

## 2.0 METHODS

### 2.1 Background Research

Prior to the initiation of the geomorphological and archaeological fieldwork, background research was conducted. Background research for the project included the examination of the Delaware archaeological site files, the National Register of Historic Places (NRHP) files, the historic resources inventory files, reports documenting previously conducted cultural resource studies, relevant state-wide historic contexts, historic maps, and historic as-built roadway plans housed at the Delaware State Historic Preservation and DeIDOT offices, as well as on the internet. Further background research was conducted in the University of Delaware's Morris Library, the University of Pittsburgh's Hillman Library, and the Carnegie Library of Pittsburgh.

### 2.2 Fieldwork

The S.R. 54 Improvements project Phase I investigations were conducted in two stages. The first stage was a geomorphological reconnaissance of the test areas in order to assess the nature of the landforms and soils within the project APE, and to determine if appropriate areas exist for the implementation of Phase I archaeological survey procedures. Geomorphological investigations included the examination of the soils/sediments contained in the proposed test areas, *via* expedient hand-excavated auger borings, in order to determine the presence or absence of *in situ* soils, slope, microrelief, the depth of potential cultural deposits, and any areas of modern disturbances which would preclude the preservation of buried archaeological resources. Seventeen areas with less than 15 percent slope, no obvious disturbances (e.g., cut and fill or grading operations, below-ground utility installation), and relatively intact, well drained soil horizons were chosen as appropriate locations for Phase I archaeological fieldwork.

Phase I archaeological field procedures consisted of a visual examination of the entire project APE, followed by subsurface testing of 11 of the original 17 test areas delineated during the geomorphological reconnaissance. A single transect of shovel test pits (STPs) located approximately 13.0 m (42.7 ft) off of the existing S.R. 54 centerline was emplaced within each test area. The STPs were spaced at 15.0 m (49.2 ft) intervals within each transect and numbered sequentially from the west to the east within each test area. Radial (retest) STPs were emplaced

at 7.5 m (24.6 ft) intervals surrounding culturally positive STPs. The STPs were excavated by arbitrary 10.0 cm (3.9 in) levels within natural strata to a minimum depth of 10.0 cm (3.9 in) into the culturally sterile subsoil. All of the sediments recovered from each STP were screened through 0.64 cm (0.25 in) mesh hardware cloth. Information regarding the soil texture and color, depth of any cultural materials recovered, and any soil disturbance was recorded on Skelly and Loy's standard excavation forms. Daily field notes and STP excavation information were kept by the field director. Field data were recorded on standardized field forms and were supplemented with notes made on the project maps, as warranted. The fieldwork was documented *via* 35 mm photography.

### **2.3 Laboratory**

The historic period artifacts that were recovered during the S.R. 54 Improvements project Phase I archaeological survey were transported to Skelly and Loy's laboratory facility where they were recorded, washed, sorted by class, labeled, and re-bagged. Each recovered artifact was individually examined and described. In-depth artifact analyses were not undertaken due to the ephemeral and non-diagnostic nature, as well as the small size, of the artifacts. Artifacts were first divided into major categories according to material type, and then further subdivided into more specific functional or typological categories within each type. Artifacts were prepared for curation at the Delaware State Museum according to their guidelines (Delaware State Historic Preservation Office 2001).