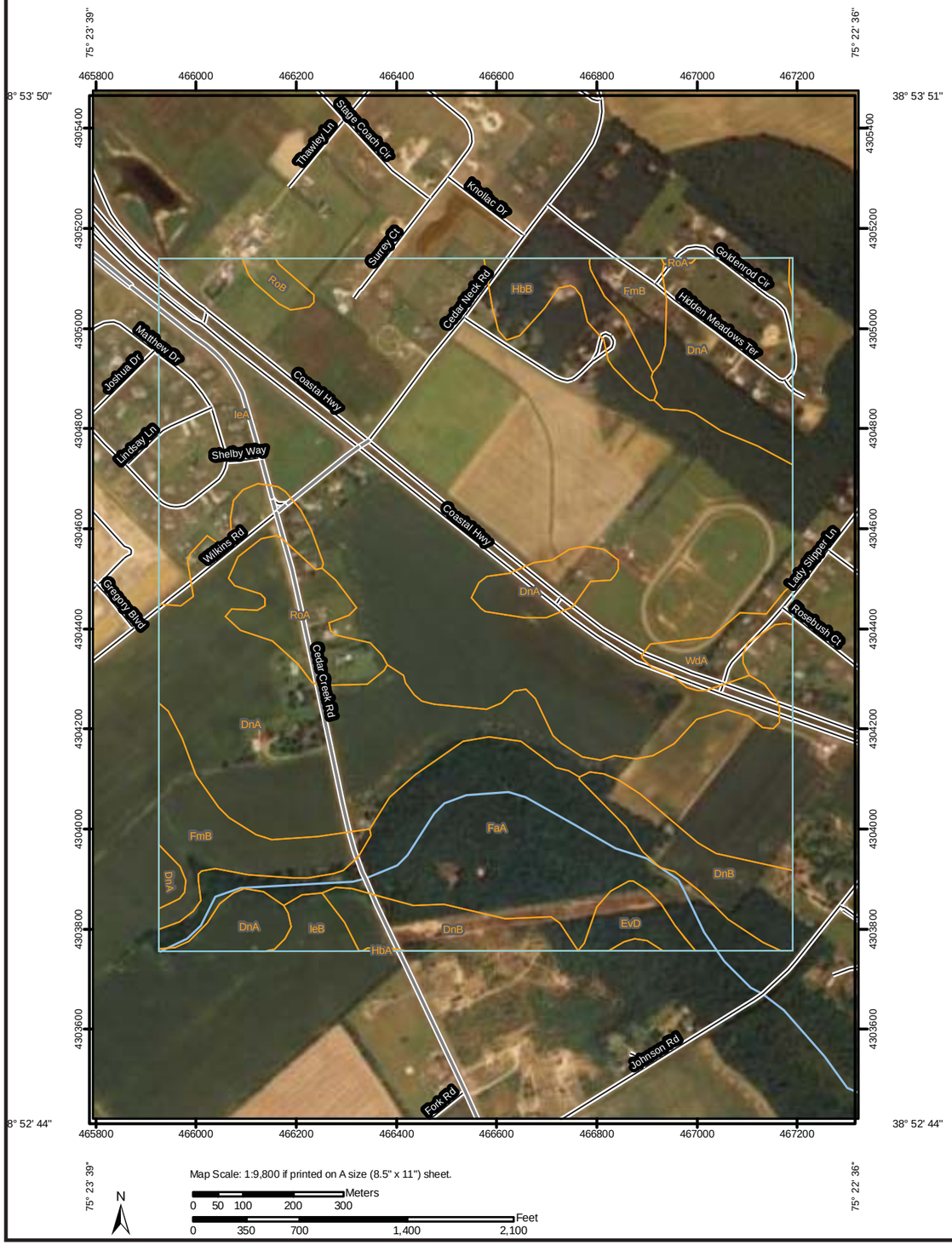
Chapter 2

GEOGRAPHICAL SETTING

Archaeological Sites 7S-C-100 and 7S-C-102 lie near the upstream limits of the Mid-Drainage Zone of the Coastal Plain, close to the Drainage Divide (Custer 1986:13 and Figure 1). These mid-drainage locations are identified as providing varied ecological opportunity to human populations because of their proximity to tidal brackish and freshwater areas. However, the general character of the specific project site more closely resembles that of the mid-Peninsula Drainage Divide. Geologically, the area is underlain by Pliocene/Miocene quartz sands with some shell beds of the Tertiary Period.

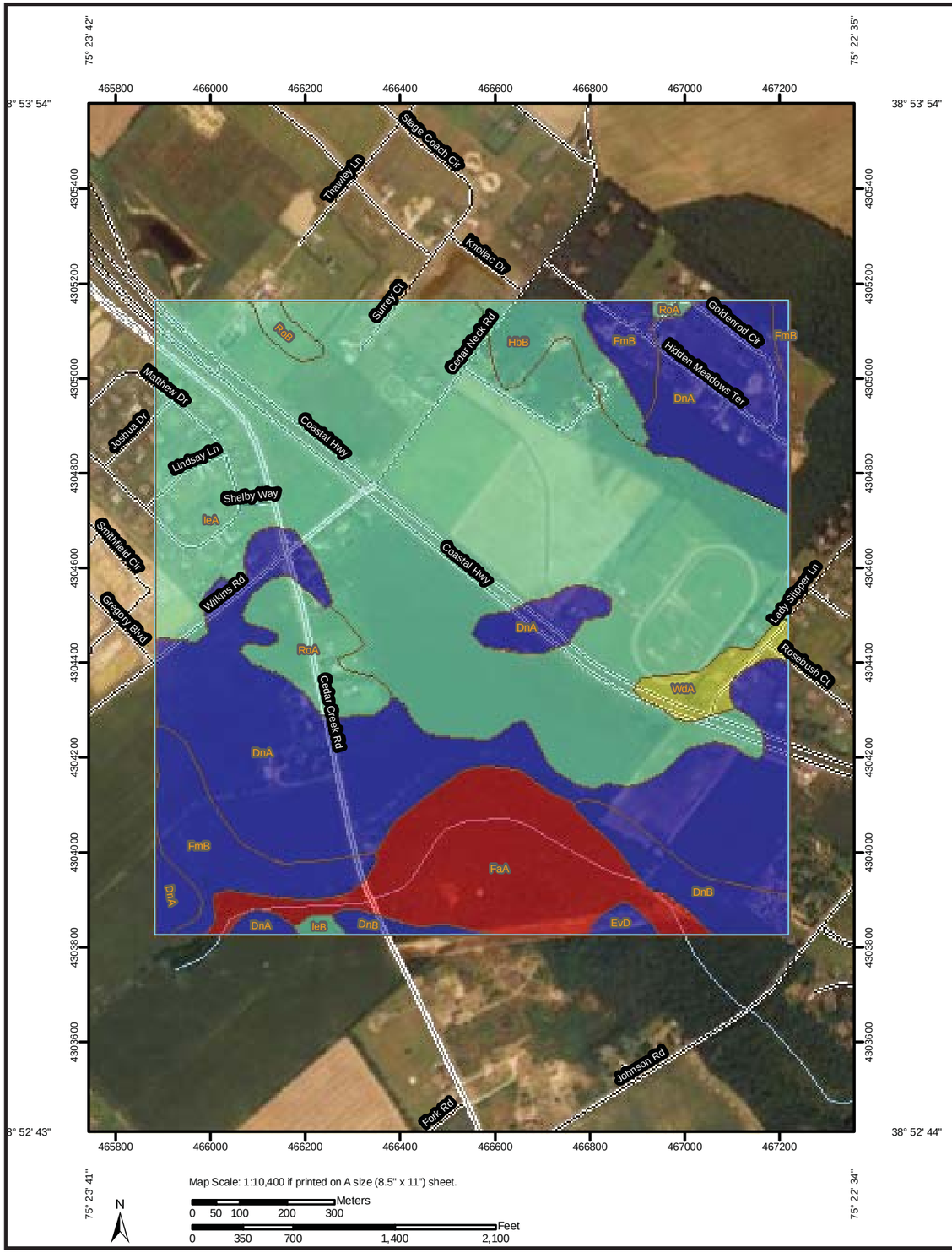
The project site lies immediately north of an unnamed third order branch of Cedar Creek, which drains northeast into the Delaware Bay. This unnamed branch flows in a southeasterly direction, joining Cedar Creek about a mile to the southeast of the project site. Terrain in the immediate project vicinity consists of a single large gently undulating agricultural field that is around 25 feet above sea level (ASL) near. One small relict stream is visible in aerial photographs crossing the proposed locations of Ramps A and B at Station 622+50. Another small relict steam, perceptible from the ground, can be detected from close examination of the one-foot contour intervals reveals a series of peaked contours which when connected indicates the course of a former fourth-order stream crossing the proposed alignment on a northwest-southeast axis at Station 630+30, originating in well-drained agricultural fields. At the time of the Phase II field survey (September and October, 2010) the field containing the project site had just been recently harvested of its crop of bush beans. The immediately surrounding area includes several residential properties with well-manicured lawns ranged along both sides of SR 30. A stand of dense deciduous woodland borders the unnamed tributary lying immediately to the south of the project site.

Soils in the project site vicinity are classified into two types, Downer loamy sand (DnA) and Ingleside loamy sand (IeA) (Figure 2.1). Both soils are well-drained loamy fluviomarine sediments with 0 to 2 percent slopes. The depth to the water table is more than 80 inches and the area is not subject to flooding (Figures 2.2 and 2.3). The division between the DnA and IeA soil types within the agricultural field located between SR 1 and 30 correlates to the location of the small prehistoric locus defined as Area 1 by Edward Otter, Inc. in the earlier Phase I survey. The larger area showing evidence of both historic and prehistoric occupation further to the west is located almost entirely on DnA soils. The differences between these soils are slight, but may have generated subtle variations in vegetation that attracted Native Americans and early colonists. The adjacent floodplain to the south is mapped as poorly drained wet Fallsington sandy loam (FaA).



Sussex County, Delaware (DE005)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
DnA	Downer loamy sand, 0 to 2 percent slopes	110.3	25.5%
DnB	Downer loamy sand, 2 to 5 percent slopes	21.3	4.9%
EvD	Evesboro loamy sand, 5 to 15 percent slopes	4.5	1.0%
FaA	Fallsington sandy loam, 0 to 2 percent slopes	46.4	10.7%
FmB	Fort Mott loamy sand, 2 to 5 percent slopes	18.6	4.3%
HbA	Hambrook sandy loam, 0 to 2 percent slopes	0.1	0.0%
HbB	Hambrook sandy loam, 2 to 5 percent slopes	8.7	2.0%
IeA	Ingleside loamy sand, 0 to 2 percent slopes	199.6	46.1%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	3.1	0.7%
RoA	Rosedale loamy sand, 0 to 2 percent slopes	12.3	2.9%
RoB	Rosedale loamy sand, 2 to 5 percent slopes	2.0	0.5%
WdA	Woodstown sandy loam, 0 to 2 percent slopes	5.7	1.3%
Totals for Area of Interest		**432.6**	**100.0%**

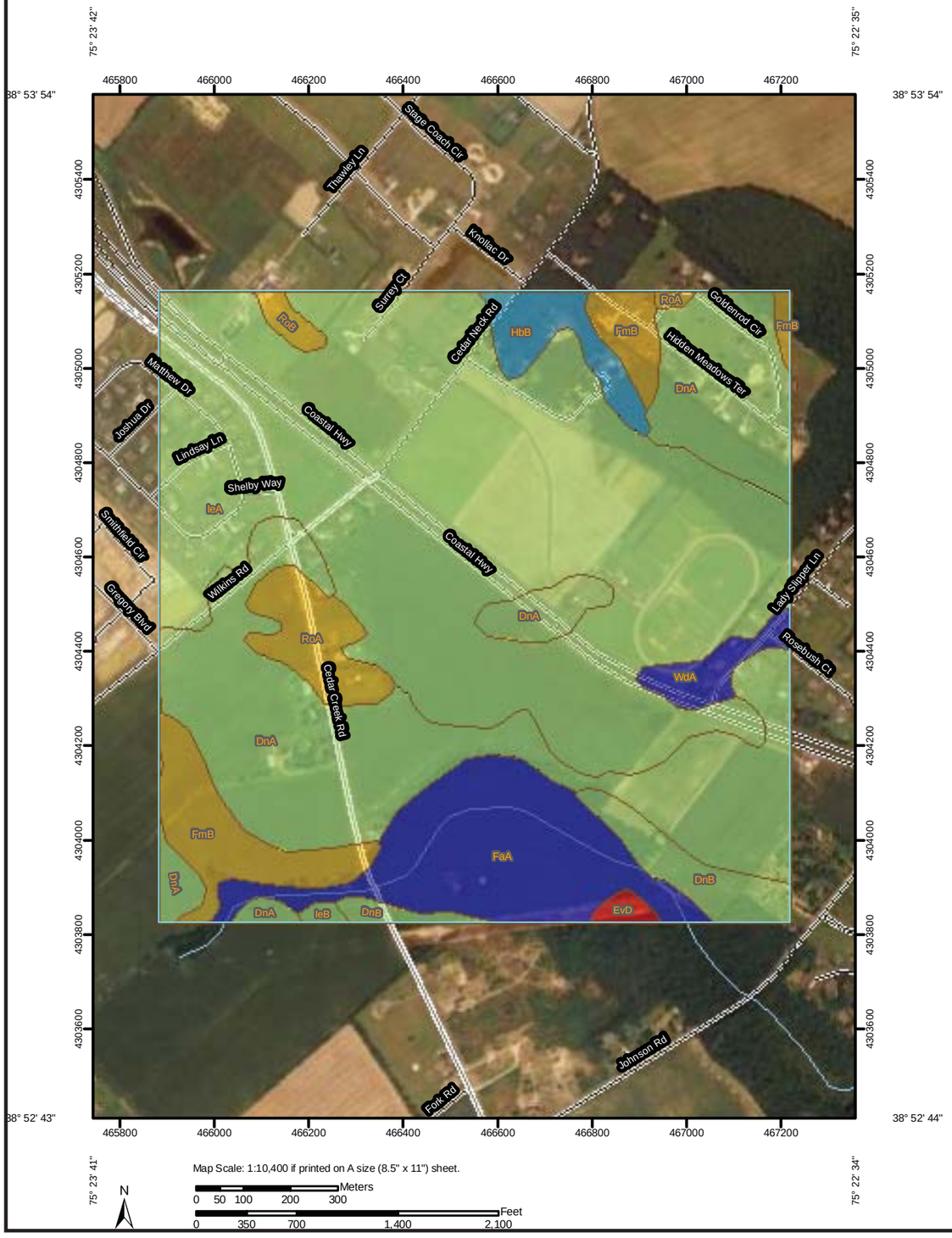
Figure 2.1. Web Soil Survey Map of the Project Site. Source: USDA Natural Resources Conservation Service, June 2009.



Depth to Water Table— Summary by Map Unit — Sussex County, Delaware

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
DnA	Downer loamy sand, 0 to 2 percent slopes	>200	117.7	26.6%
DnB	Downer loamy sand, 2 to 5 percent slopes	>200	12.8	2.9%
EvD	Evesboro loamy sand, 5 to 15 percent slopes	>200	1.7	0.4%
FaA	Fallsington sandy loam, 0 to 2 percent slopes	13	42.2	9.5%
FmB	Fort Mott loamy sand, 2 to 5 percent slopes	>200	23.2	5.2%
HbB	Hambrook sandy loam, 2 to 5 percent slopes	114	10.1	2.3%
IeA	Ingleside loamy sand, 0 to 2 percent slopes	114	212.6	48.0%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	114	0.9	0.2%
RoA	Rosedale loamy sand, 0 to 2 percent slopes	114	12.8	2.9%
RoB	Rosedale loamy sand, 2 to 5 percent slopes	114	2.4	0.5%
WdA	Woodstown sandy loam, 0 to 2 percent slopes	61	6.3	1.4%
Totals for Area of Interest			**442.8**	**100.0%**

Figure 2.2. Web Soil Survey, Depth of Water Table of the Project Site. Source: USDA Natural Resources Conservation Service, June 2009.



Available Water Supply, 0 to 100 cm— Summary by Map Unit — Sussex County, Delaware				
Map unit symbol	**Map unit name**	**Rating (centimeters)**	**Acres in AOI**	**Percent of AOI**
DnA	Downer loamy sand, 0 to 2 percent slopes	11.28	117.7	26.6%
DnB	Downer loamy sand, 2 to 5 percent slopes	11.28	12.8	2.9%
EvD	Evesboro loamy sand, 5 to 15 percent slopes	7.28	1.7	0.4%
FaA	Fallsington sandy loam, 0 to 2 percent slopes	16.59	42.2	9.5%
FmB	Fort Mott loamy sand, 2 to 5 percent slopes	9.82	23.2	5.2%
HbB	Hambrook sandy loam, 2 to 5 percent slopes	14.89	10.1	2.3%
IeA	Ingleside loamy sand, 0 to 2 percent slopes	11.77	212.6	48.0%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	11.77	0.9	0.2%
RoA	Rosedale loamy sand, 0 to 2 percent slopes	9.80	12.8	2.9%
RoB	Rosedale loamy sand, 2 to 5 percent slopes	9.80	2.4	0.5%
WdA	Woodstown sandy loam, 0 to 2 percent slopes	15.76	6.3	1.4%
Totals for Area of Interest			**442.8**	**100.0%**

Figure 2.3. Web Soil Survey, Available Water Supply, 0 to 100 cm of the Project Site. Source: USDA Natural Resources Conservation Service, June 2009.