

ORDER FOR SUPPLIES OR SERVICES

1. CONTRACT/PURCH. ORDER/ AGREEMENT NO. W912P9-10-D-0538				2. DELIVERY ORDER/ CALL NO. 0018		3. DATE OF ORDER/CALL (YYYYMMDD) 2013 Dec 16		4. REQ./ PURCH. REQUEST NO. W81C8X33442274		5. PRIORITY	
6. ISSUED BY CONTRACTING DIVISION US ARMY ENGR DIST ST LOUIS 1222 SPRUCE STREET, RM 4.207 ST LOUIS MO 63103-2833				CODE W912P9		7. ADMINISTERED BY (if other than 6) CODE SEE ITEM 6				8. DELIVERY FOB <input checked="" type="checkbox"/> DESTINATION <input type="checkbox"/> OTHER (See Schedule if other)	
9. CONTRACTOR NAME SURDEX CORPORATION AND RON HOFFMAN ADDRESS 520 SPIRIT OF ST LOUIS BLVD CHESTERFIELD MO 63005-1002				CODE 8G253		FACILITY		10. DELIVER TO FOB POINT BY (Date) (YYYYMMDD) SEE SCHEDULE		11. MARK IF BUSINESS IS <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED	
								12. DISCOUNT TERMS Net 30 Days		13. MAIL INVOICES TO THE ADDRESS IN BLOCK See Item 14, CEMVS-EC-S	
14. SHIP TO GEOSPATIAL ENGINEERING BRANCH US ARMY CORPS OF ENGINEERS ST. LOUIS DISTRICT - CEMVS-EC-S 1222 SPRUCE ST ST. LOUIS MO 63103-2833				CODE 966402		15. PAYMENT WILL BE MADE BY USACE FINANCE CENTER ST. LOUIS DISTRICT (B3) 5722 INTEGRITY DRIVE MILLINGTON TN 38054-5005				16. CODE 964145	
								MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCKS 1 AND 2.			
16. TYPE OF ORDER	DELIVERY/ CALL	<input checked="" type="checkbox"/>	This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.								
	PURCHASE	<input type="checkbox"/>	Reference your quote dated _____ REF: _____ Furnish the following on terms specified herein.								
ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.											
NAME OF CONTRACTOR			SIGNATURE			TYPED NAME AND TITLE			DATE SIGNED (YYYYMMDD)		
<input type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies:											
17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE See Schedule											
18. ITEM NO.		19. SCHEDULE OF SUPPLIES/ SERVICES				20. QUANTITY ORDERED/ ACCEPTED*		21. UNIT	22. UNIT PRICE		23. AMOUNT
		SEE SCHEDULE									
* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.				24. UNITED STATES OF AMERICA TEL: 314 331-8505 EMAIL: Archie.C.Ringgenberg@usace.army.mil BY: ARCHIE C RINGGENBERG				<i>Archie C Ringgenberg</i> CONTRACTING / ORDERING OFFICER		25. TOTAL	\$1,221,000.00
26. DIFFERENCES											
27a. QUANTITY IN COLUMN 20 HAS BEEN <input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED											
b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE						c. DATE (YYYYMMDD)		d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE			
e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE						28. SHIP NO.		29. DO VOUCHER NO.		30. INITIALS	
f. TELEPHONE NUMBER			g. E-MAIL ADDRESS			<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		32. PAID BY		33. AMOUNT VERIFIED CORRECT FOR	
36. I certify this account is correct and proper for payment.											
a. DATE (YYYYMMDD)		b. SIGNATURE AND TITLE OF CERTIFYING OFFICER									
<input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL											
34. CHECK NUMBER											
35. BILL OF LADING NO.											
37. RECEIVED AT		38. RECEIVED BY		39. DATE RECEIVED (YYYYMMDD)		40. TOTAL CONTAINERS		41. S/R ACCOUNT NO.		42. S/R VOUCHER NO.	

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001		1,221,000	Dollars, U.S.	\$1.00	\$1,221,000.00 NTE

BASE -Photogrammetric Mapping and Aerial
Photography, LIDAR, Collection and Processing, Missouri - Arkansas, 2014- in
accordance with the attached Scope of Work (SOW).

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002		2,079,000	Dollars, U.S.	\$1.00	(UNFUNDED)

OPTION OPTION 1 - Photogrammetric Mapping and
Aerial Photography, LIDAR, Collection and Processing, Missouri - Arkansas,
2014- in accordance with the attached Scope of Work (SOW).

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS
0001	POP 16-DEC-2013 TO 30-JAN-2015	N/A	GEOSPATIAL ENGINEERING BRANCH US ARMY CORPS OF ENGINEERS ST. LOUIS DISTRICT - CEMVS-EC-S 1222 SPRUCE ST ST. LOUIS MO 63103-2833 314 331-8119 FOB: Destination
0002	POP 16-DEC-2013 TO 30-JAN-2015	N/A	(SAME AS PREVIOUS LOCATION) FOB: Destination

ACCOUNTING AND APPROPRIATION DATA

AA: 96X31220000 082413 3230H72JB70WDDOA NA 96233
AMOUNT: \$1,221,000.00
CIN W81C8X334422740001: \$1,221,000.00

SCOPE OF WORK

Missouri – Arkansas LiDAR Collection and Processing, 2014

Surdex Corporation

Contract No. W912P9-10-D-0538

Task Order No. 0018

1. Description of Work

- a. This project combines the varied interests of the NRCS, USGS, the U.S. Army Corps of Engineers (Memphis District), and MODNR (Missouri Department of Natural Resources) to collect detailed ground elevation data from Aerial LiDAR Sensors which may total approximately 16,660 Square Miles into a unified collection and processing project to benefit the US Government.
- b. The NRCS, USGS, U.S. Army Corps of Engineers (Memphis District), and MODNR require high-resolution digital elevation data developed from Aerial LiDAR collection in up to nineteen (19) Northern Missouri Counties as depicted in Appendix A. These Counties include Atchison, Nodaway, Holt, Andrew, Dekalb, Buchanan, Clinton, Ray, Mercer, Grundy, Schuyler, Scotland, Clark, Knox, Lewis, Shelby, Marion, Ralls and Pike. Additional interest areas in Southeast Missouri, Northeast Arkansas, and portions of the Mississippi River Basin are outlined in Appendix B. A more detailed breakdown of priority areas and options are outlined in section 2 of this scope of work. This data will then be used to generate digital elevation models and contours for use in hydraulic/hydrologic models and other purposes to include conservation planning activities and environmental assessments.
 - i. The project requires deliverables which are tested for and meet vertical and horizontal accuracy as stated in the US Geological Survey National Geospatial Program (NGP) Base Lidar Specification, Version 1.0 and as further amended or supplemented to further define certain technical parameters and processes.
 - ii. The digital terrain data shall be hydro-flattened, collecting breaklines following the referenced USGS specifications. The data shall be collected with leaf-off conditions and when there is no snow on the ground and water features are at below-normal water levels. The POC is Elizabeth Cook 571-876-9396. Additional POC's will be provided to the contractor as needed.

2. Project Areas

To meet the needs of all involved parties, a phased data collection and data processing project has been designed. The project consists of both County and watershed based selection areas identified in Appendix's A and B.

2.1 Base Work

Data acquisition over areas identified in Appendix A and B. Combined, these identified areas cover approximately 16,660 square miles. The areas outlined in Appendix A will be collected at **1 Meter NPS (USGS Level 3)**. The areas outlined in Appendix B will be collected at **0.7 Meter NPS (USGS Level 2)**. Refer to Section 5.1.1 for a detailed breakdown of the different areas to be acquired.

2.2 Option 1

NOTE: As additional partners and funding becomes available, the acquired areas shall be processed.

Data processing over areas identified in Appendix A and B (approximately 16,660 Square Miles). The data will be processed to the specifications outlined in **Section 5 (Project Specific Requirements)** below.

3. Intellectual property

The project deliverables shall be made freely available public domain data. It is understood that all processed and unprocessed data become the property of the participating government agencies.

4. Information Supplied by the Government

- a. ESRI shapefiles defining the shape and size of the areas to be collected and processed will be provided.
- b. The areas and counties to be collected and processed are provided in Appendix's (A & B).

5.0 Project Specific Requirements

5.1 Description of Tasks

a. After receiving notice to proceed and before any data collection, the contractor must submit a project plan.

1. A map showing the study area boundaries and flight path at a reasonable scale (approx. 1:150,000).
2. Documentation specifying altitude, air speed, scan angle, scan rate, LiDAR pulse rates, and other flight and equipment information deemed appropriate.
3. A chart of areas of high Position Dilution of Precision (PDOP), or a list showing the time of the beginning and end of high PDOP.
4. The proposed ground control plan containing airborne GPS support.
5. A description of file formats and naming conventions
6. A shapefile or other agreed upon format clearly showing the tile location and naming convention.

b. If necessary, the contractor shall obtain all rights of entry, be responsible for all GPS control information and show all National Spatial Reference System (NSRS) monuments that will be used for the GPS base stations for airborne GPS control during the LiDAR acquisition.

c. The Contractor shall acquire LiDAR elevation data over the required area according to the project plan outlined in Section 2 of this scope of work. Appendix A outlines the areas to be collected at 1.0 Meter NPS. Appendix B outlines the areas to be collected at 0.7 Meter NPS. The LiDAR elevation data will be collected when the leaves are off trees and will insure the project is also flown snow free and when water bodies are at below-normal water levels, and not after periods of rain when standing water or saturated ground could inhibit accuracy. The contractor will coordinate with NRCS-MO contact for the Appendix A areas outlined. Appendix B outlined areas will be coordinated with both NRCS-MO and USACE Memphis District contact.

d. The Contractor shall process the LiDAR data and produce a "bare earth" model with vertical accuracy on flat, bare ground following US Geological Survey National Geospatial Program (NGP) Base Lidar Specification, Version 1.0 as supplemented or amended.

e. The Contractor shall use automated and manual filtering for bare earth creation, removing 95% or greater of artifacts, outliers, voids, systematic and random errors, noise, anomalies, man-made features and vegetation. The resulting digital terrain data shall support production of 2' contours from the 1 meter collection areas and 1' contours from the 0.7 meter collection areas. Data processing and handling will follow US Geological Survey National Geospatial Program (NGP) Base Lidar Specification, Version 1.0 standards.

f. The Contractor will produce hydro-flattened breaklines following USGS guidelines and requirements. Specifics for the breakline collection are:

Inland Ponds and Lakes

- 2 acres or greater surface area (approximately equal to a round pond 350 feet in diameter) at the time of collection.
- Flat and level water bodies (single elevation for every bank vertex defining a given water body).
- The entire water surface edge must be at or below the immediately surrounding terrain. The presence of floating water bodies will be cause for rejection of the deliverable.
- Long impoundments such as reservoirs, inlets, and fjords, whose water surface elevations drop when moving downstream, are required to be treated as rivers.

Inland Streams and Rivers

- 100 feet nominal width: This should not unnecessarily break a stream or river into multiple segments. At times it may squeeze slightly below 100 feet for short segments. Data producers should use their best professional cartographic judgment.
- Flat and level bank-to-bank (perpendicular to the apparent flow centerline); gradient to follow the immediately surrounding terrain. In cases of sharp turns of rapidly moving water, where the natural water surface is notably not level bank to bank, it is appropriate to represent the water surface as it exists in nature, while maintaining an aesthetic cartographic appearance.
- The entire water surface edge must be at or below the immediately surrounding terrain.
- Stream channels are required to break at road crossings (culvert locations). The roadway over a culvert should be continuous. A culvert, regardless of size, is defined as having earth between the road surface and the top of the structure.
- Bridges are required to be removed from the DEM. Streams and rivers should be continuous at bridge locations. Bridges are defined as having an elevated deck structure that does not rest on earth.
- When the identification of a structure such as a bridge or culvert cannot be made reliably, the feature should be regarded as a culvert.

Refer to reference documents in this SOW for a link to any additional breakline collection-hydro-flattening requirements.

g. The Contractor will test and document that all deliverables meet or exceed standards for both vertical and horizontal accuracy as stated in NDEP Guidelines for Digital Elevation Data, Version 1.0 for NSSDA of 95% confidence for the appropriate contour interval and ASPRS Class I Standards, following quality assurance and quality control guidelines described in item 5.2 below.

h. The Contractor will generate seven (7) copies of all digital data generated and provide them on Firewire/USB 2.0 external hard drives (contractor is to provide details in quote). The Firewire/USB drives will become government property upon delivery. All drives will contain the appropriate delivery item-level metadata for the files contained on the drive.

i. The Contractor shall certify that all media is free of known computer viruses. A statement including the name(s) and release date(s) of the virus-scanning software used to analyze the media, the date the virus scan was performed, and the operator's name shall also be included with the certification. The release or version date of the virus-scanning software shall be the current version, which has detected the latest known viruses at the time of delivery of the digital media.

5.1.1 Resolution of LiDAR

- A. **Resolution of LiDAR (Appendix A, Approximately 8,497 Square Miles) – 1.0 meter Ground Sample Distance (GSD) minimum.** To prevent clustering effects and to ensure uniform densities through the dataset, a regular 2.0 X 2.0 meter grid will be laid over the data. At least 90% of the cells in the grid shall contain the requisite number of points per square meter (ppsm).

Accuracy

Vertical elevations will meet or exceed 15.0 cm RMSE (Accuracyz = 0.30m at the 95% confidence level).

Vertical accuracy should be tested by the LiDAR provider's internal checkpoints for validation purposes but will be tested using vertical checkpoints collected under section 5.3 (Lidar Check Points).

Horizontal accuracy will meet or exceed 0.6 m RMSE (Accuracyr = 1.04 m at the 95% confidence level).

- B. **Resolution of LiDAR (Appendix B, Approximately 8,163 Square Miles) – 0.7 meter Nominal Pulse Spacing (NPS) minimum.** To prevent clustering effects and to ensure uniform densities through the dataset, a regular 1.4 X 1.4 meter grid will be laid over the data. At least 90% of the cells in the grid shall contain the requisite number of points per square meter (ppsm).

Accuracy

Fundamental Vertical elevation accuracy will meet or exceed 9.2 cm RMSE (Accuracyz = 0.20m at the 95% confidence level).

Vertical accuracy should be tested by the LiDAR provider's internal checkpoints for validation purposes but will be tested using vertical checkpoints collected under section 5.3 (Lidar Check Points).

Horizontal accuracy will meet or exceed 0.4 m RMSE (Accuracy = 0.80m at the 95% confidence level).

5.2 Quality Assurance and Quality Control

- a. After initial data collection and processing, the contractor shall deliver an agreed upon pilot area of data to the funding partners for quality control review of up to 10 days. After acceptance of the pilot data, further processing can occur.
- b. A survey narrative shall be produced in the form of a letter type report detailing all aspects of the LiDAR flight, including a description of the fieldwork and detailed office data processing procedures. The description shall include location, navigation and control, operations, all survey logs and data sheets used or acquired under this task order, any difficulties encountered, (including discrepancies with maps, etc.) and documentation of how they were resolved. The contractor shall provide an interpretation and analysis of the results of the survey, including data quality, coverage of the area, and a summary of the findings.
- c. A QC Plan shall provide and maintain an effective quality control program that will assure that all services are performed and provided in a manner that meets professional architectural and engineering quality standards. The QC plan shall be implemented by a person assigned within the Contractor's organization who will be present during the times work is in progress, and will be responsible for assuring that all documents on the project have been coordinated. This individual shall possess extensive, verifiable LIDAR and photogrammetric experience. At a minimum, competent, independent reviewers shall technically review all documents.

5.3 Lidar Check Points

Appendix A, 1.0 Meter NPS Area (8,497 Square Miles)

For every approximate 1000 square mile block area within the Base Work, the contractor shall collect a minimum of 20 points in 4 land classifications (Bare Ground, Urban, Tall weeds/Crops and Brush Lands/Trees). The breakdown of these (one-thousand) 1000 square mile blocks is as follows:

1 Meter NPS Counties		
COUNTY	Square Miles	Checkpoints
Nodaway	793.1	80
Atchison	549.8	
Holt	258.0	
Andrew	415.1	80
DeKalb	158.3	
Buchanan	357.7	
Clinton	423.4	80
Scotland	439.0	
Schuyler	307.9	80
Knox	506.4	
Shelby	389.7	80
Clark	511.9	
Lewis	510.6	80
Ralls	442.6	
Marion	444.3	80
Pike	650.3	80
Mercer	454.5	
Grundy	437.7	80
Ray	447.0	80
	8,497	800
	Total Square Miles	Total Check Points
		1 Meter NPS

Appendix B, 0.7 Meter Collection Area (8,163 Square Miles)

For every approximate 1000 square mile block area within the Option 2 selection area, the contractor shall collect a minimum of 20 points in 4 land classifications (Bare Ground, Urban, Tall weeds/Crops and Brush Lands/Trees). The total number of check points for the option 2 selection area shall be 640 (six-hundred-forty).

The eighty (80) total points per block area shall contain at least 20 points in bare ground, 20 points in urban, 20 points in tall weeds/crops and 20 points in brush lands/trees.

These points shall be used as a ground truth comparison for the LIDAR data. Points shall not be taken on slopes greater than 10%. These ground truth points shall be compared to the bare earth surface (raw points) developed from the LIDAR data and the differences shall be published within the report of survey. Check points, within the 1 Meter collection area, in open terrain shall meet the 15.0 cm RMSE requirement for Fundamental Vertical Accuracy (FVA). Check points, within the 0.7 Meter collection area, in open terrain shall meet the 9.2 cm RMSE requirement for Fundamental Vertical Accuracy (FVA). The accuracy of the other land coverage types shall be reported according to NDEP/ASPRS methodology which uses the 95th percentile testing method for all land cover categories other than bare earth or open terrain. These surveyed points shall be withheld from the prime contractor during the calibration and processing phases of this task order.

The RMSE shall be calculated as the square root of the average of the set of squared differences between the bare earth and the points collected for the individual groups as in the paragraph above (bare ground, urban, tall weeds/crops, brush lands/trees). If the differences are normally distributed and average zero, 95 percent of any sufficiently large sample should be less than 1.96 times the RMSE.

6.0 Data Processing and Deliverables

6.1 Deliverables

All geospatial data deliverables will be provided in the appropriate UTM Zone, horizontal datum of NAD83, vertical datum NAVD88, (GEOID12A) coordinates values will be orthometric heights. Horizontal and vertical units shall be floating point decimal meters. The contractor will submit tiling scheme to contributing partners and USACE St. Louis District for approval.

One or more mutually-agreed small sample pilot areas for data processing shall be processed and those deliverables reviewed and accepted before Contractor will proceed with full data processing for all deliverables.

6.1.1 Geospatial data deliverables include:

All Lidar LAS products with points classified and return number will follow the below classes:

- 1 - processed, but unclassified
- 2 - bare-earth ground
- 7 - Noise
- 9 - water
- 10 - ignored
- 11 - withheld
- 12 - overlap points shall not be used

a. Bare-earth 1-meter pixel size Digital Elevation Model (DEM) in Imagine .IMG 32-bit floating point, decimal meters format with defined projection/coordinates. The tiles will be edge joined and seamless within the project. Cells must be aligned and be fully contained within each tile. The collected hydro-flattened breaklines shall be included-incorporated during the creation of the DEMs. Both the 1 Meter and 0.7 Meter areas will be delivered at 1 meter pixel resolution.

b. All breaklines developed for use in hydro-flattening shall be delivered as an ESRI shapefile (PolylineZ or PolygonZ format, as appropriate to the type of feature represented and the methodology used by the contractor). 1 each shapefile (1 Polyline Z, 1 Polygon Z)

c. ASPRS .LAS format files with LiDAR points classified as bare-earth and canopy (first return). The .LAS file must also have intensity values for the LiDAR data, flight information and flight acquisition date, return value and flight lines (tiles only). LAS version 1.3.

d. Index map of project area as ESRI polygon in agreed upon tile scheme with file names and acquisition dates in the attribute table.

- e. FGDC compliant geospatial metadata for each deliverable product in .xml format. FGDC metadata on a per file bases in not a requirement.
- f. ESRI Shapefile of actual flight lines acquired showing date and time.
- g. ESRI 3D Shape files of mass points used for ground control and quality assurance. One shapefile for the calibration points and another for the Lidar quality check points.
- h. ASCII and Microsoft excel file of ground control and quality assurance lidar checkpoints. Format of point number, X, Y, Z, classification category type.

6.1.2 Non-geospatial data deliverable includes a project completion report containing:

- a. A LiDAR system data report including discussions of data processing methods used, final LiDAR pulse and scan rates, scan angle, capability for multiple returns from single pulses, accuracy and precision of the LiDAR data acquired, accuracy of the topographic surface products, quality control report details and companion imagery (if any).
- b. A flight report documenting mission date, time, flight altitude, airspeed, and other information deemed pertinent. The report must include information about GPS-derived flight tracks, provide a detailed description of final flight line parameters and GPS controls (i.e. benchmarks), and include ground truth and complementary data. A chart of areas of high PDOP, with curtains (point obstructions) created for each of the receiver sites is required. A site obstruction diagram shall be provided for each receiver site.
- c. A ground control report that includes, at a minimum, all pertinent base station information and mission notes, including information on GPS station monument names and stability. Digital photos of each GPS station monument as well as lidar QC check points.
- d. Data processing procedures of posting, and all orthometric values of x, y, and z coordinates for LiDAR returns.
- e. A system calibration report.

7. Deliveries and Performance

Final delivery of all products shall be completed by **January 30, 2015**. The Contractor shall include interim deliverables with dates within the proposal before the final deliverable is made.

8. Shipment

All transportation charges and costs appurtenant thereto, are a subsidiary obligation of the Contractor for which no separate payment will be made. Shipments shall be made to:

USACE-St. Louis District

Ted Stanton

1222 Spruce Street

4th Floor

St. Louis, MO 63103-2833

Ted.e.stanton@usace.army.mil

314-331-8389

Missouri NRCS

Elizabeth Cook

GIS Specialist

601 Bus Loop 70 West

Columbia, MO 65203

elizabeth.cook@mo.usda.gov

573-876-9396

USGS MO Contact

Ray Fox

USGS Geospatial Liaison for MO

1400 Independence Rd

Rolla, MO 65401

rfox@usgs.gov

USGS AR Contact

Bill Sneed

USGS Geospatial Liaison for AR

401 Hardin Rd

Little Rock, AR 72211

wsneed@usgs.gov

571-308-3744

USACE-Memphis District
Williams Snapp
Room 750
167 N. Main St
Memphis TN, 30103
William.b.snapp@usace.army.mil
901-544-3237

501-228-3665

Michael S. Weller
Water Resource Center
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102
michael.weller@dnr.mo.gov
573-522-6772

9. Inspection

Inspection of the finished items to determine their conformance to the specifications will be made by a representative of the NRCS, USGS, USACE Memphis District and MODNR upon delivery to the destination. If the inspection reveals any defect or deviation in the manufacture of the items which would make them unfit for the purpose intended, the Contractor will be required to satisfactorily remedy such conditions at no additional cost.

10. Acceptance

The Contracting agencies will notify the Contractor within 30 business days of receipt of the deliverables whether the items are in full compliance with the specifications. If the finished items are found to be in full compliance with the specifications, they will be accepted. The acceptance of any item by an inspector shall not preclude subsequent rejection if such an item is later found to be defective.

11. Unauthorized Direction:

Reference Contract Clause 52.243-1 Changes-Fixed Price (August 1987) Alternate III (1984): Only the Contracting Officer has authority to change the contract or issue a task order. No price or completion date changes can be made without approval from the Contracting Officer in advance of commencing work. The Contractor shall not accept directions from any Government employee or otherwise, other than the Contracting Officer, that would involve a change to the contract cost or final completion date.

12. Time Extension

In the event these schedules are exceeded due to causes beyond the control and without fault or negligence of the contractor, as determined by the Contracting Officer, this delivery order completion date will be extended one (1) calendar day for each day of delay.

Requests for time extensions for an individual task order should be forwarded to the Contracting Officer no later than fourteen (14) days preceding the completion date shown on the task order.

13. Reference documents

The National Standard for Spatial Data Accuracy (NSSDA) is a Federal Geographic Data Committee (FGDC) standard that federal agencies are to use in determining geospatial accuracy.

<http://www.fgdc.gov/standards/documents/standards/accuracy/chapter3.pdf>

The National Digital Elevation Program (NDEP) has created a set of recommended guidelines for digital data that provides information on digital elevation types, product descriptions, metadata profiles, definitions, and map accuracy standards.

<http://www.ndep.gov/TechSubComm.html>

USGS center for LIDAR Information Coordination and Knowledge
USGS National Geospatial Program Base Lidar Specification Version 1.0 as supplemented or amended

<http://pubs.usgs.gov/tm/11b4/>