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## **SECTION 3: GROUND CONTROL STATION INFORMATION SHEETS**

This section contains the station information sheets for each of the new quality control check points to support the Long Island, New York Sandy Lidar Project.

Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York		Station Description Lidar QAQC Point # 2001			
Date of Survey 4/17/2014		Ground Type Short Grass			
Established by WOOLPERT, INC.	Latitude 41°15'26.14707" N	Longitude 72°00'40.02370" W	Ellipsoid Ht. -19.123 (Meters)	Geoid Ht. -30.802 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000375146	Northing (UTM 18) 4571625.437 (Meters)	Easting (UTM 18) 750404.645 (Meters)	Elevation 11.679 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2002	
Date of Survey 4/17/2014				Ground Type Short Grass	
Established by WOOLPERT, INC.	Latitude 41°16'38.75042" N	Longitude 71°58'46.34828" W	Ellipsoid Ht. -25.816 (Meters)	Geoid Ht. -30.763 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000392118	Northing (UTM 18) 4573956.325 (Meters)	Easting (UTM 18) 752972.470 (Meters)	Elevation 4.947 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2003	
Date of Survey 4/16/2014				Ground Type Bare Earth	
Established by WOOLPERT, INC.	Latitude 41°08'09.07481" N	Longitude 72°21'00.22861" W	Ellipsoid Ht. -16.603 (Meters)	Geoid Ht. -30.962 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000211723	Northing (UTM 18) 4557223.194 (Meters)	Easting (UTM 18) 722416.297 (Meters)	Elevation 14.359 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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Long Island New York  
SANDY LiDAR PROJECT



County, State Suffolk County, New York		Station Description Lidar QAQC Point # 2004			
Date of Survey 4/16/2014		Ground Type Bare Earth			
Established by WOOLPERT, INC.	Latitude 41°01'07.43910" N	Longitude 72°29'34.85123" W	Ellipsoid Ht. -22.353 (Meters)	Geoid Ht. -31.201 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.0001506	Northing (UTM 18) 4543864.274 (Meters)	Easting (UTM 18) 710791.081 (Meters)	Elevation 8.847 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York		Station Description  Lidar QAQC Point # 2005			
Date of Survey 4/19/2014					
Established by WOOLPERT, INC.	Latitude 40°56'36.87845" N	Longitude 72°56'27.04111" W	Ellipsoid Ht. 13.126 (Meters)	Geoid Ht. -30.797 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999967823	Northing (UTM 18) 4534535.212 (Meters)	Easting (UTM 18) 673331.046 (Meters)	Elevation 43.923 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York		Station Description  Lidar QAQC Point # 2006			
Date of Survey 4/20/2014					
Established by WOOLPERT, INC.	Latitude 40°52'22.53909" N	Longitude 73°15'23.18007" W	Ellipsoid Ht. 6.380 (Meters)	Geoid Ht. -30.622 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999864732	Northing (UTM 18) 4526114.062 (Meters)	Easting (UTM 18) 646920.721 (Meters)	Elevation 37.002 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York		Station Description  Lidar QAQC Point # 2007			
Date of Survey 4/21/2014					
Established by WOOLPERT, INC.	Latitude 40°56'30.89753" N	Longitude 73°28'38.89442" W	Ellipsoid Ht. -28.780 (Meters)	Geoid Ht. -30.594 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999806696	Northing (UTM 18) 4533425.211 (Meters)	Easting (UTM 18) 628161.552 (Meters)	Elevation 1.814 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York		Station Description Lidar QAQC Point # 2008			
Date of Survey 4/21/2014		Ground Type Short Grass			
Established by WOOLPERT, INC.	Latitude 40°51'51.55533" N	Longitude 73°31'52.65256" W	Ellipsoid Ht. -13.572 (Meters)	Geoid Ht. -30.883 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999790714	Northing (UTM 18) 4524733.643 (Meters)	Easting (UTM 18) 623775.486 (Meters)	Elevation 17.311 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 2009	
Date of Survey 4/22/2014				Ground Type Short Grass	
Established by WOOLPERT, INC.	Latitude 40°47'22.86355" N	Longitude 73°42'16.75619" W	Ellipsoid Ht. -24.308 (Meters)	Geoid Ht. -31.316 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999750827	Northing (UTM 18) 4516217.587 (Meters)	Easting (UTM 18) 609287.473 (Meters)	Elevation 7.008 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 2010	
Date of Survey 4/22/2014				Ground Type Short Grass	
Established by WOOLPERT, INC.	Latitude 40°42'58.36408" N	Longitude 73°39'04.83854" W	Ellipsoid Ht. -8.362 (Meters)	Geoid Ht. -31.550 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999761037	Northing (UTM 18) 4508129.312 (Meters)	Easting (UTM 18) 613910.712 (Meters)	Elevation 23.188 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 2011	
Date of Survey 4/21/2014				Ground Type Short Grass	
Established by WOOLPERT, INC.	Latitude 40°38'20.25674" N	Longitude 73°37'49.19847" W	Ellipsoid Ht. -28.121 (Meters)	Geoid Ht. -31.757 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999769531	Northing (UTM 18) 4499581.178 (Meters)	Easting (UTM 18) 615819.059 (Meters)	Elevation 3.637 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2012	
Date of Survey 4/21/2014				Ground Type Bare Earth	
Established by WOOLPERT, INC.	Latitude 40°37'47.10905" N	Longitude 73°14'02.64572" W	Ellipsoid Ht. -26.827 (Meters)	Geoid Ht. -31.520 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999878805	Northing (UTM 18) 4499156.369 (Meters)	Easting (UTM 18) 649349.172 (Meters)	Elevation 4.694 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2013	
Date of Survey 4/19/2014				Ground Type Short Grass	
Established by WOOLPERT, INC.	Latitude 40°44'25.79357" N	Longitude 73°14'02.64572" W	Ellipsoid Ht. -30.858 (Meters)	Geoid Ht. -31.681 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000002035	Northing (UTM 18) 4512127.196 (Meters)	Easting (UTM 18) 679613.262 (Meters)	Elevation 0.824 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2014	
Date of Survey 4/18/2014				Ground Type Short Grass	
Established by WOOLPERT, INC.	Latitude 40°53'10.98323" N	Longitude 72°55'27.81979" W	Ellipsoid Ht. -2.661 (Meters)	Geoid Ht. -31.039 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999976884	Northing (UTM 18) 4528218.486 (Meters)	Easting (UTM 18) 674866.569 (Meters)	Elevation 28.378 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2015	
Date of Survey 4/17/2014				Ground Type Short Grass	
Established by WOOLPERT, INC.	Latitude 40°54'39.60580" N	Longitude 72°18'28.92621" W	Ellipsoid Ht. -25.815 (Meters)	Geoid Ht. -31.496 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000236983	Northing (UTM 18) 4532366.742 (Meters)	Easting (UTM 18) 726714.653 (Meters)	Elevation 5.681 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2016	
Date of Survey 4/18/2014				Ground Type Bare Earth	
Established by WOOLPERT, INC.	Latitude 41°04'19.62878" N	Longitude 71°56'30.90555" W	Ellipsoid Ht. -28.947 (Meters)	Geoid Ht. -31.057 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000417489	Northing (UTM 18) 4551270.114 (Meters)	Easting (UTM 18) 756925.711 (Meters)	Elevation 2.111 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2017	
Date of Survey 4/18/2014				Ground Type Bare Earth	
Established by WOOLPERT, INC.	Latitude 40°59'59.34582" N	Longitude 72°17'48.86098" W	Ellipsoid Ht. -30.681 (Meters)	Geoid Ht. -31.330 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000241269	Northing (UTM 18) 4542256.645 (Meters)	Easting (UTM 18) 727346.880 (Meters)	Elevation 0.649 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2018	
Date of Survey 4/17/2014				Ground Type Bare Earth	
Established by WOOLPERT, INC.	Latitude 40°53'35.33073" N	Longitude 72°29'39.11306" W	Ellipsoid Ht. -17.757 (Meters)	Geoid Ht. -31.524 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000151458	Northing (UTM 18) 4529918.422 (Meters)	Easting (UTM 18) 711091.494 (Meters)	Elevation 13.767 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2019	
Date of Survey 4/20/2014				Ground Type Bare Earth	
Established by WOOLPERT, INC.	Latitude 40°42'29.81108" N	Longitude 73°10'19.46668" W	Ellipsoid Ht. -30.010 (Meters)	Geoid Ht. -31.309 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999898233	Northing (UTM 18) 4507981.049 (Meters)	Easting (UTM 18) 654411.132 (Meters)	Elevation 1.298 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2020	
Date of Survey 4/19/2014				Ground Type Short Grass	
Established by WOOLPERT, INC.	Latitude 40°48'06.60967" N	Longitude 72°52'01.71551" W	Ellipsoid Ht. -13.927 (Meters)	Geoid Ht. -31.465 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000000732	Northing (UTM 18) 4518948.144 (Meters)	Easting (UTM 18) 679918.833 (Meters)	Elevation 17.537 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 2021	
Date of Survey 4/20/2014				Ground Type Short Grass	
Established by WOOLPERT, INC.	Latitude 40°55'00.48196" N	Longitude 73°20'32.42463" W	Ellipsoid Ht. -18.308 (Meters)	Geoid Ht. -30.518 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999842732	Northing (UTM 18) 4530843.950 (Meters)	Easting (UTM 18) 639589.694 (Meters)	Elevation 12.210 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3001	
Date of Survey 4/17/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 41°15'35.96683" N	Longitude 72°00'28.35058" W	Ellipsoid Ht. -29.067 (Meters)	Geoid Ht. -30.797 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000378316	Northing (UTM 18) 4571937.667 (Meters)	Easting (UTM 18) 750665.893 (Meters)	Elevation 1.730 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3002	
Date of Survey 4/17/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 41°16'30.40364" N	Longitude 71°58'55.90812" W	Ellipsoid Ht. -26.099 (Meters)	Geoid Ht. -30.768 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000390832	Northing (UTM 18) 4573691.145 (Meters)	Easting (UTM 18) 752758.989 (Meters)	Elevation 4.669 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





Photogrammetric Ground Control Information Sheet

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3003	
Date of Survey 4/16/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 41°08'08.76177" N	Longitude 72°20'59.86038" W	Ellipsoid Ht. -16.313 (Meters)	Geoid Ht. -30.962 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000211726	Northing (UTM 18) 4557213.801 (Meters)	Easting (UTM 18) 722425.177 (Meters)	Elevation 14.649 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3004	
Date of Survey 4/16/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 41°00'37.45161" N	Longitude 72°29'03.82654" W	Ellipsoid Ht. -22.417 (Meters)	Geoid Ht. -31.233 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.00015452	Northing (UTM 18) 4542960.313 (Meters)	Easting (UTM 18) 711542.422 (Meters)	Elevation 8.816 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3005	
Date of Survey 4/19/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°56'40.63378" N	Longitude 72°56'27.55074" W	Ellipsoid Ht. 12.840 (Meters)	Geoid Ht. -30.793 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999967805	Northing (UTM 18) 4534650.740 (Meters)	Easting (UTM 18) 673316.401 (Meters)	Elevation 43.633 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3006	
Date of Survey 4/20/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°52'54.72210" N	Longitude 73°15'13.75229" W	Ellipsoid Ht. 20.325 (Meters)	Geoid Ht. -30.596 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999863276	Northing (UTM 18) 4527110.902 (Meters)	Easting (UTM 18) 647121.605 (Meters)	Elevation 50.921 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3007	
Date of Survey 4/20/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°52'26.82534" N	Longitude 73°25'35.43616" W	Ellipsoid Ht. -21.443 (Meters)	Geoid Ht. -30.683 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999819757	Northing (UTM 18) 4525974.688 (Meters)	Easting (UTM 18) 632586.792 (Meters)	Elevation 9.240 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 3008	
Date of Survey 4/21/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°51'25.47253" N	Longitude 73°32'05.85230" W	Ellipsoid Ht. -3.287 (Meters)	Geoid Ht. -30.908 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999788205	Northing (UTM 18) 4523924.158 (Meters)	Easting (UTM 18) 623479.932 (Meters)	Elevation 27.620 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 3009	
Date of Survey 4/22/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°47'32.30423" N	Longitude 73°41'28.86682" W	Ellipsoid Ht. 2.145 (Meters)	Geoid Ht. -31.300 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.99974971	Northing (UTM 18) 4516525.365 (Meters)	Easting (UTM 18) 610405.490 (Meters)	Elevation 33.445 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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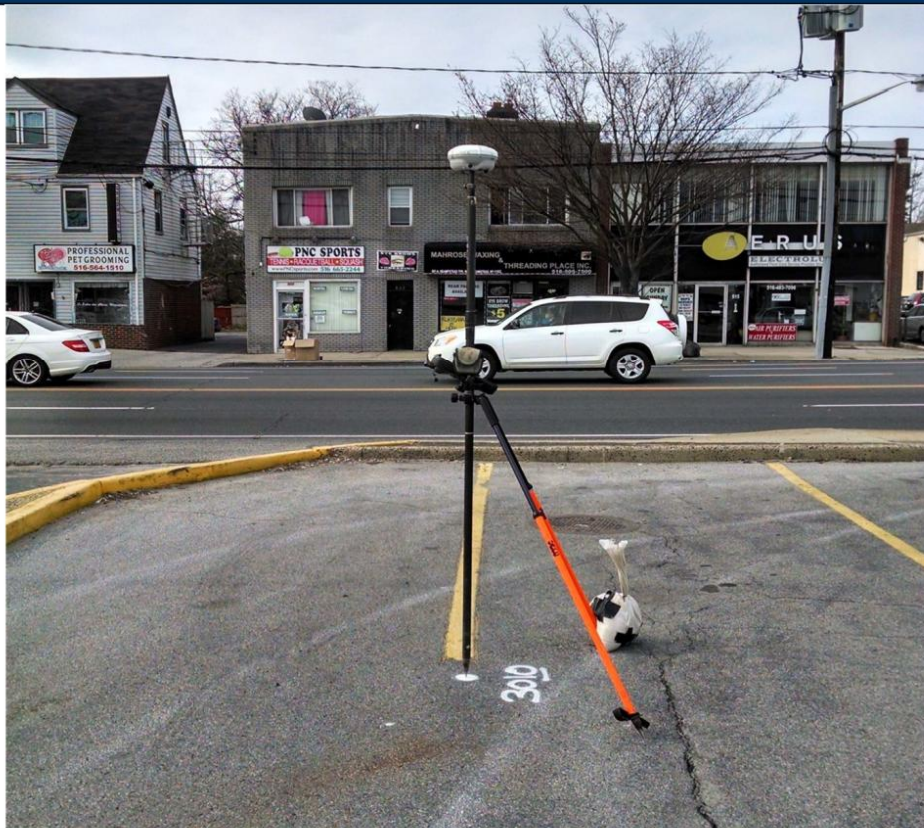


**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York		Station Description Lidar QAQC Point # 3010			
Date of Survey 4/22/2014		Ground Type Urban			
Established by WOOLPERT, INC.	Latitude 40°42'21.30477" N	Longitude 73°39'29.51557" W	Ellipsoid Ht. -15.857 (Meters)	Geoid Ht. -31.597 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.99976064	Northing (UTM 18) 4506977.694 (Meters)	Easting (UTM 18) 613349.188 (Meters)	Elevation 15.740 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 3011	
Date of Survey 4/21/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°38'21.17407" N	Longitude 73°38'25.01176" W	Ellipsoid Ht. -27.748 (Meters)	Geoid Ht. -31.779 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999767081	Northing (UTM 18) 4499596.412 (Meters)	Easting (UTM 18) 614977.383 (Meters)	Elevation 4.030 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3012	
Date of Survey 4/20/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°38'17.74233" N	Longitude 73°15'29.32307" W	Ellipsoid Ht. -26.264 (Meters)	Geoid Ht. -31.467 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.99987121	Northing (UTM 18) 4500060.379 (Meters)	Easting (UTM 18) 647294.113 (Meters)	Elevation 5.203 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3013	
Date of Survey 4/19/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°45'05.07294" N	Longitude 72°52'17.70008" W	Ellipsoid Ht. -29.195 (Meters)	Geoid Ht. -31.643 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.00000207	Northing (UTM 18) 4513340.820 (Meters)	Easting (UTM 18) 679680.140 (Meters)	Elevation 2.448 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York		Station Description  Lidar QAQC Point # 3014			
Date of Survey 4/18/2014					
Established by WOOLPERT, INC.	Latitude 40°53'11.77901" N	Longitude 72°55'26.37178" W	Ellipsoid Ht. -2.910 (Meters)	Geoid Ht. -31.039 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999977067	Northing (UTM 18) 4528243.831 (Meters)	Easting (UTM 18) 674899.875 (Meters)	Elevation 28.129 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3015	
Date of Survey 4/17/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°54'40.16336" N	Longitude 72°18'30.04941" W	Ellipsoid Ht. -25.742 (Meters)	Geoid Ht. -31.496 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000236822	Northing (UTM 18) 4532383.128 (Meters)	Easting (UTM 18) 726687.845 (Meters)	Elevation 5.755 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3016	
Date of Survey 4/18/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 41°04'31.48003" N	Longitude 71°56'23.33461" W	Ellipsoid Ht. -28.383 (Meters)	Geoid Ht. -31.051 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000418439	Northing (UTM 18) 4551641.840 (Meters)	Easting (UTM 18) 757089.582 (Meters)	Elevation 2.667 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3017	
Date of Survey 4/18/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 41°00'04.87370" N	Longitude 72°17'48.15797" W	Ellipsoid Ht. -30.072 (Meters)	Geoid Ht. -31.327 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000241236	Northing (UTM 18) 4542427.638 (Meters)	Easting (UTM 18) 727358.025 (Meters)	Elevation 1.255 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3018	
Date of Survey 4/17/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°53'37.42295" N	Longitude 72°29'59.65343" W	Ellipsoid Ht. -29.580 (Meters)	Geoid Ht. -31.520 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000150802	Northing (UTM 18) 4529969.190 (Meters)	Easting (UTM 18) 710608.955 (Meters)	Elevation 1.940 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





Photogrammetric Ground Control Information Sheet

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3019	
Date of Survey 4/20/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°44'01.87200" N	Longitude 73°10'34.56352" W	Ellipsoid Ht. -24.870 (Meters)	Geoid Ht. -31.202 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999895857	Northing (UTM 18) 4510812.550 (Meters)	Easting (UTM 18) 653997.899 (Meters)	Elevation 6.332 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3020	
Date of Survey 4/19/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°48'07.17084" N	Longitude 72°52'00.11010" W	Ellipsoid Ht. -14.341 (Meters)	Geoid Ht. -31.465 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000000961	Northing (UTM 18) 4518966.365 (Meters)	Easting (UTM 18) 679956.033 (Meters)	Elevation 17.124 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 3021	
Date of Survey 4/20/2014				Ground Type Urban	
Established by WOOLPERT, INC.	Latitude 40°55'08.34598" N	Longitude 73°21'05.98881" W	Ellipsoid Ht. -27.998 (Meters)	Geoid Ht. -30.519 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999841542	Northing (UTM 18) 4531071.616 (Meters)	Easting (UTM 18) 638799.980 (Meters)	Elevation 2.521 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4001	
Date of Survey 4/17/2014				Ground Type Tall Grass	
Established by WOOLPERT, INC.	Latitude 41°15'27.64790" N	Longitude 72°00'36.90808" W	Ellipsoid Ht. -13.662 (Meters)	Geoid Ht. -30.802 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000374728	Northing (UTM 18) 4571674.224 (Meters)	Easting (UTM 18) 750475.566 (Meters)	Elevation 17.140 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4002	
Date of Survey 4/17/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 41°16'37.69033" N	Longitude 71°58'47.86740" W	Ellipsoid Ht. -26.565 (Meters)	Geoid Ht. -30.764 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000392022	Northing (UTM 18) 4573922.398 (Meters)	Easting (UTM 18) 752938.261 (Meters)	Elevation 4.199 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4003	
Date of Survey 4/16/2014				Ground Type Tall Grass	
Established by WOOLPERT, INC.	Latitude 41°07'57.77111" N	Longitude 72°20'56.50932" W	Ellipsoid Ht. -16.040 (Meters)	Geoid Ht. -30.971 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000212169	Northing (UTM 18) 4556877.216 (Meters)	Easting (UTM 18) 722513.637 (Meters)	Elevation 14.930 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4004	
Date of Survey 4/16/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 41°01'11.30986" N	Longitude 72°29'36.87867" W	Ellipsoid Ht. -22.859 (Meters)	Geoid Ht. -31.197 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000150415	Northing (UTM 18) 4543982.288 (Meters)	Easting (UTM 18) 710740.295 (Meters)	Elevation 8.338 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4005	
Date of Survey 4/19/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 40°56'41.77757" N	Longitude 72°55'49.96123" W	Ellipsoid Ht. 11.330 (Meters)	Geoid Ht. -30.809 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.9999718	Northing (UTM 18) 4534706.774 (Meters)	Easting (UTM 18) 674194.530 (Meters)	Elevation 42.139 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4006	
Date of Survey 4/20/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 40°52'10.86086" N	Longitude 73°15'41.64530" W	Ellipsoid Ht. -1.828 (Meters)	Geoid Ht. -30.629 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999864481	Northing (UTM 18) 4525745.339 (Meters)	Easting (UTM 18) 646495.641 (Meters)	Elevation 28.801 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4007	
Date of Survey 4/21/2014				Ground Type Tall Grass	
Established by WOOLPERT, INC.	Latitude 40°55'54.14449" N	Longitude 73°28'35.55844" W	Ellipsoid Ht. -18.297 (Meters)	Geoid Ht. -30.616 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999805364	Northing (UTM 18) 4532293.209 (Meters)	Easting (UTM 18) 628259.308 (Meters)	Elevation 12.319 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York		Station Description Lidar QAQC Point # 4008			
Date of Survey 4/21/2014		Ground Type Weeds			
Established by WOOLPERT, INC.	Latitude 40°49'36.95714" N	Longitude 73°31'52.80207" W	Ellipsoid Ht. 43.679 (Meters)	Geoid Ht. -30.983 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999781956	Northing (UTM 18) 4520583.030 (Meters)	Easting (UTM 18) 623841.584 (Meters)	Elevation 74.662 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 4009	
Date of Survey 4/22/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 40°47'08.92926" N	Longitude 73°42'13.93933" W	Ellipsoid Ht. -22.595 (Meters)	Geoid Ht. -31.327 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999750753	Northing (UTM 18) 4515788.885 (Meters)	Easting (UTM 18) 609359.841 (Meters)	Elevation 8.732 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 4010	
Date of Survey 4/22/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 40°42'57.40582" N	Longitude 73°39'03.89164" W	Ellipsoid Ht. -8.614 (Meters)	Geoid Ht. -31.551 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.99976114	Northing (UTM 18) 4508100.105 (Meters)	Easting (UTM 18) 613933.383 (Meters)	Elevation 22.936 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 4011	
Date of Survey 4/21/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 40°35'29.09093" N	Longitude 73°35'08.92667" W	Ellipsoid Ht. -29.636 (Meters)	Geoid Ht. -31.770 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999780931	Northing (UTM 18) 4494362.797 (Meters)	Easting (UTM 18) 619668.603 (Meters)	Elevation 2.134 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4012	
Date of Survey 4/21/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 40°37'46.76334" N	Longitude 73°13'59.35758" W	Ellipsoid Ht. -26.878 (Meters)	Geoid Ht. -31.522 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999879098	Northing (UTM 18) 4499147.260 (Meters)	Easting (UTM 18) 649426.636 (Meters)	Elevation 4.644 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4013	
Date of Survey 4/19/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 40°44'25.48197" N	Longitude 72°52'22.28805" W	Ellipsoid Ht. -30.918 (Meters)	Geoid Ht. -31.681 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000001995	Northing (UTM 18) 4512117.312 (Meters)	Easting (UTM 18) 679602.144 (Meters)	Elevation 0.764 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4014	
Date of Survey 4/18/2014				Ground Type Short Grass	
Established by WOOLPERT, INC.	Latitude 40°53'08.66277" N	Longitude 72°55'34.36693" W	Ellipsoid Ht. -4.408 (Meters)	Geoid Ht. -31.039 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999976506	Northing (UTM 18) 4528143.294 (Meters)	Easting (UTM 18) 674715.037 (Meters)	Elevation 26.631 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4015	
Date of Survey 4/17/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 40°54'40.02454" N	Longitude 72°18'31.56604" W	Ellipsoid Ht. -25.760 (Meters)	Geoid Ht. -31.496 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000236628	Northing (UTM 18) 4532377.754 (Meters)	Easting (UTM 18) 726652.493 (Meters)	Elevation 5.736 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4016	
Date of Survey 4/17/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 40°57'42.38882" N	Longitude 72°18'54.27113" W	Ellipsoid Ht. 4.057 (Meters)	Geoid Ht. -31.395 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000228025	Northing (UTM 18) 4537985.621 (Meters)	Easting (UTM 18) 725948.457 (Meters)	Elevation 35.452 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4017	
Date of Survey 4/17/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 40°57'32.17486" N	Longitude 72°19'19.67143" W	Ellipsoid Ht. 5.983 (Meters)	Geoid Ht. -31.400 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000224475	Northing (UTM 18) 4537652.385 (Meters)	Easting (UTM 18) 725364.290 (Meters)	Elevation 37.383 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York		Station Description  Lidar QAQC Point # 4018			
Date of Survey 4/19/2014					
Established by WOOLPERT, INC.	Latitude 40°51'35.50563" N	Longitude 72°36'39.39095" W	Ellipsoid Ht. -6.877 (Meters)	Geoid Ht. -31.541 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000100299	Northing (UTM 18) 4525947.906 (Meters)	Easting (UTM 18) 701356.915 (Meters)	Elevation 24.664 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4019	
Date of Survey 4/20/2014				Ground Type Weeds	
Established by WOOLPERT, INC.	Latitude 40°43'10.75903" N	Longitude 73°10'22.54219" W	Ellipsoid Ht. -26.859 (Meters)	Geoid Ht. -31.263 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999897364	Northing (UTM 18) 4509242.251 (Meters)	Easting (UTM 18) 654312.688 (Meters)	Elevation 4.404 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4020	
Date of Survey 4/19/2014				Ground Type Tall Grass	
Established by WOOLPERT, INC.	Latitude 40°49'05.16984" N	Longitude 72°52'42.95447" W	Ellipsoid Ht. -9.240 (Meters)	Geoid Ht. -31.385 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999995532	Northing (UTM 18) 4520730.572 (Meters)	Easting (UTM 18) 678908.731 (Meters)	Elevation 22.145 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 4021	
Date of Survey 4/20/2014				Ground Type Tall Grass	
Established by WOOLPERT, INC.	Latitude 40°55'02.00405" N	Longitude 73°20'31.73334" W	Ellipsoid Ht. -18.358 (Meters)	Geoid Ht. -30.517 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999842792	Northing (UTM 18) 4530891.194 (Meters)	Easting (UTM 18) 639604.975 (Meters)	Elevation 12.159 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5001	
Date of Survey 4/17/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 41°15'36.64966" N	Longitude 72°00'32.01627" W	Ellipsoid Ht. -29.900 (Meters)	Geoid Ht. -30.797 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000377915	Northing (UTM 18) 4571955.787 (Meters)	Easting (UTM 18) 750579.853 (Meters)	Elevation 0.897 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5002	
Date of Survey 4/17/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 41°16'38.98518" N	Longitude 71°58'45.55769" W	Ellipsoid Ht. -26.355 (Meters)	Geoid Ht. -30.763 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000392315	Northing (UTM 18) 4573964.206 (Meters)	Easting (UTM 18) 752990.613 (Meters)	Elevation 4.409 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5003	
Date of Survey 4/16/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 41°07'58.73926" N	Longitude 72°20'56.37198" W	Ellipsoid Ht. -15.831 (Meters)	Geoid Ht. -30.970 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000212149	Northing (UTM 18) 4556907.172 (Meters)	Easting (UTM 18) 722515.930 (Meters)	Elevation 15.139 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5004	
Date of Survey 4/16/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 41°01'11.22396" N	Longitude 72°29'32.97403" W	Ellipsoid Ht. -24.490 (Meters)	Geoid Ht. -31.198 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000151144	Northing (UTM 18) 4543982.260 (Meters)	Easting (UTM 18) 710831.574 (Meters)	Elevation 6.708 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5005	
Date of Survey 4/19/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°56'40.40628" N	Longitude 72°55'50.26394" W	Ellipsoid Ht. 11.142 (Meters)	Geoid Ht. -30.810 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999971803	Northing (UTM 18) 4534664.318 (Meters)	Easting (UTM 18) 674188.453 (Meters)	Elevation 41.953 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5006	
Date of Survey 4/20/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°52'10.78093" N	Longitude 73°15'38.78917" W	Ellipsoid Ht. 0.198 (Meters)	Geoid Ht. -30.629 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999864406	Northing (UTM 18) 4525744.202 (Meters)	Easting (UTM 18) 646562.549 (Meters)	Elevation 30.827 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5007	
Date of Survey 4/21/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°55'53.57943" N	Longitude 73°28'34.25000" W	Ellipsoid Ht. -16.445 (Meters)	Geoid Ht. -30.616 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999805172	Northing (UTM 18) 4532276.318 (Meters)	Easting (UTM 18) 628290.212 (Meters)	Elevation 14.171 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 5008	
Date of Survey 4/21/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°49'37.37152" N	Longitude 73°31'52.11313" W	Ellipsoid Ht. 43.170 (Meters)	Geoid Ht. -30.983 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999782084	Northing (UTM 18) 4520596.079 (Meters)	Easting (UTM 18) 623857.507 (Meters)	Elevation 74.152 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York		Station Description Lidar QAQC Point # 5009			
Date of Survey 4/22/2014		Ground Type Brush			
Established by WOOLPERT, INC.	Latitude 40°47'11.93541" N	Longitude 73°42'03.37692" W	Ellipsoid Ht. -24.148 (Meters)	Geoid Ht. -31.323 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.99975166	Northing (UTM 18) 4515885.246 (Meters)	Easting (UTM 18) 609606.029 (Meters)	Elevation 7.175 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 5010	
Date of Survey 4/21/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°35'31.71646" N	Longitude 73°36'02.10628" W	Ellipsoid Ht. -29.747 (Meters)	Geoid Ht. -31.800 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.99977728	Northing (UTM 18) 4494423.781 (Meters)	Easting (UTM 18) 618417.260 (Meters)	Elevation 2.053 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 5011	
Date of Survey 4/21/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°35'31.77578" N	Longitude 73°35'50.32276" W	Ellipsoid Ht. -29.735 (Meters)	Geoid Ht. -31.793 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999778087	Northing (UTM 18) 4494430.018 (Meters)	Easting (UTM 18) 618694.215 (Meters)	Elevation 2.058 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5012	
Date of Survey 4/21/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°37'48.52799" N	Longitude 73°14'01.56433" W	Ellipsoid Ht. -27.051 (Meters)	Geoid Ht. -31.519 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.99987893	Northing (UTM 18) 4499200.633 (Meters)	Easting (UTM 18) 649373.699 (Meters)	Elevation 4.469 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5013	
Date of Survey 4/19/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°44'25.46563" N	Longitude 72°52'21.17952" W	Ellipsoid Ht. -31.133 (Meters)	Geoid Ht. -31.682 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000002144	Northing (UTM 18) 4512117.439 (Meters)	Easting (UTM 18) 679628.157 (Meters)	Elevation 0.549 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5014	
Date of Survey 4/18/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°53'09.35314" N	Longitude 72°55'35.47902" W	Ellipsoid Ht. -4.816 (Meters)	Geoid Ht. -31.038 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999976455	Northing (UTM 18) 4528163.967 (Meters)	Easting (UTM 18) 674688.505 (Meters)	Elevation 26.222 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5015	
Date of Survey 4/17/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°53'53.77460" N	Longitude 72°18'44.59727" W	Ellipsoid Ht. -26.502 (Meters)	Geoid Ht. -31.523 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000235289	Northing (UTM 18) 4530942.011 (Meters)	Easting (UTM 18) 726391.450 (Meters)	Elevation 5.021 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5016	
Date of Survey 4/18/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 41°04'32.30576" N	Longitude 71°56'25.34636" W	Ellipsoid Ht. -27.369 (Meters)	Geoid Ht. -31.051 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000417977	Northing (UTM 18) 4551665.659 (Meters)	Easting (UTM 18) 757041.735 (Meters)	Elevation 3.681 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York		Station Description Lidar QAQC Point # 5017			
Date of Survey 4/17/2014		Ground Type Brush			
Established by WOOLPERT, INC.	Latitude 40°57'36.23479" N	Longitude 72°19'08.15834" W	Ellipsoid Ht. 2.453 (Meters)	Geoid Ht. -31.398 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000226502	Northing (UTM 18) 4537785.854 (Meters)	Easting (UTM 18) 725629.619 (Meters)	Elevation 33.851 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5018	
Date of Survey 4/19/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°51'36.02607" N	Longitude 72°36'40.22939" W	Ellipsoid Ht. -6.387 (Meters)	Geoid Ht. -31.540 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000100123	Northing (UTM 18) 4525963.420 (Meters)	Easting (UTM 18) 701336.846 (Meters)	Elevation 25.154 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5019	
Date of Survey 4/20/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°42'29.55353" N	Longitude 73°10'25.65255" W	Ellipsoid Ht. -30.392 (Meters)	Geoid Ht. -31.306 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999897741	Northing (UTM 18) 4507970.087 (Meters)	Easting (UTM 18) 654266.139 (Meters)	Elevation 0.915 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5020	
Date of Survey 4/19/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°49'06.39672" N	Longitude 72°52'46.74862" W	Ellipsoid Ht. -8.779 (Meters)	Geoid Ht. -31.382 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999995064	Northing (UTM 18) 4520766.255 (Meters)	Easting (UTM 18) 678818.926 (Meters)	Elevation 22.603 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 5021	
Date of Survey 4/20/2014				Ground Type Brush	
Established by WOOLPERT, INC.	Latitude 40°55'03.66227" N	Longitude 73°20'32.55134" W	Ellipsoid Ht. -18.208 (Meters)	Geoid Ht. -30.516 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.9998427	Northing (UTM 18) 4530941.966 (Meters)	Easting (UTM 18) 639584.871 (Meters)	Elevation 12.307 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6001	
Date of Survey 4/17/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 41°15'25.70666" N	Longitude 72°00'38.65499" W	Ellipsoid Ht. -13.127 (Meters)	Geoid Ht. -30.803 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000374406	Northing (UTM 18) 4571612.950 (Meters)	Easting (UTM 18) 750436.969 (Meters)	Elevation 17.675 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York		Station Description Lidar QAQC Point # 6002			
Date of Survey 4/17/2014		Ground Type Trees			
Established by WOOLPERT, INC.	Latitude 41°16'39.20945" N	Longitude 71°58'48.39595" W	Ellipsoid Ht. -26.065 (Meters)	Geoid Ht. -30.763 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000391857	Northing (UTM 18) 4573968.825 (Meters)	Easting (UTM 18) 752924.333 (Meters)	Elevation 4.698 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6003	
Date of Survey 4/16/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 41°07'56.50185" N	Longitude 72°20'59.15001" W	Ellipsoid Ht. -15.431 (Meters)	Geoid Ht. -30.971 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000211743	Northing (UTM 18) 4556836.195 (Meters)	Easting (UTM 18) 722453.254 (Meters)	Elevation 15.540 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6004	
Date of Survey 4/16/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 41°01'11.14218" N	Longitude 72°29'35.22946" W	Ellipsoid Ht. -23.297 (Meters)	Geoid Ht. -31.197 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000150684	Northing (UTM 18) 4543978.224 (Meters)	Easting (UTM 18) 710778.965 (Meters)	Elevation 7.901 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6005	
Date of Survey 4/19/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°56'41.23491" N	Longitude 72°55'51.17940" W	Ellipsoid Ht. 11.442 (Meters)	Geoid Ht. -30.809 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999971662	Northing (UTM 18) 4534689.365 (Meters)	Easting (UTM 18) 674166.442 (Meters)	Elevation 42.251 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York		Station Description  Lidar QAQC Point # 6006			
Date of Survey 4/20/2014					
Established by WOOLPERT, INC.	Latitude 40°52'10.16982" N	Longitude 73°15'44.29617" W	Ellipsoid Ht. -1.900 (Meters)	Geoid Ht. -30.629 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.99986427	Northing (UTM 18) 4525722.797 (Meters)	Easting (UTM 18) 646434.009 (Meters)	Elevation 28.729 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6007	
Date of Survey 4/21/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°56'27.66491" N	Longitude 73°28'36.24045" W	Ellipsoid Ht. -21.999 (Meters)	Geoid Ht. -30.594 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999805836	Northing (UTM 18) 4533326.607 (Meters)	Easting (UTM 18) 628225.347 (Meters)	Elevation 8.595 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar QAQC Point # 6008	
Date of Survey 4/21/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°49'36.70433" N	Longitude 73°31'51.68930" W	Ellipsoid Ht. 42.937 (Meters)	Geoid Ht. -30.983 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999782152	Northing (UTM 18) 4520575.671 (Meters)	Easting (UTM 18) 623867.780 (Meters)	Elevation 73.919 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York		Station Description Lidar QAQC Point # 6009			
Date of Survey 4/22/2014		Ground Type Trees			
Established by WOOLPERT, INC.	Latitude 40°47'12.49943" N	Longitude 73°42'03.32448" W	Ellipsoid Ht. -23.632 (Meters)	Geoid Ht. -31.323 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999751582	Northing (UTM 18) 4515902.656 (Meters)	Easting (UTM 18) 609607.000 (Meters)	Elevation 7.691 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6010	
Date of Survey 4/19/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°45'29.24704" N	Longitude 72°52'23.08902" W	Ellipsoid Ht. -27.439 (Meters)	Geoid Ht. -31.617 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000001155	Northing (UTM 18) 4514083.232 (Meters)	Easting (UTM 18) 679535.687 (Meters)	Elevation 4.178 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6011	
Date of Survey 4/19/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°45'29.30242" N	Longitude 72°52'22.46601" W	Ellipsoid Ht. -27.492 (Meters)	Geoid Ht. -31.617 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000001228	Northing (UTM 18) 4514085.294 (Meters)	Easting (UTM 18) 679550.255 (Meters)	Elevation 4.125 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6012	
Date of Survey 4/19/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°45'30.06808" N	Longitude 72°52'22.77157" W	Ellipsoid Ht. -27.379 (Meters)	Geoid Ht. -31.616 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000001176	Northing (UTM 18) 4514108.731 (Meters)	Easting (UTM 18) 679542.517 (Meters)	Elevation 4.238 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6013	
Date of Survey 4/19/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°45'30.09649" N	Longitude 72°52'23.47292" W	Ellipsoid Ht. -27.457 (Meters)	Geoid Ht. -31.616 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000001115	Northing (UTM 18) 4514109.209 (Meters)	Easting (UTM 18) 679526.050 (Meters)	Elevation 4.159 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6014	
Date of Survey 4/18/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°53'09.50157" N	Longitude 72°55'34.23810" W	Ellipsoid Ht. -3.137 (Meters)	Geoid Ht. -31.038 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999976317	Northing (UTM 18) 4528169.232 (Meters)	Easting (UTM 18) 674717.439 (Meters)	Elevation 27.901 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**USGS/NGTOC**



**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6015	
Date of Survey 4/20/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°42'28.04451" N	Longitude 73°10'14.89661" W	Ellipsoid Ht. -30.113 (Meters)	Geoid Ht. -31.312 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999898661	Northing (UTM 18) 4507928.806 (Meters)	Easting (UTM 18) 654519.508 (Meters)	Elevation 1.199 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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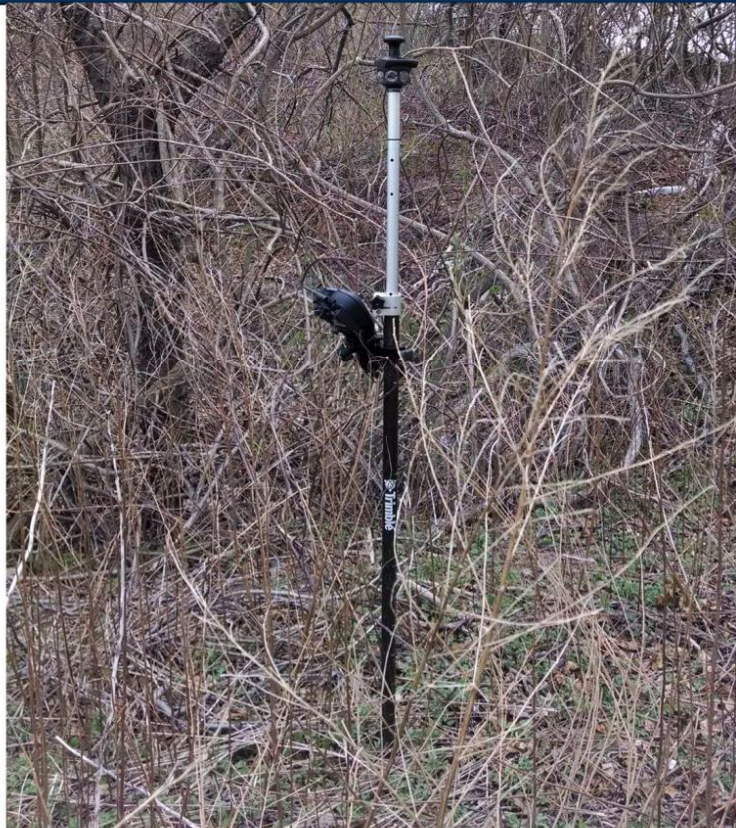


**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6016	
Date of Survey 4/18/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 41°04'29.16897" N	Longitude 71°56'22.90798" W	Ellipsoid Ht. -28.373 (Meters)	Geoid Ht. -31.051 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000418516	Northing (UTM 18) 4551570.911 (Meters)	Easting (UTM 18) 757102.043 (Meters)	Elevation 2.678 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6017	
Date of Survey 4/17/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°57'43.32357" N	Longitude 72°18'51.93231" W	Ellipsoid Ht. 3.638 (Meters)	Geoid Ht. -31.395 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.00022839	Northing (UTM 18) 4538016.131 (Meters)	Easting (UTM 18) 726002.249 (Meters)	Elevation 35.033 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6018	
Date of Survey 4/19/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°51'36.27071" N	Longitude 72°36'40.75947" W	Ellipsoid Ht. -6.259 (Meters)	Geoid Ht. -31.540 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.00010004	Northing (UTM 18) 4525970.625 (Meters)	Easting (UTM 18) 701324.229 (Meters)	Elevation 25.281 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



Photogrammetric Ground Control Information Sheet

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar QAQC Point # 6019	
Date of Survey 4/20/2014				Ground Type Trees	
Established by WOOLPERT, INC.	Latitude 40°42'30.47985" N	Longitude 73°10'26.33320" W	Ellipsoid Ht. -30.556 (Meters)	Geoid Ht. -31.305 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999897704	Northing (UTM 18) 4507998.319 (Meters)	Easting (UTM 18) 654249.573 (Meters)	Elevation 0.749 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York		Station Description Lidar QAQC Point # 6020			
Date of Survey 4/19/2014		Ground Type Trees			
Established by WOOLPERT, INC.	Latitude 40°49'07.00587" N	Longitude 72°52'43.36597" W	Ellipsoid Ht. -9.378 (Meters)	Geoid Ht. -31.383 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999995505	Northing (UTM 18) 4520786.958 (Meters)	Easting (UTM 18) 678897.719 (Meters)	Elevation 22.004 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York		Station Description Lidar QAQC Point # 6021			
Date of Survey 4/20/2014		Ground Type Trees			
Established by WOOLPERT, INC.	Latitude 40°55'00.84061" N	Longitude 73°20'30.62318" W	Ellipsoid Ht. -17.586 (Meters)	Geoid Ht. -30.517 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999842763	Northing (UTM 18) 4530855.809 (Meters)	Easting (UTM 18) 639631.624 (Meters)	Elevation 12.932 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1001	
Date of Survey 4/17/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 41°15'27.03555" N	Longitude 72°00'37.81990" W	Ellipsoid Ht. -14.267 (Meters)	Geoid Ht. -30.802 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000374696	Northing (UTM 18) 4571654.607 (Meters)	Easting (UTM 18) 750454.994 (Meters)	Elevation 16.535 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1002	
Date of Survey 4/17/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 41°16'38.90506" N	Longitude 71°58'46.74778" W	Ellipsoid Ht. -26.045 (Meters)	Geoid Ht. -30.763 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000392095	Northing (UTM 18) 4573960.771 (Meters)	Easting (UTM 18) 752963.008 (Meters)	Elevation 4.719 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1003	
Date of Survey 4/16/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 41°08'09.34587" N	Longitude 72°21'01.25410" W	Ellipsoid Ht. -16.841 (Meters)	Geoid Ht. -30.961 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000211628	Northing (UTM 18) 4557230.826 (Meters)	Easting (UTM 18) 722392.131 (Meters)	Elevation 14.120 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1004	
Date of Survey 4/16/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 41°01'08.79062" N	Longitude 72°29'35.95052" W	Ellipsoid Ht. -22.442 (Meters)	Geoid Ht. -31.199 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000150474	Northing (UTM 18) 4543905.217 (Meters)	Easting (UTM 18) 710764.207 (Meters)	Elevation 8.757 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1005	
Date of Survey 4/18/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°56'38.27715" N	Longitude 72°56'31.57842" W	Ellipsoid Ht. 13.249 (Meters)	Geoid Ht. -30.793 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999967347	Northing (UTM 18) 4534575.847 (Meters)	Easting (UTM 18) 673223.932 (Meters)	Elevation 44.042 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1006	
Date of Survey 4/20/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°52'21.96037" N	Longitude 73°15'23.67764" W	Ellipsoid Ht. 5.559 (Meters)	Geoid Ht. -30.622 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.99986482	Northing (UTM 18) 4526095.984 (Meters)	Easting (UTM 18) 646909.429 (Meters)	Elevation 36.181 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1007	
Date of Survey 4/21/2014				Ground Type Bare Ground	
Established by WOOLPERT, INC.	Latitude 40°56'29.38647" N	Longitude 73°28'37.42751" W	Ellipsoid Ht. -24.925 (Meters)	Geoid Ht. -30.594 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999806203	Northing (UTM 18) 4533379.212 (Meters)	Easting (UTM 18) 628196.665 (Meters)	Elevation 5.668 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar Control Point # 1008	
Date of Survey 4/21/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°51'53.00518" N	Longitude 73°31'53.50987" W	Ellipsoid Ht. -15.255 (Meters)	Geoid Ht. -30.883 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999790914	Northing (UTM 18) 4524778.015 (Meters)	Easting (UTM 18) 623754.666 (Meters)	Elevation 15.628 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar Control Point # 1009	
Date of Survey 4/22/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°47'13.54500" N	Longitude 73°42'08.38166" W	Ellipsoid Ht. -21.860 (Meters)	Geoid Ht. -31.322 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999750984	Northing (UTM 18) 4515933.142 (Meters)	Easting (UTM 18) 609487.995 (Meters)	Elevation 9.462 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar Control Point # 1010	
Date of Survey 4/22/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°42'58.23074" N	Longitude 73°39'05.32095" W	Ellipsoid Ht. -8.424 (Meters)	Geoid Ht. -31.550 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999761016	Northing (UTM 18) 4508125.027 (Meters)	Easting (UTM 18) 613899.457 (Meters)	Elevation 23.126 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York				Station Description Lidar Control Point # 1011	
Date of Survey 4/21/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°38'28.38874" N	Longitude 73°37'57.53977" W	Ellipsoid Ht. -27.824 (Meters)	Geoid Ht. -31.757 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999768915	Northing (UTM 18) 4499828.883 (Meters)	Easting (UTM 18) 615619.228 (Meters)	Elevation 3.932 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1012	
Date of Survey 4/21/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°37'46.22679" N	Longitude 73°14'05.91542" W	Ellipsoid Ht. -26.724 (Meters)	Geoid Ht. -31.520 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999878509	Northing (UTM 18) 4499127.621 (Meters)	Easting (UTM 18) 649272.901 (Meters)	Elevation 4.797 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1013	
Date of Survey 4/18/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°44'27.65609" N	Longitude 72°52'21.92847" W	Ellipsoid Ht. -30.492 (Meters)	Geoid Ht. -31.679 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000001959	Northing (UTM 18) 4512184.562 (Meters)	Easting (UTM 18) 679608.953 (Meters)	Elevation 1.188 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1014	
Date of Survey 4/18/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°52'28.82745" N	Longitude 72°55'08.18487" W	Ellipsoid Ht. 3.788 (Meters)	Geoid Ht. -31.094 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999977991	Northing (UTM 18) 4526929.390 (Meters)	Easting (UTM 18) 675357.018 (Meters)	Elevation 34.882 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1015	
Date of Survey 4/17/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°53'54.38500" N	Longitude 72°18'43.76157" W	Ellipsoid Ht. -29.057 (Meters)	Geoid Ht. -31.522 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000235795	Northing (UTM 18) 4530961.437 (Meters)	Easting (UTM 18) 726410.427 (Meters)	Elevation 2.465 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1016	
Date of Survey 4/18/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 41°04'19.07969" N	Longitude 71°56'31.25022" W	Ellipsoid Ht. -28.973 (Meters)	Geoid Ht. -31.058 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000417446	Northing (UTM 18) 4551252.897 (Meters)	Easting (UTM 18) 756918.260 (Meters)	Elevation 2.084 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1017	
Date of Survey 4/17/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 41°00'00.09904" N	Longitude 72°17'48.22419" W	Ellipsoid Ht. -30.662 (Meters)	Geoid Ht. -31.330 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000241345	Northing (UTM 18) 4542280.336 (Meters)	Easting (UTM 18) 727361.039 (Meters)	Elevation 0.668 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1018	
Date of Survey 4/17/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°53'35.58279" N	Longitude 72°29'37.62792" W	Ellipsoid Ht. -16.524 (Meters)	Geoid Ht. -31.524 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000151444	Northing (UTM 18) 4529927.191 (Meters)	Easting (UTM 18) 711126.027 (Meters)	Elevation 14.999 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1019	
Date of Survey 4/20/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°42'26.30540" N	Longitude 73°10'18.55421" W	Ellipsoid Ht. -30.156 (Meters)	Geoid Ht. -31.313 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999898346	Northing (UTM 18) 4507873.391 (Meters)	Easting (UTM 18) 654434.794 (Meters)	Elevation 1.157 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1020	
Date of Survey 4/19/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°49'03.00355" N	Longitude 72°52'43.85302" W	Ellipsoid Ht. -9.644 (Meters)	Geoid Ht. -31.387 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.99999551	Northing (UTM 18) 4520663.258 (Meters)	Easting (UTM 18) 678889.297 (Meters)	Elevation 21.743 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Lidar Control Point # 1021	
Date of Survey 4/20/2014				Ground Type Asphalt	
Established by WOOLPERT, INC.	Latitude 40°55'00.26493" N	Longitude 73°20'34.80262" W	Ellipsoid Ht. -18.608 (Meters)	Geoid Ht. -30.518 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.999842588	Northing (UTM 18) 4530836.203 (Meters)	Easting (UTM 18) 639534.194 (Meters)	Elevation 11.910 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:



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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Survey Control Point # 20000	
Date of Survey 4/17/2014				Ground Type Nail Set	
Established by WOOLPERT, INC.	Latitude 41°15'27.07724" N	Longitude 72°00'35.00137" W	Ellipsoid Ht. -14.031 (Meters)	Geoid Ht. -30.802 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000375064	Northing (UTM 18) 4571658.152 (Meters)	Easting (UTM 18) 750520.550 (Meters)	Elevation 16.771 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:





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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Nassau County, New York		Station Description Survey Control Point # 20001			
Date of Survey 4/22/2014		Ground Type Nail Set			
Established by WOOLPERT, INC.	Latitude 40°47'15.66707" N	Longitude 73°42'10.04703" W	Ellipsoid Ht. -21.251 (Meters)	Geoid Ht. -31.321 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 0.99975078	Northing (UTM 18) 4515998.001 (Meters)	Easting (UTM 18) 609447.995 (Meters)	Elevation 10.070 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Survey Control Point # 31004	
Date of Survey 4/18/2014				Ground Type Nail Set	
Established by WOOLPERT, INC.	Latitude 40°57'42.71415" N	Longitude 72°18'52.67324" W	Ellipsoid Ht. 3.713 (Meters)	Geoid Ht. -31.395 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000228285	Northing (UTM 18) 4537996.803 (Meters)	Easting (UTM 18) 725985.505 (Meters)	Elevation 35.108 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Survey Control Point # 31005	
Date of Survey 4/19/2014				Ground Type Nail Set	
Established by WOOLPERT, INC.	Latitude 40°45'27.23016" N	Longitude 72°52'23.60268" W	Ellipsoid Ht. -27.585 (Meters)	Geoid Ht. -31.619 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000001131	Northing (UTM 18) 4514020.743 (Meters)	Easting (UTM 18) 679525.150 (Meters)	Elevation 4.034 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

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**Long Island New York  
SANDY LiDAR PROJECT**



County, State Suffolk County, New York				Station Description Survey Control Point # 31006	
Date of Survey 4/19/2014				Ground Type Nail Set	
Established by WOOLPERT, INC.	Latitude 40°45'28.78156" N	Longitude 72°52'23.94701" W	Ellipsoid Ht. -27.395 (Meters)	Geoid Ht. -31.617 (Meters)	Horizontal Datum NAD 83 (2011)
Combined Scale Factor 1.000001061	Northing (UTM 18) 4514068.390 (Meters)	Easting (UTM 18) 679515.916 (Meters)	Elevation 4.222 (Meters)	Vertical Datum NAVD 88	Geoid Model GEOID 12A

Picture:

