

APPENDIX 1

MONUMENT INFORMATION REPORT

CONTROL MONUMENT USED BY APTIM FOR 2021 TOWN OF DUCK DATA ACQUISITION REPORT APRIL 2021	
DATUMS: NAD83(2011) - NAVD1988 (US SURVEY FEET)	
Designation	ARCH
Stamping	ARCH 2005
Northing	854412.25
Easting	2979783.79
Horizontal Root Mean Square Error	0.18
Elevation	11.64
Vertical Root Mean Square Error	0.10
Description	Located about 3.2 miles NW of Kill Devil Hills and 4.1 miles SSW of Southern Shores. On US 158 Bypass, 2.4 miles west from the main entrance to The Wright Brothers Memorial to Arch Street, in the northwest quadrant. 57.2 ft. West-Southwest of the centerline of US 158 Southbound Lanes. The Disk is a commemorative of the Wright Brothers first flight NGS, NCGS, NOAA, and NPS agency inscriptions.



Monument: ARCH



Location Verification: ARCH

Mean of Inverse Shots - Published Versus APTIM Found				
Monument	No. of Shots	ΔN	ΔE	ΔZ
ARCH	12	0.10	-0.05	0.09

CONTROL MONUMENT USED BY APTIM FOR 2021 TOWN OF DUCK DATA ACQUISITION REPORT APRIL 2021	
DATUMS: NAD83(2011) - NAVD1988 (US SURVEY FEET)	
Designation	Y 254
Stamping	Y 254
Northing	880716.27
Easting	2966184.93
Horizontal Root Mean Square Error	0.16
Elevation	12.15
Vertical Root Mean Square Error	0.02
Description	Proceed along NC 12 for 2.1 mi. N from the intersection of US 154 in Kitty Hawk to house number 160. Station is level with the centerline of NC 12 and flush with the ground. Located 31.5 Ft. E of the centerline of NC 12, 30 Ft. S-SW of the center of concrete drive to house, 8.4 Ft. S of a water meter, 1.2 SW of a witness sign, and 3.3 Ft. W-SW of a power pole with 2 guy wires and a reference tag.



Monument: Y 254



Location Verification: Y 254

Mean of Inverse Shots – Published Solution Versus APTIM Found				
Monument	No. of Shots	ΔN	ΔE	ΔZ
Y 254	42	-0.04	-0.06	0.01

CONTROL MONUMENT USED BY APTIM FOR 2021 TOWN OF DUCK DATA ACQUISITION REPORT APRIL 2021	
DATUMS: NAD83(2011) - NAVD1988 (US SURVEY FEET)	
Designation	KITTY
Stamping	KITTY 1962
Northing	859358.84
Easting	2977204.86
Horizontal Root Mean Square Error	0.14
Elevation	9.17
Vertical Root Mean Square Error	0.09
Description	Station is located about 0.65 miles east of the post office in Kitty Hawk. The station is a standard disk set in a 12x12 inch concrete monument. It is 126 feet east-southeast of the intersection, 17 feet east of a power line pole and 2.7 feet northeast of a metal witness post with sign. The mark is flush with the ground.



Monument: KITTY



Location Verification: KITTY

Mean of Inverse Shots – Published Versus APTIM Found				
Monument	No. of Shots	ΔN	ΔE	ΔZ
KITTY	20	-0.06	-0.05	0.08

CONTROL MONUMENT USED BY APTIM FOR 2021 TOWN OF DUCK DATA ACQUISITION REPORT APRIL 2021	
DATUMS: NAD83(2011) - NAVD1988 (US SURVEY FEET)	
Designation	CAFFEY
Stamping	CAFFEY 1935
Northing	915308.87
Easting	2952084.11
Horizontal Root Mean Square Error	0.12
Elevation	1.99
Vertical Root Mean Square Error	0.06
Description	Station is about 350 feet W of Caffey Inlet Coast Guard Station, on a small sand neck which extends into the marsh on the E shore of Currituck Sound. This neck is just S of an old can buoy lying in the marsh and is just N of a small gut which the road crosses on a small bridge. The station is about 225 feet W of a flagpole at the fence line W of the coast guard station, a point in line with the S fence, and 179 feet NW of the center of the bridge.



Monument: CAFFEY



Location Verification: CAFFEY

Mean of Inverse Shots – Published Versus APTIM Found				
Monument	No. of Shots	ΔN	ΔE	ΔZ
CAFFEY	22	0.06	-0.03	0.02

TOWN OF DUCK STATION INFORMATION			
APRIL 2021			
DATUMS: NAD83(2011) / NAVD88 (U.S. SURVEY FEET)			
STATION	NORTHING	EASTING	AZIMUTH
D-01	918267.70	2951387.50	70.00
D-02	917384.40	2951733.80	70.00
D-03	916429.40	2952103.00	70.00
D-04	915495.30	2952464.00	70.00
D-05	914598.00	2952849.30	70.00
D-06	913696.90	2953224.40	70.00
D-07	912798.80	2953607.30	70.00
D-08	911897.90	2953983.00	70.00
D-09	910994.82	2954356.65	70.00
D-10	910066.74	2954759.12	70.00
D-10.5	909703.50	2954914.20	70.00
D-11	909133.14	2955158.05	70.00
D-12	908412.53	2955461.41	70.00
D-13	907478.35	2955874.29	70.00
D-14	906578.33	2956252.15	70.00
D-15	905677.78	2956628.57	70.00
D-16	904767.65	2956978.72	70.00
D-17	903863.92	2957333.66	70.00
D-18	902886.47	2957718.79	70.00
D-19	902331.03	2957932.45	70.00
D-20	901760.74	2958139.73	70.00
D-21	900958.70	2958472.10	70.00
D-22	900228.80	2958754.00	70.00
D-23	899515.60	2958992.70	70.00
D-24	898739.80	2959267.20	70.00
D-25	897824.30	2959601.70	70.00
D-26	896902.30	2959928.60	70.00
D-27	895981.90	2960250.60	70.00
D-28	895073.00	2960604.10	70.00
D-29	894166.20	2960963.60	70.00
D-30	893257.60	2961317.70	70.00
D-31	892350.70	2961676.70	70.00
D-32	891379.40	2962078.10	70.00
D-33	890553.20	2962439.40	70.00
D-34	889616.10	2962839.60	70.00