≋USGS
science for a changing world

Project Definition: The entire collection for a contracted area.
Work Unit Definition: A production block of data defined by the National Geospatial Technical Operations Center due to expediency, priority or resource allocation. There can be one or many work units per project.

Project Information

Lidar Base Specification: Lidar Base Specification 2022 rev. A.	**Primary Contractor:** Fugro Geospatial, Inc. (Fugro)
Las Version: 1.4	**Contract Mechanism:** GPSC
P Method: 7 - Linear-Mode Lidar	
Collection Start Date: 11-14-2016	**Collection End Date:** 04-29-2021
The National Map Email: tnm_help@usgs.gov	

Vertical Accuracy Results

The U.S. Geological Survey evaluates absolute vertical accuracy of the lidar and lidar-derived bare earth DEM data at the project level

Lidar Point Cloud	Required NVA RMSEz (cm)	**Tested NVA RMSEz (cm)**	Required NVA at 95% confidence level (cm)	**Tested NVA at 95% confidence level (cm)**	Required VVA at 95th percentile (cm)	**Tested VVA at 95th percentile (cm)**
	10.0	**3.93**	19.6	**7.70**	N/A	**20.01**

Digital Elevation Model	Required NVA RMSEz (cm)	**Tested NVA RMSEz (cm)**	Required NVA at 95% confidence level (cm)	**Tested NVA at 95% confidence level (cm)**	Required VVA at 95th percentile (cm)	**Tested VVA at 95th percentile (cm)**
	10.0	**4.21**	19.6	**8.25**	30.0	**19.07**

Please see the vertical_accuracy folder within the project metadata for more information.

Classifications Used

Classification verification is limited to the minimum required by applicable Lidar Base Specification. Classifications beyond the minimum are not verified by USGS.	
Classification ID	**Classification Type**
1	Unclassified
2	Ground
6	Building
7	Low Noise
9	Water
17	Bridge Deck
18	High Noise
20	Ignored Ground
21	Snow
22	Temporal exclusion
8	Model Key Point

≋USGS
science for a changing world

The National Map

Sensor(s) Used

Sensor
Leica ALS80 - Aerial Oscillating Mirror
Riegl VQ-1560i - Aerial Oscillating Mirror
Riegl 1560ii/ii-s - Rotating Polygonal Mirror
Riegl LMS Q1560 - Aerial Rotating Prism

Project Name: ND_3DEPProcessing_D22

Report Date: 2024-01-22

Work Unit Information

ND_3DEPProcessing_2_D22	Work Unit ID: 300203	Quality Level: 2
Horizontal EPSG Code: 6343	**Vertical EPSG Code:** 5703	**Geoid Model:** GEOID18
DEM Ground Sample Distance: 1.0	**Hydro Treatment:** hydro-flattened	
Collection Start Date: 2016-11-14	**Collection End Date:** 2021-04-29	

ND_3DEPProcessing_1_D22	Work Unit ID: 300152	Quality Level: 2
Horizontal EPSG Code: 6343	**Vertical EPSG Code:** 5703	**Geoid Model:** GEOID18
DEM Ground Sample Distance: 1.0	**Hydro Treatment:** hydro-flattened	
Collection Start Date: 2019-05-31	**Collection End Date:** 2021-04-10	

ND_3DEPProcessing_3_D22	Work Unit ID: 300204	Quality Level: 2
Horizontal EPSG Code: 6343	**Vertical EPSG Code:** 5703	**Geoid Model:** GEOID18
DEM Ground Sample Distance: 1.0	**Hydro Treatment:** hydro-flattened	
Collection Start Date: 2017-05-04	**Collection End Date:** 2021-04-29	

ND_3DEPProcessing_5_D22	Work Unit ID: 300234	Quality Level: 2
Horizontal EPSG Code: 6343	**Vertical EPSG Code:** 5703	**Geoid Model:** GEOID18
DEM Ground Sample Distance: 1.0	**Hydro Treatment:** hydro-flattened	
Collection Start Date: 2020-10-09	**Collection End Date:** 2021-04-29	

ND_3DEPProcessing_4_D22	Work Unit ID: 300233	Quality Level: 2
Horizontal EPSG Code: 6342	**Vertical EPSG Code:** 5703	**Geoid Model:** GEOID18
DEM Ground Sample Distance: 1.0	**Hydro Treatment:** hydro-flattened	
Collection Start Date: 2016-11-19	**Collection End Date:** 2017-10-27	

ND_3DEPProcessing_6_D22	Work Unit ID: 300235	Quality Level: 2
Horizontal EPSG Code: 6343	**Vertical EPSG Code:** 5703	**Geoid Model:** GEOID18
DEM Ground Sample Distance: 1.0	**Hydro Treatment:** hydro-flattened	
Collection Start Date: 2019-05-26	**Collection End Date:** 2021-04-01	

Project Name: ND_3DEPProcessing_D22

Report Date: 2024-01-22