²

- Nearmap current coverage for vertical and oblique imagery in urbanized County area (approx.): 158 mi²
- Nearmap expansion for full County vertical coverage for even year capture(s): 166 mi²

Figure 7. Kendall County Area of Interest and Nearmap Coverage

MapBrowser

All Nearmap accounts provide access to MapBrowser, Nearmap's web-based platform designed to help quickly navigate the library of high-resolution captures. MapBrowser includes easy-to-use width, height, area, pitch and additional measurement tools that provide accurate estimates, eliminating the cost for multiple site visits.

Using MapBrowser, Nearmap imagery can be annotated with notes, shapes and images. Users can highlight specific areas, add notes, or use a library of real-world objects to design logistical site plans.

MapBrowser offers:

- ✓ **Intelligent Search:** Quickly search by address, point of interest, latitude/longitude, or use the "Locate Me" tool in the field for on-site geo-location.
- ✓ **Flexible View:** Smooth unrestricted panning and zooming; full on-screen image rotation.
- ✓ **Precise Measurement:** Accurate measurement of height, width, area, radius, or pitch with instant unit conversion and dynamic adjustment.
- ✓ **Rich Visual Analysis:** Access to current and historical captures with a Split View tool for analyzing change over time.
- ✓ **Purpose-Built Export:** Save georeferenced, time-indexed images with or without measurement drawings and road overlays.
- ✓ **Powerful Integration:** An open API allows for easy and seamless integration of imagery as a base layer in GIS, CAD and other 3rd-party applications.

As mentioned above, MapBrowser provides the user access to current and historical imagery in the following forms: vertical, panorama, and oblique captures throughout the area of interests set out in the images above. Users can easily change image types and orientation through menu and click/touch gestures.

Additionally, MapBrowser provides a number of measurement tools enabling area, linear, and height measurements across vertical and oblique images. The tools allow the user to zoom-in for accurate pixel selection as well as vertex editing to enable quick modifications. Accessing the archived imagery is easily done on MapBrowser by incrementally clicking through the imagery timeline, or by selecting a specific capture date. Nearmap's MapBrowser enables users to review change over time with a side-by-side view and a sliding swipe tool for both vertical and panorama imagery. Further, the location pin will provide the user with the precise date and time of the area in the imagery. As these are mosaicked images from different flight lines or surveys, the date and time may contain a range over time.

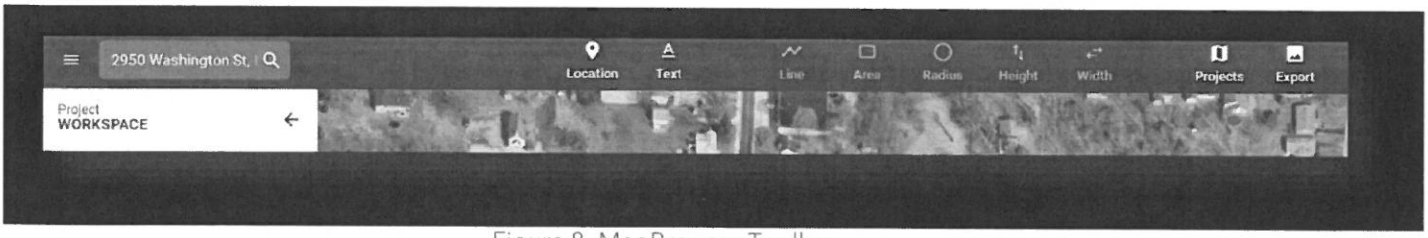
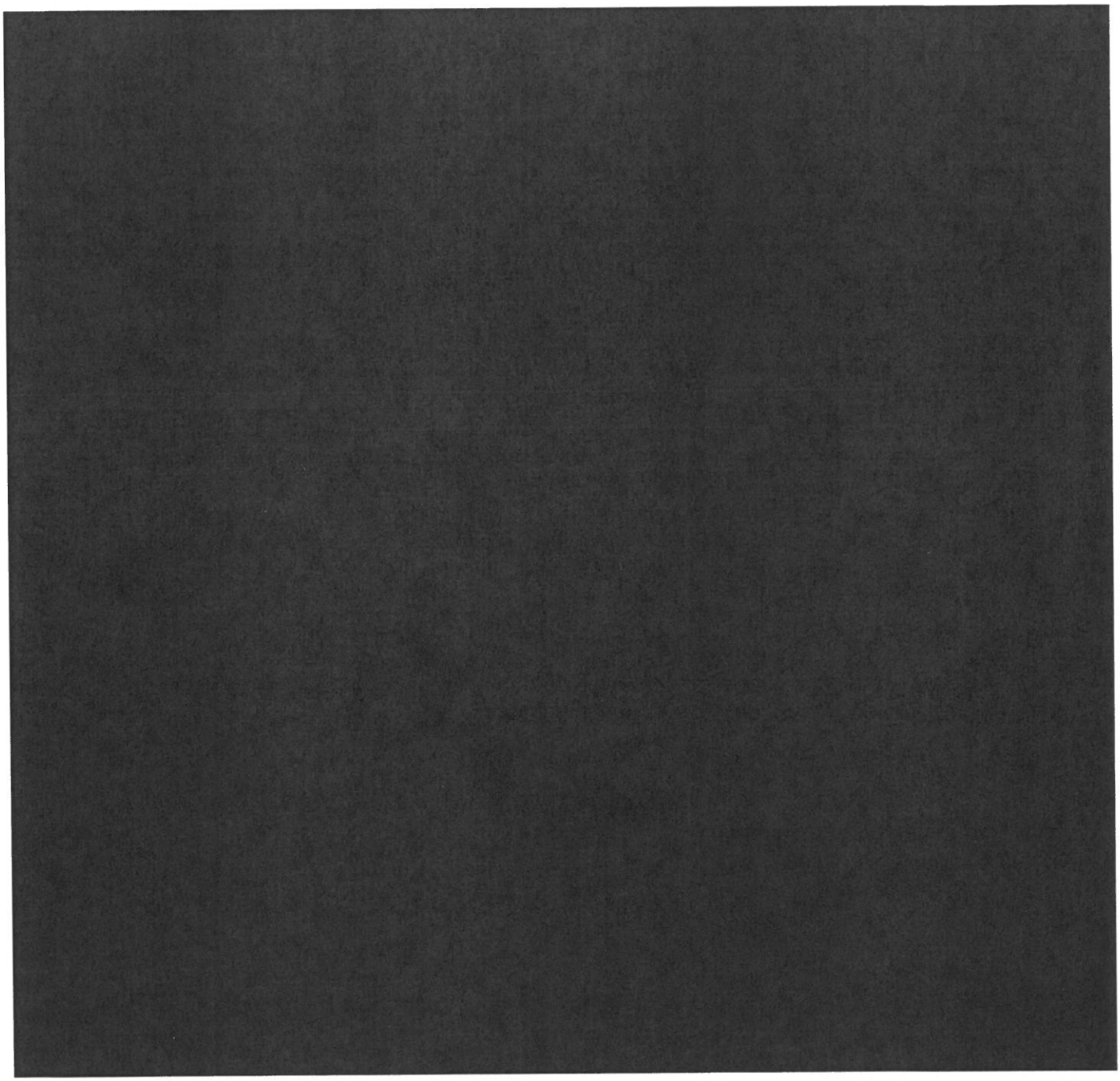


Figure 8. MapBrowser Toolbar

Licensing

The licensing arrangement and the terms proposed for the deliverables under this response to the ITB will be subject to Nearmap's standard licensing terms as published at https://go.nearmap.com/legal/us-productsagreement and where applicable product specific terms as published at https://www.nearmap.com/us/en/legal/us-product-specific-terms. The most recent version of Nearmap's standard licensing terms, dated May 29, 2018 ("**Standard Terms**") will be applicable to the County.



Additional Information and Value-Added Alternatives

3D Imagery

Nearmap continues to provide new forms of location content to the market including 3D imagery which is now available within MapBrowser. This new capability allows customers to easily navigate from 2D to Oblique to 3D imagery. Nearmap streams 3D imagery into MapBrowser while also allowing users to navigate through a photo realistic landscape from every direction. Users can pan, zoom, tilt the landscape and, if needed, quickly switch back to a 2D perspective.

With wide-scale, regularly refreshed textured mesh, DSM, point cloud, and true ortho datasets of 78 major urban areas, you can conduct sophisticated analysis, engage your community, accurately predict costs, and view change over multi-year projects. With on-demand datasets available for immediate use, there's no waiting to start building your new reality. We capture, process, and deliver high-fidelity 3D content for industry-leading applications so you can enjoy a seamless workflow on your preferred CAD/GIS platform.

With Nearmap 3D, users also have the ability to define an export area for 3D, select an OBJ or FBX file (textured mesh), .3MX, .SLPK, cesium tiles and/or a .LAS point cloud format and export the imagery. Export files will be provided to the user as links for downloading. All of this extends Nearmap's position in 3D imagery. Both 3D visualization and export are licensed separately from Nearmap. If 3D imagery is of interest to the County, Nearmap would be pleased to discuss the County's requirements and put forward a proposal to meet those requirements.

The 3D products are delivered either online using MapBrowser 3D Export, or offline or via Secure Cloud Transfer where online export is not available.

3D - covering more than 53% of the US population – over 99,000 square miles collected annually.

3D SPECIFICATIONS	
Ground Sampling Distance (GSD)	6" or 15 cm
Absolute Horizontal Accuracy	11" or 28 cm RMSEx/y
Datum / Projection	WGS84 / Spherical Mercator
Image Bands	Natural RGB Color

Figure 9. 3D Specifications

Figure 10. 3D Textured Mesh .SLPK Format Visualized in ESRI ArcGIS Pro Demonstrating Viewshed Analysis

Cost Summary

Nearmap's cost proposal to the County is set out in the table below:

Proposed Product Subscription	Line Item Costs
Orthogonal, Panorama and Oblique Imagery (sub-3" resolution); includes coverage for vertical imagery of the urbanized County three times a year plus oblique/panorama imagery of the urbanized County once per year in addition to full County vertical coverage captured in the spring on even years.	$27,500 per year
Enterprise Site Licenses for Orthogonal and Oblique Imagery access for all participants to Web Based Product / Application - MapBrowser	Included at no additional cost.
On-premise copy plus external media drive for delivery of Orthogonal Imagery One copy of full County vertical imagery with a spring capture for that year to be delivered in the first year of the term (for a 2 year agreement only) and another single copy in the third year with a spring capture for that year where there is a 4 year agreement.	Included at no additional cost.
Software Maintenance and System Support Services	Included at no additional cost.
Training	Included at no additional cost.
Multi-year Total Proposed Amount – 2 years Includes coverage for vertical imagery of the urbanized County three times a year plus oblique imagery of the urbanized County once per year in addition to full County vertical coverage captured in the spring on even years (1 flight). **$27,500 Annually**	***$55,000***
Multi-year Total Proposed Amount – 4 years Includes coverage for vertical imagery of the urbanized County three times a year plus oblique imagery of the urbanized County once per year in addition to full County vertical coverage captured in the spring on even years (2 flights). **$25,000 Annually**	***$100,000***

Additional Services / Add-ons	Total Proposed Amount
3D Viewer (optional)	*+20% off list*
3D Export (optional)*	*+30% off list*

*Additional 3D export available for $250/square mile export

nearmap

PLEASE READ THIS PRODUCTS AGREEMENT CAREFULLY. BY ACCEPTING THIS AGREEMENT EITHER BY CLICKING A BOX INDICATING YOUR ACCEPTANCE OR EXECUTING A QUOTE, YOU AGREE TO BE BOUND BY THIS PRODUCTS AGREEMENT, THE QUOTE AND ALL TERMS INCORPORATED BY REFERENCE. IF YOU DO NOT AGREE TO ALL OF THESE TERMS, DO NOT ACCESS OR USE, YOU MUST NOT ACCEPT THIS PRODUCTS AGREEMENT AND NOT USE ANY NEARMAP PRODUCTS AND SERVICES.

PRODUCTS AGREEMENT

Recitals

A. Nearmap is a provider of aerial photography and associated products and services.
B. Nearmap agrees to supply the Licensee with the Products described in the Quote, subject to the terms of this agreement and the Schedules, which together make up the legal agreement between the Licensee and Nearmap (**Agreement**).

Definitions of capitalized words are set out in section 18 of the Agreement.

1. GRANT OF LICENSE TO USE PRODUCTS

1.1 **Grant** Subject to the terms of this Agreement and payment by the Licensee of the Fee, Nearmap grants to the Licensee a limited, non-exclusive, non-transferrable license for the Term to use the Products in the Coverage Area for the Permitted Purpose (**License**).

1.2 **Authorized Users** The Products available under this License are only to be used by the total number of Authorized Users. The Licensee shall implement reasonable controls to ensure that it does not exceed the number of Authorized Users. If you exceed the total number of Authorized Users, you will be in breach of this Agreement.

1.3 **Renewal** Upon the expiration of the initial Term, this Agreement subject to any amendments to this Agreement required by Nearmap, shall be renewed automatically for successive renewal terms of twelve (12) months each (each a **Renewal Term**) unless terminated by either party by providing at least 30 days' written notice of its intention not to renew this Agreement prior to the expiry of the initial Term or any current Renewal Term. The Licensee will receive notice of any pricing changes or changes to the terms of this Agreement prior to the commencement of each Renewal Term. If Auto Renew is marked "No" in the Quote, this section 1.3 is not applicable to the Licensee.

1.4 **Replacement Product** Nearmap may from time to time supply the Licensee with a replacement Product of no lesser quality than the previously supplied Product at its absolute discretion. If requested by Nearmap, the Licensee must stop using any previously supplied Product and use the replacement Product from date of delivery from Nearmap.

1.5 **Acknowledge Nearmap source** The Licensee must expressly acknowledge Nearmap, in a reasonably prominent manner (by display of the Nearmap logo or other appropriate attribution), as the source of any Product or Derivative Works that the Licensee use, copy, modify or distribute. Unless otherwise permitted in writing, the Licensee must not remove or cause to be removed any Nearmap logo, watermark or other Nearmap attribution in any Product or Derivative Works.

1.6 **Periodic Data Allowance** Nearmap measures data usage by the Licensee under this License. In using the Products, the Licensee's consumption of data in the Period must not exceed the Periodic Data Allowance. The following conditions apply to the Licensee's Periodic Data Allowance:

(a) the Periodic Data Allowance used by the Licensee will be calculated at the end of every Period based on the total data usage of all users who access and use the Licensee's Nearmap account during that Period;

(b) if the Licensee elects to download Products available to the Licensee on the Website, this will be applied to the Periodic Data Allowance. The Licensee may have the option to elect to download high resolution images. Downloading these images will use a higher portion of the Periodic Data Allowance than downloading a lower resolution image;

(c) if the amount of data consumed by the Licensee in any given Period is less than the Periodic Data Allowance, the balance will not be rolled over to a following Period;

(d) the Licensee agrees that Nearmap may charge the Licensee additional fees, up to a maximum of the Excess Data Rate, for any use by the Licensee of the Products resulting in data consumption in excess of the Periodic Data Allowance;

(e) Nearmap will provide notice to the Licensee if it exceeds its Periodic Data Allowance for any Period; and

(f) if the Licensee exceeds the Periodic Data Allowance, Nearmap may, in its absolute discretion, elect to:
  (i) restrict the Licensee's access to the Products until the Periodic Data Allowance is reset or until additional fees are paid; or
  (ii) immediately cease the Licensee's access to the Products for the remainder of the Period.

1.7 **Unavailability** Subject to section 12, if a Product is not available for a period of 3 consecutive days the Term will be extended by the period of unavailability.

2. RESTRICTIONS ON RIGHT TO USE PRODUCTS

2.1 **Permitted Purpose** The Products must only be used for the Permitted Purpose.

2.2 **No right to distribute, transfer, resell, assign or sublicense** This License is granted only to the Licensee. The Licensee must not distribute, transfer, resell, assign, rent, lease or sublicense any Product or any of the Licensee's rights under this License without Nearmap's prior written consent.

2.3 **No third party access** Unless otherwise provided in this Agreement, the Licensee must not make any Product available in any medium or manner to any third party (including the Licensee's subsidiaries and affiliates).

2.4 **Employees** The Licensee may make Products available to any employee, subject to that person complying with the terms of the Agreement as if they were a party to it and the total number of Authorized Users has not been exceeded. The Licensee is responsible and liable for any Authorized User who uses the Licensee's account access details or uses Products made available to the Licensee in breach of this Agreement, including, without limitation, for any additional fees that become payable if the Licensee exceeds the number of Authorized Users.

2.5 **No machine learning** The Licensee must not conduct machine learning work which includes but is not limited to any:

(a) machine learning models (including the model form and model parameters);
(b) outputs of machine learning models;
(c) software that processes or transforms input data for training a machine learning model or getting a prediction from a machine learning model into a format suitable for training or making such prediction; or
(d) software used to train a machine learning model or compute outputs of a machine learning model for a given set of input data.

2.6 **No caching and creation of database** Except as expressly permitted under this Agreement, the Licensee is not permitted to:

(a) use its access to the Products under this Agreement for the purposes of creating a database of imageries for resale, distribution, sub-license or other commercial purposes and mass downloads or bulk feeds of any imagery; and
(b) pre-fetch, retrieve, cache, index, or store any Content or portion of the Products.

2.7 **Limits on use of Website** In the Licensee's use of the Website, the Licensee must not (without the prior written consent of Nearmap):

(a) provide a link to another URL;
(b) upload content or other information to the Website;
(c) do anything to damage, interfere or disrupt access to the Website or do anything which might impair its functionality;
(d) use the Website in any way to send unsolicited (commercial or otherwise) e-mail or any material for marketing or publicity purposes, or any similar abuse of either;
(e) publish, post, distribute, disseminate or otherwise transmit, defamatory, offensive, infringing, obscene, indecent or other unlawful or objectionable or confidential material or information;
(f) make available, upload or distribute by any means any material or files that contain any viruses, bugs, corrupt data, "trojan horses", "worms" or any other harmful software;
(g) remove any content or information from the Website, other than that permitted under the terms of this License;
(h) falsify the true ownership of a Product or other material or information made available via the Website;
(i) obtain or attempt to obtain unauthorized access, through whatever means, to the Website;
(j) use the Website other than in accordance with the Agreement;
(k) attempt any of the above acts or engage, encourage or permit another person to do any of the above acts; or
(l) provide or allow access which exceeds the total number of Authorized Users in connection with use of the Product.

2.8 **Breach** If the Licensee breaches any of sections 2.1 to 2.5 inclusive, Nearmap reserves its rights to terminate the Agreement in accordance with section 6.2, restrict the Licensee's access to the Products and/or take any other steps available to it at law.

3. THE LICENSEE'S ACCESS TO PRODUCTS AND SERVICES

3.1 Any password/ID issued by Nearmap to an Authorized User is personal and confidential to that Authorized User. If Nearmap suspects that any password/ID is being used by an unauthorized user, by a different Authorized User to the person whom it was issued to or the number of Authorized Users has been exceeded, Nearmap may:

(a) cancel that password/ID;
(b) restrict the Licensee's access to the Product including but not limited to low resolution imagery for the remainder of the month;
(c) immediately cease the Licensee's access to the Product;

(d) require the Licensee to pay for any additional charges in accordance with Nearmap's then current price list for the applicable Product, in respect of any such unauthorized use; and/or

(e) exercise any other right available to Nearmap under the terms of this Agreement.

3.2 **Downtime** Nearmap will use reasonable efforts to ensure that the Website remains available but cannot guarantee that this will be the case at all times. Nearmap agrees that, wherever possible, all planned maintenance will be done out of normal Operational Hours to ensure optimal uptime of the Website. When Nearmap becomes aware of any Fault, Nearmap will use reasonable efforts to:

(a) allocate such resources as may be necessary to remedy the Fault; and

(b) otherwise take all reasonable steps to remedy the Fault so as to minimize any disruption to the Licensee's use of the Products.

3.3 **Expiry** The Licensee's License will expire at the end of the Term unless renewed in accordance with section 1.3 and may be suspended or terminated in accordance with section 6.2 if the Licensee is in breach of this Agreement.

3.4 **Unauthorized Use** Licensee shall take reasonable steps to prevent unauthorized access to the License, including without limitation protect its passwords and other log-in information. The Licensee shall notify Nearmap immediately of any known or suspected unauthorized use of the License or breach of its security and shall use best efforts to stop said breach.

3.5 **Audit** During the Term of this Agreement and for two (2) years after termination or expiry of this Agreement, the Licensee shall maintain accurate and complete records regarding its use of the Products and the Licensee shall permit Nearmap (or its auditors) access to the business location(s), books and records, employees and/or contractors pertaining to the Licensee's use of the Products. Nearmap will give at least thirty (30) days prior written notice of an audit and will not conduct an audit more than once per calendar year unless non-compliance findings are noted and in which case the audit period can be expanded.

3.6 **Audit Findings** If an audit results in findings of non-compliance, Nearmap may, at its discretion (a) invoice any additional license fees due based on the standard Nearmap Fees in place at the time of the original license grant, (b) recover the reasonable cost of the audit if additional Fees exceed five (5) per cent of the Fees paid during the audit period and (c) terminate this Agreement in accordance with section 6.2. Licensee must pay all invoices issued under this section within thirty (30) days following the date of invoice.

4. FEES

4.1 **Fees** The Fees payable by the Licensee are set out in the Quote.

4.2 **Payment** The Fees are payable by the Licensee to Nearmap in the manner and by the due date as set out in the Quote at the beginning of each Term unless otherwise agreed by Nearmap.

4.3 **No cancellation** Subject to section 4.4, all Fees are non-cancellable and non-refundable except as expressly set out in the Agreement.

4.4 **Refund of Fees** If the Licensee is not in breach of the Agreement, and Nearmap elects to terminate the Agreement under section 6.3, Nearmap will refund the Licensee any pre-paid fees relating to the portion of Term remaining as at the date of termination.

4.5 **Taxes** Unless otherwise stated, Fees and Late Payment Fee do not include any direct or indirect local, state, federal or foreign taxes, levies, duties or similar governmental assessments of any nature, including value-added, excise, use or withholding taxes (collectively, "Taxes"). Licensee is responsible for paying all Taxes except those assessable against Nearmap based on its income. Nearmap will invoice Licensee for such Taxes if Nearmap believes it has a legal obligation to do so and Licensee agrees to pay such Taxes if so invoiced.

4.6 **Late Payment** If a scheduled Fee payment is not made in full for any reason, the Licensee gives Nearmap permission to charge a Late Payment Fee and/or immediately limit or terminate access to the Products provided under this License.

4.7 **Acceleration** In the event of the Licensee failing to pay Nearmap the Fees in full in accordance with the terms of this Agreement, all Fees (whether accrued or not) will become immediately due and payable.

4.8 **Amendments** Fees at the end of the Term may only be increased subject to Nearmap and the Licensee agreeing in writing.

5. THE LICENSEE'S WARRANTIES

5.1 **Warranty** The Licensee warrants that:

(a) any information the Licensee supplies to Nearmap in respect of the Agreement is complete and correct. The Licensee must keep Nearmap informed of any change to the Licensee's information provided to Nearmap, including any change to the Licensee's contact details, or the details of a credit card used for payment;

(b) the Licensee will immediately notify Nearmap of any usage of any Product outside the Permitted Purpose, and provide any other information reasonably requested by Nearmap;

(c) the Licensee has the power to enter into this Agreement and to perform the obligations under it; and

(d) the Licensee has and will comply with all relevant laws relating to the Licensee's use of the:
   (i) License;
   (ii) Products; and
   (iii) Website.

6. TERMINATION AND EXPIRY

6.1 **Initial Term** This Agreement commences on the Commencement Date and continues until expiry of the Term unless terminated earlier in accordance with the terms of this Agreement or renewed under section 1.3.

6.2 **Termination by Either Party** Either party may terminate this Agreement with immediate effect by giving notice to the other party if:

(a) the other party breaches any of its obligation under this Agreement capable of remedy and fails to remedy that breach within fourteen (14) days after receiving notice requiring it to do so;

(b) the other party breaches any of its obligations under this Agreement incapable of remedy; or

(c) the other party files for protection under bankruptcy laws, makes an assignment for the benefit of creditors, appoints or suffers appointment of a receiver or trustee over its property, files a petition under any bankruptcy or insolvency act or has any such petition filed against it which is not discharged within sixty (60) days of the filing thereof or admits in writing its inability to pay its debt generally as they become due.

6.3 **Termination by Nearmap** Regardless of anything else in the Agreement but subject to section 4.4, Nearmap has the right, in its absolute discretion and upon giving the Licensee 10 Business Days' notice, to terminate the Agreement and the License.

6.4 **Consequences** If the Agreement is terminated under sections 6.2 or 6.3 or expires at the end of the Term:

(a) the License immediately terminates and the Products will no longer be available to the Licensee;

(b) The Licensee must immediately destroy, delete or return to Nearmap all Products; and

(c) subject to section 7.3, the Licensee and the Authorized Users are not permitted to use any Products for any purpose.

6.5 **Costs** Nearmap reserves all rights following termination of this Agreement, including any rights available to Nearmap to collect any outstanding Fees which may be owed by the Licensee. The Licensee will be liable for any reasonable legal costs incurred by Nearmap in enforcing its rights following termination of this Agreement.

6.6 **Continuing obligations** After expiry or termination of the Agreement or a License, sections 1.5, 2, 7, 8, 9, 10, 13, 14, 15, and 17 will still be binding on the Licensee in relation to Products licensed or obtained during the Term.

7. INTELLECTUAL PROPERTY

7.1 **Ownership** Unless otherwise indicated, the Website, the Products and all associated Intellectual Property Rights, data, information and software are owned by Nearmap and are protected by copyright, moral rights, trademark and other laws relating to the protection of intellectual property. Nearmap reserves all of its Intellectual Property Rights. Except for the limited License granted to the Licensee in section 1.1, no ownership or Intellectual Property Rights in the Website or any Product will pass to the Licensee.

7.2 **Trademarks** The Nearmap trademarks and all associated Intellectual Property Rights are owned by Nearmap. Nothing in the Agreement confers upon the Licensee any rights to use or modify any of Nearmap's trademarks, except that Nearmap grants the Licensee a royalty free, limited non-exclusive, non-transferrable, non-sublicensable license to use Nearmap trademarks to the extent necessary to comply with the Licensee's obligations under the Agreement.

7.3 **Derivative Works** Subject to compliance with all other terms of this Agreement, the Licensee is granted a non-exclusive right to produce and use Derivative Works for a Permitted Purpose. Unless otherwise notified to the Licensee by Nearmap, the Licensee may continue using Derivative Works following termination or expiry of this Agreement. The Licensee and Nearmap will jointly own all rights in and to any Product embedded in a Derivative Work.

8. THIRD PARTY PROVIDERS

8.1 Nearmap engages Third Party Providers in order to provide the Products. The Licensee agrees to comply with all requirements and restrictions that Third Party Providers may impose on Licensee directly or indirectly by imposition on Nearmap, in relation to their respective products and/or services, at the time of, or subsequent to, the Agreement. The Licensee acknowledges that provision of the Products is subject to, and dependent upon, adequate delivery of products and services by the Third Party Providers. In accordance with section 9 of the Agreement, Nearmap's liability is reduced to the extent that loss or damage of any kind is caused or contributed to, by Third Party Providers. For the Licensee's convenience, Nearmap has set out in this section 8 links to the terms and conditions of these Third Party Providers with which the Licensee is required to comply. The Licensee further acknowledges that by entering into the Agreement, the Licensee agrees to comply with the respective terms and conditions of Third Party Providers, which currently include the Third Party Providers set out below. Third Party Providers and their terms of supply may change from time to time during the Term of the Agreement.

(a) **Google** Nearmap engages Google to supply navigation and geo-location data, and related content. By entering into the Agreement, the Licensee agrees to the Google Terms of Service as they apply to the Licensee. https://www.google.com/enterprise/earthmaps/legal/us/maps_purchase_agreement_apac.html

(b) **Amazon Web Services (AWS)** Nearmap engages Amazon Web Service, Inc. to provide services (**AWS Services**) which enables delivery of the Products. By entering into the Agreement, the Licensee agrees to comply with the AWS Customer Agreement (http://aws.amazon.com/agreement/) as it applies to the Licensee. Use of the Products is also subject to the Licensee's compliance with the following AWS policies:
   (i) Privacy Policy (http://aws.amazon.com/privacy/)
   (ii) Acceptable Use Policy (http://aws.amazon.com/aup/)
   (iii) Terms of Use (http://aws.amazon.com/terms/)
   (iv) Service Terms (http://aws.amazon.com/serviceterms/)
   (v) Trademark Use Guideline (http://aws.amazon.com/trademark-guidelines/);

(c) **NASA/NCAS** By entering into the Agreement, the Licensee agrees to the following NASA/NCAS terms and conditions: (https://www.nearmap.com/legal-information/copyright)

9. WARRANTY AND LIABILITY

9.1 **Warranty** Nearmap agrees to use industry standard GPS to ensure captured imagery has accurate geographical positioning.

9.2 **DISCLAIMER OF WARRANTIES** OTHER THAN AS SET FORTH IN SECTION 9.1, THE WEBSITE AND THE PRODUCTS ARE PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS, WITHOUT ANY WARRANTIES OF ANY KIND TO THE FULLEST EXTENT PERMITTED BY LAW. NEARMAP AND ITS CONTENT PROVIDERS, AGENTS AND AFFILIATES EXPRESSLY DISCLAIM ANY AND ALL WARRANTIES, WHETHER EXPRESS, STATUTORY OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, TITLE, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, AND COURSE OF DEALING OR PERFORMANCE.

9.3 **NO REPRESENTATIONS** WHILE NEARMAP USES REASONABLE EFFORTS TO ENSURE THE ACCURACY, CORRECTNESS AND RELIABILITY OF THE PRODUCTS AND THE WEBSITE, NEARMAP MAKES NO REPRESENTATIONS OR WARRANTIES AS TO THE ACCURACY, CORRECTNESS OR RELIABILITY OF ANY PRODUCT OR CONTENT CONTAINED ON THE WEBSITE. THE PRODUCTS AND THE WEBSITE ARE SUBJECT TO ERRORS, OMISSIONS, INACCURACIES AND DISTORTIONS AND NEARMAP WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR ANY CLAIMS MADE BY OR ARISING OUT OF, ANY PERSON OR ENTITY SEEKING TO RELY ON ANY OF THE PRODUCTS OR THE WEBSITE.

9.4 **LIMIT OF LIABILITY** NEARMAP'S LIABILITY FOR: (A) A BREACH OF A WARRANTY UNDER SECTION 9.1; OR (B) A BREACH OF A WARRANTY WHICH IS IMPLIED OR IMPOSED IN RELATION TO THIS LICENSE UNDER LEGISLATION AND CANNOT BE EXCLUDED, WILL BE LIMITED TO, AT NEARMAP'S OPTION, REPLACING OR REPAIRING THE PRODUCTS OR SUPPLYING PRODUCTS EQUIVALENT TO THE RELEVANT PRODUCTS, OR PAYING THE COST OF REPLACING OR REPAIRING THE PRODUCTS.

9.5 **NO LIABILITY FOR CLAIMS** TO THE EXTENT PERMITTED BY LAW, IN NO EVENT WILL NEARMAP, ITS CONTENT PROVIDERS, AGENTS OR AFFILIATES BE LIABLE FOR ANY CLAIMS OF ANY KIND ARISING FROM OR CONNECTED WITH THE USE OF THE WEBSITE OR THE PRODUCTS, OR THE UNAVAILABILITY OF THE SAME, INCLUDING BUT NOT LIMITED TO LOSS OF USE, LOSS OF PROFITS OR LOSS OF DATA, AND DIRECT, INDIRECT, INCIDENTAL, PUNITIVE AND CONSEQUENTIAL DAMAGES, WHETHER IN CONTRACT, TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE) OR OTHERWISE. THE LICENSEE IS RESPONSIBLE FOR THE ENTIRE COST OF ALL SERVICING, REPAIR OR CORRECTION REQUIRED DUE TO THE LICENSEE'S USE OF THIS WEBSITE OR THE PRODUCTS. THIS EXCLUSION APPLIES, WITHOUT LIMITATION, TO ANY CLAIMS CAUSED BY OR RESULTING FROM RELIANCE BY A USER ON ANY INFORMATION OBTAINED FROM NEARMAP.

9.6 **AGGREGATE LIMIT** IN NO EVENT WILL THE AGGREGATE LIABILITY OF NEARMAP, WHETHER IN CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE, WHETHER ACTIVE, PASSIVE OR IMPUTED), PRODUCT LIABILITY, STRICT LIABILITY OR OTHER THEORY, ARISING OUT OF OR RELATING TO THE USE OF THE PRODUCTS EXCEED ANY COMPENSATION OR FEE THE LICENSEE HAS PAID, IF ANY, TO NEARMAP FOR ACCESS TO OR USE OF THE PRODUCTS OVER THE 12 MONTH PERIOD PRIOR TO THE ALLEGED DEFAULT, BREACH OR EVENT GIVING RISE TO THE LIABILITY.

9.7 **Third Party Providers** The Licensee acknowledges that Nearmap relies on the services of Third Party Providers in order to supply the products and services. Without limiting any of the above, for the avoidance of doubt, to the fullest extent permitted by applicable law, Nearmap will not be liable for any loss, damage, or cost of any kind, which is caused, or contributed to, by a third party service provider.

9.8 **Indemnity** The Licensee agrees to indemnify Nearmap and its directors, officer, employees, agents and subcontractors, from and against any and all direct or indirect claims, damages, losses, liabilities, expenses and costs (including reasonable attorney's fees and costs) arising from or out of:

(a) the Licensee's actual or alleged breach of any provisions of this Agreement;
(b) the Licensee's use of the Product for any purpose; and
(c) the Licensee's use of, or any third party's use of, or inability to use, any Derivative Works, including without limitation, any output from the Derivative Works.

9.9 Nearmap will provide the Licensee with notice of any such claim or allegation, and Nearmap has the right to participate in the defense of any such claim at its expense.

10. COPYRIGHT COMPLAINTS

10.1 Subject to section 9, if any third party brings a Claim against the Licensee alleging that the Licensee's use of the Products in accordance with this License infringes their copyright ("**Infringement Claim**"), Nearmap will defend the Licensee against the Claim and pay any settlement to which Nearmap consents or final court-awarded damages for which the Licensee is liable.

10.2 The Licensee must:

(a) promptly notify Nearmap of any such Infringement Claim;
(b) not make any admissions in relation to the Infringement Claim without Nearmap's prior written consent;
(c) permit Nearmap to conduct the defense of the Infringement Claim including all negotiations for settlement; and
(d) provide Nearmap with any assistance reasonably requested to allow Nearmap to defend the Infringement Claim.

10.3 Nearmap will have no liability for any Infringement Claim:

(a) that arises from any:
  (i) use of the Product in violation of this Agreement;
  (ii) modification of the Product by anyone other than Nearmap or a party authorized by Nearmap in writing by Nearmap to modify the portion of the Product applicable to the Infringement Claim; or
  (iii) third-party products, services, hardware, software or other materials, or a combination of these with the Products would not be infringing without this combination; or
(b) if the Licensee fails to comply with section 10.2.

10.4 To the maximum extent permitted by law, this section 10 sets out Nearmap's sole and exclusive liability, and the Licensee's sole and exclusive remedy, for any third party Infringement Claims brought against the Licensee in relation to an infringement of Intellectual Property Rights.

11. PRIVACY POLICY

11.1 Nearmap will use any data supplied by the Licensee as set out in Nearmap's Privacy Policy, available at http://go.nearmap.com/legal/privacy-policy.

11.2 By entering into this Agreement, the Licensee expressly consents to receiving by email direct marketing communications from Nearmap.

11.3 By entering into this Agreement, the Licensee acknowledges that personal information provided by the Licensee in the course of accessing Products (including, without limitation, credit or debit card details provided by the Licensee for the purpose of paying Nearmap) may be disclosed to and held by one or more of Nearmap's third party suppliers and partners (including, without limitation, providers of payment processing services), and used by those third parties in connection with the supply of Products. Nearmap will have no liability whatsoever with respect to any personal information held by a third party in connection with the supply of Products.

12. FORCE MAJEURE

12.1 **Force Majeure Event** If a party is unable to perform or is delayed in performing an obligation under this Agreement (except for any obligation to pay money, including Fees) because of an acts of war, terrorism, hurricanes, earthquakes, other acts of God or of nature, strikes or other labor disputes, riots or other acts of civil disorder, embargoes, or other causes beyond the performing party's reasonable control (**Force Majeure Event**):

(a) that obligation is suspended but only so far and for so long as that party is affected by the Force Majeure Event; and
(b) the affected party will not be responsible for any loss or expense suffered or incurred by the other party as a result of, and to the extent that, the affected party is unable to perform or is delayed in performing its obligations under this Agreement because of the Force Majeure Event.

12.2 **Notice of Force Majeure Event** If a Force Majeure Event occurs, the party affected by the Force Majeure Event must:

(a) promptly give the other party notice of the Force Majeure Event and an estimate of the non-performance and delay;
(b) take all reasonable steps to overcome the effects of the Force Majeure Event; and
(c) resume compliance as soon as practicable after the Force Majeure Event no longer affects it.

13. CONFIDENTIALITY

13.1 The Product includes metadata and other confidential and proprietary information of Nearmap (**Confidential Information**). The Licensee must not use any Confidential Information for any purpose not expressly permitted hereunder and will disclose Confidential Information only to its employees who have a need to know for purposes of this Agreement and who are under a duty of confidentiality no less restrictive than the Licensee's duty hereunder. The Licensee will protect Confidential Information from unauthorized user, access, or disclosure in the same manner as it would protect its own confidential or proprietary information of similar nature and with no less than reasonable care.

14. NOTICES

14.1 All notices and consents will be in writing and will be considered delivered and effective upon receipt (or when delivery is refused) when (a) personally delivered; (b) sent by registered or certified mail (postage prepaid, return receipt requested); (c) sent by nationally recognized private courier (with signature required and all fees prepaid); or (d) sent by email with confirmation of transmission. Notices must be sent to the Licensee at the address set forth in the Quote (or if none is specified, the address to which Nearmap sends invoices) and for Nearmap to 10897 South River Front Parkway, Suite 150 South Jordan, UT 84095, USA, or at another address as a party may designate in writing.

15. TECHNOLOGY EXPORT

15.1 The Licensee shall not: (a) permit any third party to access or use the Product in violation of any U.S. law or regulation; or (b) export any software provided by Nearmap or otherwise remove it from the United States except in compliance with all applicable U.S. laws and regulations. Without limiting the generality of the foregoing, the Licensee shall not permit any third party to access or use the Product in, or export such software to, a country subject to a United State embargo (as of the Effective Date, Cuba, Iran, North Korea, Sudan, and Syria).

16. NEARMAP NOW

16.1 **Survey** During the Term, the Licensee may request a survey of an area which is not covered (in its entirety or in part) by the Coverage Area (**Survey**). The Licensee must provide a detailed description of the area that is to be covered by the Survey and which is to be included in the Survey Specification. Upon receipt of such a request in writing, Nearmap may,in its absolute discretion, agree to provide the Survey to the Licensee.

16.2 **Delivery of Survey** Subject to sections 12 and 16.1, Nearmap will deliver the Survey to the Licensee by uploading the Survey to the Website within 6 months of the date on which Nearmap receives payment of the Survey Fee in full from the Licensee. Nearmap will notify the Licensee in writing once the Survey has been uploaded to the Website.

16.3 **Availability to other Nearmap customers** Nearmap may, at its absolute discretion, allow other customers of Nearmap to access the Survey on the Website.

16.4 **Refund of Survey Fee** If the Licensee is not in breach of the Agreement and Nearmap elects to terminate the Agreement under section 6.3 prior to delivery of the Survey, Nearmap will refund the Survey Fee to the Licensee.

16.5 **Nearmap Basic** This Section 16 will not be applicable to the Licensee if the License purchased is for a Nearmap Basic Product.

17. MISCELLANEOUS TERMS

17.1 **Nearmap customer** The Licensee agrees that Nearmap may identify the Licensee as a Nearmap customer in Nearmap business materials.

17.2 **Additional Terms and Conditions** The Additional Terms and Conditions form part of, and should be read in conjunction with, this Agreement.

17.3 **Precedence of Documents** This Agreement is comprised of:

(a) the Quote;
(b) the Additional Terms and Conditions; and
(c) this agreement.

If there is any ambiguity or inconsistency between the documents comprising the Agreement, the document appearing higher in the list will have precedence.

17.4 **Independent Contractors** The parties are independent contractors and will so represent themselves in all regards. Neither party is the agent of the other, and neither may make commitments on the other's behalf. The parties agree that no Nearmap employee or contractor will be an employee of the Licensee.

17.5 **Construction** The parties agree that the terms of this Agreement result from negotiations between them. This Agreement will not be construed in favor of or against either party by reason for authorship.

17.6 **Waiver** Neither party will be deemed to have waived any of its rights under this Agreement by lapse of time or by any statement or representation other than by an authorized representative in an explicit written waiver. No waiver of a breach of this Agreement will constitute a waiver of any other breach of this Agreement.

17.7 **Severability** If one or more of the terms of the Agreement are found to be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining terms will not be affected.

17.8 **Amendments** Other than as expressly specified in this Agreement, this Agreement may only be varied with the written consent of Nearmap and the Licensee.

17.9 **Assignment** This Agreement shall not be assigned by either party without the prior written consent of the other party which shall not be unreasonably withheld; provided, however, that Nearmap may, upon written notice to the Licensee, assign all of its rights under this Agreement to (i) a parent, subsidiary or Affiliate of Nearmap, (ii) a purchaser of all or substantially all assets related to this Agreement, or (iii) a third party participating in a merger, acquisition, sale of assets or other corporate reorganization in which Nearmap is participating. Any attempt to assign this Agreement in violation of this provision shall be void and of no effect. This Agreement shall bind and inure to the benefit of the parties and their respective successors and permitted assigns.

17.10 **Entire Agreement** This Agreement:

(a) comprises the entire agreement and understanding between the parties on everything connected with the subject matter of this Agreement; and
(b) supersedes any prior agreement or understanding on anything connected with that subject matter.

17.11 **Counterparts** This Agreement may consist of a number of counterparts and if so the counterparts taken together constitute one and the same instrument. This Agreement is not binding on any party unless one or more counterparts have been duly executed by, or on behalf of, Nearmap and the Licensee.

17.12 **Governing Law** This Agreement will be governed by and construed in accordance with the laws of the State of Utah applicable to agreements made and to be entirely performed within the State of Utah, without resort to its conflict of law provisions.

18. DEFINITIONS

In this Agreement:

Additional Terms and Conditions means the additional terms and conditions (if any) set out in Schedule 1.

Affiliate means, with respect to Nearmap, any entity that controls or is controlled by such party, or is under common control with Nearmap. For purposes of this definition, an entity shall be deemed to control another entity if it owns or controls, directly or indirectly, at least fifty per cent (50%) of the voting equity of another entity (or other comparable interest for an entity other than a corporation)

Authorized User means the number of person specified in the "Seats" section of the Quote, who have been granted access to the Product by the Licensee pursuant to the term and conditions of this Agreement and who either has been assigned a unique Nearmap user login credential or whom the Licensee has assigned a user login credential that enables access to the Product.

Auto Renew means the section of the Quote titled "Auto Renew".

Business Days means any day other than a Saturday, a Sunday or a recognised public holiday.

Claim means any claim, cost (including legal costs on a solicitor and client basis), damages, debt, expense, tax, liability, loss, obligation, allegation, suit, action, demand, cause of action, proceeding or judgment of any kind however calculated or caused, and whether direct or indirect, consequential, incidental or economic.

Commencement Date means the date as specified in the "Contract Commencement" section of the Quote.

Commercial Purpose means to distribute, transfer, sell, sub-license or pass possession of any Products (in whole or in part) for the purpose of direct commercial benefit or gain by the Licensee.

Content means any content made available to the Licensee in connection with the License.

Coverage Area means the area specified in the "Coverage" section of the Quote for which Nearmap has available Products, which may cover part or all of that area and which may cover part (but not all) of the area covered by the Survey.

Derivative Work means any new work created by or for the Licensee that includes or embeds all or part of a Nearmap Product.

Excess Data Rate means the rate of additional fees that the Licensee pays per megabyte for its use of the Products beyond the Period Data Allowance, being:

(a) if the Licensee pays its Fees on a monthly basis, the Fees per month divided by the Periodic Data Allowance; or
(b) if the Licensee pays its Fees on a yearly basis, the Fees per year divided by 12 divided by the Periodic Data Allowance.

Fault means any fault, failure, error or defect which prevents the Licensee from accessing the Products, other than where access is prevented due to a planned outage, because of an unforeseeable event beyond Nearmap's reasonable control or any conduct or activity undertaken by the Licensee, the Licensee's employees or agents.

Fees means the fees specified in the Quote payable by the Licensee for the License, or as otherwise agreed in writing between Nearmap and the Licensee.

Intellectual Property Rights includes all industrial and intellectual property rights throughout the world including copyright, moral rights, trademarks, patents, rights to protect confidential information and any similar rights.

Late Payment Fee means a fee, as notified by Nearmap to the Licensee, corresponding to the costs incurred by Nearmap (including, without limitation, administrative and other costs) in recovering any payment not made by the Licensee on the due or scheduled date for payment. Late fees incur interest at the rate of 1.5% per month.

License means the license granted in section 1.1.

Licensee means the person or entity specified in the "Customer Name" section of the Quote.

Nearmap means Nearmap US, Inc.

Operational Hours means 9am to 5pm PT.

Period means the period specified in the "Allowance" section of the Quote unless otherwise agreed in writing between Nearmap and the Licensee.

Periodic Data Allowance means the data allowance specified in the "Allowance" section of the Quote unless otherwise agreed in writing between Nearmap and the Licensee.

Permitted Purpose means the use of Products by the Licensee in the Licensee's ordinary business and at all times excludes any:

(a) Commercial Purpose;
(b) Unlawful Purpose;
(c) Integration or attempt to integrate the Product in an internal system of the Licensee or of a third party; and
(d) Redistribution or copying of files, images, photographs or making such files, images or photographs available in any medium or manner that is contained in the Products to any third party (except as expressly permitted under this Agreement).

Products means any Nearmap products specified in the Quote and, if applicable, the Survey.

Quote the document produced after the Licensee places an initial order for the Product(s), requests any changes to its' License, or renews its License, which may be titled "New Subscription Quote", "Renewal Quote" or "Amendment Quote".

Schedules means the schedules to the Quote, which form part of this Agreement.

Subscription Period means the period stated in the "Subscription Period" column of the Quote.

Subscription Start Date means the date specified in the "Subscription Start Date" section of the Quote.

Survey has the meaning (if any) given to that section 16.1.

Survey Fee means the fee for the Survey as agreed in writing between Nearmap and the Licensee.

Survey Specification means the survey specification referred to in the Quote.

Term means the term specified in the "Contract Term" section of the Quote, commencing on the (a) Commencement Date, or(b) Subscription Start Date (if a date is specified), whichever is a later date unless a Subscription Period is stated.

Third Party Providers means third party providers of products and services to Nearmap.

Unlawful Purpose means any unlawful purpose, including but not limited to stalking, harassing or intimidating any person or engaging in misleading or deceptive conduct.

Website means all pages and sub-sites available within the nearmap.com domain.