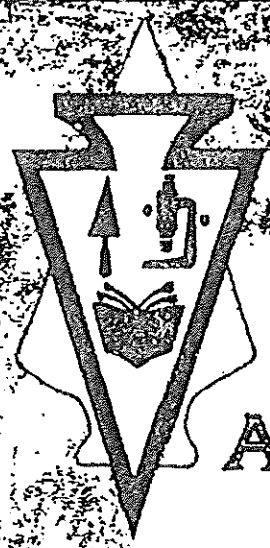
Owego Apalachin Maintenance and Storage Building Replacement Project

Appendix F

Cultural Resources



PUBLIC ARCHAEOLOGY FACILITY REPORT

Department of Anthropology
State University of New York at Binghamton
Binghamton, New York

CULTURAL RESOURCE MANAGEMENT SURVEY
STAGE IB ARCHAEOLOGICAL RECONNAISSANCE

OWEGO/APALACHIN CENTRAL SCHOOL DISTRICT PROJECT
VILLAGE OF OWEGO
TOWN OF OWEGO
TIOGA COUNTY, NEW YORK
MCDs 10740 and 10706

PREPARED BY:

LAURIE E. MIROFF
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BINGHAMTON UNIVERSITY
BINGHAMTON, NY 13902

PREPARED FOR:

HAWK ENGINEERING
P.O. BOX 427
BINGHAMTON, NEW YORK 13902-0427

December 20, 2000

CULTURAL RESOURCE MANAGEMENT SURVEY
STAGE 1B ARCHAEOLOGICAL RECONNAISSANCE

OWEGO/APALACHIN CENTRAL SCHOOL DISTRICT PROJECT
VILLAGE OF OWEGO
TOWN OF OWEGO
TIOGA COUNTY, NEW YORK
MCDs 10740 and 10706
00PR0756

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DECEMBER 20, 2000

REPORT OF FIELD RECONNAISSANCE
STAGE 1B CULTURAL RESOURCE SURVEY
OWEGO/APALACHIN CENTRAL SCHOOL DISTRICT PROJECT

Permit Applicant:	Hawk Engineering, P. C. P.O. Box 427 Binghamton, New York 13902-0427
Permit Number:	00PR0756
Location:	Village of Owego and Town of Owego, Tioga County, New York (MCDs 10740 and 10706)
Report prepared by:	Laurie E. Miroff — Date: December 20, 2000
Affiliation:	Public Archaeology Facility Binghamton University Binghamton, New York 13902 (607) 777-4786

PROJECT SUMMARY

A Stage 1B archaeological resources survey was requested for the proposed Owego/Apalachin Central School District Project in the Village of Owego and Town of Owego, Tioga County, New York. Proposed construction includes additions to the Owego/Apalachin Middle School and Senior High School. Other expansions and new construction will include the relocation of existing softball, baseball, football, and field hockey fields, as well as areas of new paving, parking, and storage buildings. The project area is divided into two areas: the existing school property south of a small creek feeding into Owego Creek (Parcel A) and a proposed acquisition area north of that creek and east of the floodway boundary (Parcel B). Parcel A consists of an approximately 430 m (1410 ft) long by 405 m (1328 ft) wide area enclosing approximately 11 ha (27 ac) and Parcel B includes an approximately 430 m (1410 ft) long by 420 m (1378 ft) wide area enclosing approximately 10 ha (26 ac). The setting within the immediate vicinity of Parcel A includes sports fields (football, field hockey, baseball, and track) and grass (Attachment F, Photos 1-11). Within Parcel B, the setting includes plowed, disked and unplowed agricultural fields (Attachment F, Photos 14-17). The parcels are situated on a glacial outwash terrace adjacent to Owego Creek and approximately 2.4 km (1.5 mi) north of where Owego Creek meets the Susquehanna River (Attachment B). Elevations within the project area range from approximately 247 to 253 m (810 to 830 ft) ASL.

A Phase 1A Literature Review was previously conducted by Pratt & Pratt Archaeological Consultants, Inc. (Pratt and Pratt 2000). Pratt and Pratt identified 30 prehistoric/protohistoric sites within a 3.2 km (2 mi) radius of the project area (Pratt and Pratt 2000:18-20). Eight prehistoric/protohistoric sites are located within a 1.6 km (1 mi) radius of the project area (Pratt and Pratt 2000:2, 19-20). The cultural and temporal affiliations for the majority of these sites are unknown. Pratt and Pratt's site files search also recorded two National Register Properties and a National Register District within a 1.6 km (1 mi) radius of the project area (Pratt and Pratt 2000:2, 18). Six historic sites are recorded in the vicinity, but outside of, the project area. No Map Documented Structures (MDSs) were recorded for the project area (Pratt and Pratt 2000). Based on their review of historic maps and known archaeological sites in the area, Pratt and Pratt assigned a high historic and high prehistoric sensitivity to the project area.

Subsurface testing was conducted on Parcel A from August 3 to 15, 2000. Subsurface and surface testing was conducted on Parcel B from November 13 to 28, 2000. Testing in Parcel A consisted of subsurface testing with shovel test pits (STPs) at 1 m (3.3 ft), 7.5 m (25 ft) and 15 m (49 ft) intervals and three 0.75 by 5 m (2.5 by 16 ft) backhoe trenches. Archaeologists excavated a total of 351 STPs within Parcel A. Twelve prehistoric and 238 historic artifacts were recovered. One prehistoric site was designated, the Huntington Creek Site (SUBi-2088), Loci 1 through 5. Artifacts include: 9 Onondaga chert non-cortical flakes (1 retouched and 1 utilized) and 1 fire-cracked

rock. All artifacts were recovered mainly from the upper 64 cm (25 in). The total site area covers approximately 24,750 m^2 (266,407 ft^2) or 2.5 ha (6 ac). Within this larger site area, 5 separate loci were identified across the field. These loci range in size from 225 m^2 (2421 ft^2) to 338 m^2 (3638 ft^2). The total area of all loci is 1238 m^2 (13,326 ft^2) or .1 ha (.2 ac).

Testing in Parcel B consisted of surface survey (within the plowed and disked areas) and subsurface testing with shovel test pits (STPs) throughout the parcel at 1 m (3.3 ft), 7.5 m (25 ft), 15 m (49 ft) and 30 m (98 ft) intervals. Archaeologists excavated 265 STPs and four 0.75 by 5 m (2.5 by 16 ft) backhoe trenches in Parcel B. Crews recovered 146 prehistoric and 75 historic artifacts. Two prehistoric sites were designated. Crews collected 123 artifacts from the surface and four artifacts from three STPs in Parcel B; these were designated the Owego Free Academy Site (SUBi-2089). Artifacts include: 80 fire-cracked rock, 4 Onondaga chert non-cortical flakes (1 utilized), 2 rhyolite non-cortical flakes, 1 Onondaga chert cortical flake, 6 Onondaga chert bifacial thinning flakes (3 utilized), 2 pitted hammerstones, 1 Onondaga chert biface fragment, 2 rhyolite biface fragments, 2 Onondaga chert projectile points (1 Susquehanna Broad and 1 Brewerton-like Side-Notched), 1 drill (possibly chalcedony), 3 Onondaga chert cores (1 heat treated/burned), 13 Onondaga chert shatter (5 utilized, 2 heat treated/burned, 1 utilized and heat treated/burned), 7 rhyolite shatter, and 3 Onondaga chert cortical chunks (1 utilized). All artifacts were recovered from either the surface or within the upper 39 cm (15 in) of STPs. The total site area covers approximately 29,182 m^2 (314,112 ft^2) or 2.9 ha (7.2 ac). The Owego Creek site (SUBi-2090), Loci 1, 2 and 3, was defined based on 17 artifacts in 3 STPs, a surface find at STP AB34, and two possible hearth features identified in two STPs. Artifacts include: 15 fire-cracked rock, 1 bifacial thinning flake (utilized), 1 bi-pitted and flaked rough stone tool, and 1 cortical chunk (utilized). All chipped stone artifacts are made from Onondaga chert. All artifacts were recovered from either the surface or within the upper 40 cm (16 in) of STPs. The total site area covers approximately 3957 m^2 (42,593 ft^2) or .4 ha (1 ac). Within this larger site area, 3 separate loci were identified. These loci range in size from 56 m^2 (603 ft^2) to 675 m^2 (7,266 ft^2). The total area of all loci is 956 m^2 (10290.3 ft^2) or .1 ha (.2 ac).

Historic material recovered from both Parcels A and B appears to be random refuse and is not associated with a historic standing structure or foundation. No sites were designated. The historic artifacts included unidentified animal bone, brick fragments, gun cartridge, a coin, metal tubing and wire, cut spike, cut nails and cut nail fragments, undiagnostic metal, undiagnostic nail and nail fragment, wire nail and wire nail fragment, glass, clear bottle glass, clear melted glass, amber bottle glass, aqua bottle and melted glass, brown bottle glass, clear lamp chimney glass, green bottle glass, olive bottle glass, purple bottle glass, etched clear glass, pink molded glass, pressed clear glass, milk glass, ironstone, pearlware, porcelain, porcelain electric insulator, redware, semi-porcelain, undifferentiated ceramic, whiteware, yellowware, and plastic.

If construction activity cannot avoid impacting the Huntington Creek, Owego Free Academy, and Owego Creek sites, we recommend site examinations to determine National Register Eligibility (NRE). Our proposed site examinations would include: excavation of additional STPs and 9 to 12 1 x 1 m (3 x 3 ft) units at the Huntington Creek site; a surface survey and excavation of 20 to 25 1 x 1 m (3 x 3 ft) units at the Owego Free Academy site; and a surface survey and excavation of additional STPs and 6 to 8 1 x 1 m (3 x 3 ft) units at the Owego Creek site.

All notes and other documentation of the reconnaissance testing are curated according to federal (36CFR Part 79) and state guidelines (NYAC 1994) in the facilities of the Department of Anthropology at Binghamton University.

PART 1: DOCUMENTARY RESEARCH ADDENDUM SITE IDENTIFICATION

A. Documentary Research Addendum (if needed)

1. X Local site inventory checked (specify)
   Public Archaeology Facility, Binghamton University

2. X Division for Historic Preservation

3. X New York State Museum

   __ Informants interviewed (name, address, specialty)

4. X Other sources checked (specify)

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2000 Steatite, Interaction, and Persistence: The Transitional Period of New York's Upper Susquehanna. Paper presented at the 65th Annual Meeting of the Society for American Archaeology, Philadelphia, Pennsylvania.

Results of Documentary Research: ENVIRONMENT AND SOILS

The Phase 1A literature review for the proposed project was conducted by Pratt & Pratt Archaeological Consultants, Inc. (Pratt and Pratt 2000). The results of their findings are included in the brief summary below.

Tioga County is situated in south-central New York, bordering Pennsylvania. It is located within the Glaciated Allegheny Plateau section of the Appalachian Plateau province. The elevation of the project area varies between 247 and 253 m (810 and 830 ft) ASL. Owego Creek lies just west and north of the project area. The project area is approximately 2.4 km (1.5 mi) north of where Owego Creek meets the Susquehanna River. Huntington Creek flows through the project area, dividing Parcels A and B. Huntington Creek meets Owego Creek just west of the project area.

According to Pratt and Pratt (2000:11-12) the project area soils include Unadilla silt loam (Unn), Howard gravelly silt loam (Hsn), Howard gravelly loam (Hgn, Nearly level phase), Allis channery silt loam (A), and Tioga silt loam (Tsb, High-bottom phase) (Attachment B). In general, the soils begin with a grayish-brown or yellow-brown silt loam or gravelly loam, followed by a yellow-brown subsoil of silt loam or silt loam with gravel and a gray-brown silt, sand and gravel (generally this parent material is glacial outwash or recent alluvium). Recent research by the Public Archaeology Facility has shown that the upper Susquehanna and its tributaries, such as Owego Creek, are characterized by ancient braided streams (Cremeens 1998). Unadilla soils tend to fill in these ancient channels between gravel bars. Today, linear pockets of Unadilla soils are found interspersed with the ancient gravel bars. The lower Owego Creek Valley may be an example of this characterization.

Current land use/field conditions within the project area include playing fields (football, field hockey, baseball diamonds and a track), grass, and plowed, disked and unplowed farm fields (Attachment F, Photos 1-11; 14-18). Untestable areas include Huntington Creek. A brushy area in Parcel A just east of Owego Creek was removed from the project area and, thus, was not tested.

Given the typical soil profiles of the project area, deeply buried sites are expected in some areas, particularly in ancient stream channels that have filled with Unadilla soils.

Results of Documentary Research: PREHISTORY

During the Paleo-Indian period (10,000-8,000 B.C.) people used the rich resources of low-lying streams and riverbanks for the mainstay of their existence, while using more elevated flood plains and glacial kames for their temporary residences (Ritchie 1980). Paleo-Indian people led a highly mobile life, following megafauna (e.g., caribou, mastodon, and moose-elk), fishing and collecting available plant resources. No fluted points were identified in the project area, however, fluted points were identified at two loci in Tioga County (Pratt and Pratt 2000:13). Pratt and Pratt note that the distribution of Paleo-Indian sites suggests that habitation could occur within the project area.

People followed a seasonally mobile lifestyle during the Archaic period (8000-1500 B.C.). As megafauna became less available with environmental changes to a mixed deciduous-coniferous forest, deer, bear, elk, and a wide variety of smaller mammals and birds were substituted (Ritchie 1980). Settlement types for the Early and Middle Archaic periods include large camps and smaller, more temporary camps. Late Archaic sites (large central base camps and temporary camps) are generally located near major waterways. Little evidence for habitation during the Early and Middle Archaic exists in present-day New York. Population density appears to have increased during the Late Archaic (Pratt and Pratt 2000:13). Three beveled adzes of the Lamoka phase are noted in Ritchie (1980:44-45) for Tioga County. The Tioga County Courthouse and the Tioga Courthouse Annex sites, located in the Village of Owego, are the closest sites to the project area with evidence for Late Archaic occupation.

The Transitional period (1500-1000 B.C.) is characterized by steatite vessels and a subsistence practice focused on hunting, gathering, and fishing. Toward the end of this period, ceramic vessels were manufactured and co-occurred with steatite (Versaggi and Knapp 2000). Small, temporary camps, often oriented toward river or coastal areas, typify settlement patterns during this period (Ritchie and Funk 1973:71-73). The Tioga County Courthouse site also contained evidence for Transitional period occupation.

The use of ceramic vessels became more widespread during the Early Woodland period (1000-200 B.C.). In addition, long-distance contact with cultural groups in the Midwest region developed. This contact continued into the subsequent Middle Woodland period (200 B.C.-A.D. 900). During the Early and Middle Woodland periods, subsistence was distinguished by a greater reliance on native plant species such as chenopodium, sunflower, and tobacco (Funk 1993:31; Ritchie 1980:241). Settlement types for these periods include large and small camps with associated special purpose sites. It was not until the Late Woodland period (A.D. 900-1300) and continuing into the Iroquois (A.D. 1300-1550) period that permanent villages, along with camps, became the dominant settlement pattern. In addition, at this time, maize, beans and squash horticulture, supplemented by native cultigens, was added to the previous subsistence practices of hunting, fishing and gathering.

It is known from the Susquehanna and lower Chenango valleys that villages used a system of base camps and logistical sites for collecting and processing resources that could not be obtained within the daily foraging radius around the village (Ritchie and Funk 1973; Versaggi 1987, 1996). Versaggi (1996) identified four site groupings for non-village sites in the Upper Susquehanna River valley. These include base camps, single-task field camps, multi-task field camps, and temporary processing locations and hunting/butchering stations.

Pratt and Pratt's site files search and the files of the Public Archaeology Facility (PAF), New York State Museum (NYSM) and Office of Parks Recreation and Historic Preservation (OPR&HP) along with interviews with local officials and property owners recorded 30 prehistoric/protohistoric sites within a 3.2 km (2 mi) radius of the project area (Pratt and Pratt 2000:18-20). These include the Tioga County Courthouse site (SUBi-1002, NYSM #10783), a multicomponent camp site with evidence for occupation from the Late Archaic to Early Woodland; SUBi-672 (OPR&HP A107.40.0028), a multicomponent site with evidence for occupation from the Transitional to Early Woodland and Late Woodland periods; the Lackawanna Avenue site (SUBi-675, OPR&HP A107.40.0012), a low density site of unknown temporal affiliation; SUBi-677 (OPR&HP A107.40.0011), a large, multicomponent village in the western part of the Village of Owego, with evidence for occupation dating from the Late Archaic to Contact period, possibly the village of Ah-we-ga described by early European travelers and destroyed by the Clinton -Sullivan

campaign of 1779; and SUBi-679, a Late Archaic (probably) site from which a Lamoka-like projectile point was recovered.

Of these 30 sites, eight prehistoric sites are located within a 1.6 km (1 mi) radius of the project area (Pratt and Pratt 2000:2, 19-20) (Table 1).

Table 1. Site Files Search

Site Number	Site Name	Cultural Affiliation/Site Type	Report
NYSM 4951, ACP Tioga County #2	No Name	Camp site, West of Owego Creek, near a small brook	Parker 1922:700
NYSM 4980, OPR&HP A107.40.0023, ACP Tioga County #31	No Name	Burial site, Town of Tioga, overlooking west bank of Owego Creek	Parker 1922:702
NYSM 4968, ACP Tioga County #19	No Name	Village and Burial site, west of Owego Creek	Parker 1922:701
ACP Tioga County #35	No Name	Camp Sites northeast of Tioga Center, near mouth of Pipe Creek	Parker 1922:702
OPR&HP A107.40.0026	Fair Grounds Site	1 stone axe of unknown temporal affiliation and 1 Late Archaic grooved axe	None
OPR&HP A107.40.000491, SUBi-1341	Tioga Courthouse Annex Site	Multicomponent, Late Archaic through Early Woodland; and 1780s to 1850s	Black et al. 1992
---	Jackson Site	Two projectile point fragments, one in the garden and one east of the creek	Jackson 2000
---	Academy Site	Native American structures on high school property, observed by informants' great grandparents	Quest 2000

The Jackson Site is located within the immediate vicinity of the project area (Parcel B). The Academy site is located within the project area (Parcel A). The site was reported by Richard Quest, Tioga County Historian who learned of it through hearsay. The area on which the site reportedly existed was heavily modified by construction of the existing school building and sports fields.

Existing information suggests that a settlement pattern model including villages for Late Woodland occupations and base camps for Late Archaic and Transitional occupations along with temporary camps and resource procurement/processing stations associated with residential sites characterizes the Susquehanna Valley. The Susquehanna Valley provided a variety of habitats and physiographic situations that would have allowed for many uses and provided many resources for prehistoric populations. The location of the project area on a glacial terrace set back from the Susquehanna River flood plain, places the project in an area of high probability for residential sites and temporary camps or resource/processing stations. Therefore, a high prehistoric sensitivity was assigned to this project area.

Results of Documentary Research: HISTORY

The project area lies approximately 1.6 km (1 mi) north of the Village of Owego's center in the Town and Village of Owego, Tioga County. Tioga County was legally established on February 16, 1791. Its land was formerly part of Montgomery County. At this time, Tioga County included the land in the counties of Chemung, Broome, and Chenango (Gay 1985:29).

According to Pratt and Pratt (2000:15), during the eighteenth century the project area was in Tuscarora territory during the Clinton-Sullivan Campaign of 1779. A Tuscarora village in Owego was destroyed on August 19, 1779. This site is listed in the OPR&HP site file (A107.40.0011) as located at the mouth of Owego Creek, but a historic account places it 2 miles up a creek. Pratt and Pratt (2000:15) suggest that the site at Owego Creek's mouth may be a Nanticoke settlement.

The first European settler in the Village of Owego was Amos Draper, 1785, an agent and Indian trader from Wyoming. John McQuigg and James McMaster also settled there in 1785 from New England. The earliest settlers occupied the area near the village's trading post. Settlement of the town did not occur until a decade after that of the village. The primary industry of early inhabitants included agriculture and lumbering. The town grew quickly in the early 1880s and became the seat of Tioga County government in 1822.

Pratt and Pratt's site files search at the New York State Museum (NYSM)/Office of Parks Recreation and Historic Preservation (OPR&HP) recorded two National Register properties and a National Register District within a 1.6 km (1 mi) radius of the project area (Pratt and Pratt 2000:2, 18). These include the Owego Central Historic District, the U. S. Post Office, and the Tioga County Courthouse. The closest to the project area is the Owego Central Historic District, located approximately .4 km (.25 mi) south of the project area. Six historic sites are recorded in the vicinity, but outside of, the project area. These sites include two grist mills, a mill, two schools, and Evergreen Cemetery (Pratt and Pratt 2000:2, 20).

Other historic sites within a 3.2 km (2 mi) radius of the project area include: 69 Central Avenue site (SUBi-1919, NYSM #10784), a 19th- to early 20th-century sheet midden associated with a Map Documented Structure in the Village of Owego; 93 Central Avenue site (SUBi-1914, NYSM # 10785), an early 20th-century sheet midden associated with a house in the Village of Owego; the Newell site (SUBi-1915, NYSM #10786), a mid 19th-century sheet midden associated with a dwelling constructed between 1855 and 1869 in the Village of Owego; and the J.J. Hooker site (SUBi-1916, NYSM #10787), a sheet midden associated with a structure constructed between 1855 and 1869. Pratt and Pratt's (2000) historic map review indicates that no Map Documented Structures were located within the project area. However, the 1869 (Beers) map notes the presence of Fair Grounds in Parcel B. A high historic sensitivity was assigned to this project area.

Documentary Summary

__ no sites reported

X sites reported (describe briefly)

Thirty prehistoric/protohistoric sites are located within a 3.2 km (2 mi) radius of the project area (Pratt and Pratt 2000:18-20). Eight prehistoric sites are located within a 1.6 km (1 mi) radius of the project area (Pratt and Pratt 2000:2, 19-20). The prehistoric sites include camps and villages and date from the Late Archaic to the Contact period. In addition, one multicomponent site includes a component dating from the 1780s to 1850s. No Map Documented Structures are located within the project area (Pratt and Pratt 2000). However, the 1869 (Beers) map does note the presence of Fair Grounds in Parcel B.

B. Field Investigation

1. Methodology

a. Description of structure for survey team (number, organization).

Dr. Nina M. Versaggi, Director of PAP, supervised this project. Laurie E. Miroff served as Project Director and is the author of this report. David Card, Greg Diute, Jaimie Donati, Eric Drake, Melissa Drake, Rena Figures, Bretton Giles, Warren Goodrich, Brian Grills, Tracy Hanna, Kristy Hopkins, Tim Knapp, Sam Kudrle, James Macaluso, Nassir Malit, Amy Mann, Martin McKeen, Aaron Miller, Maria O' Donovan, Chris Ostrander, Nikki Pavlides, David Resse, Mike Rudler, Tracy Shaffer, Kevin Sheridan, Jennifer Weeks, and Robert Wurst were field assistants. Artifact identification was performed by Janna Rudler, Rebecca Stollman, and Laurie Miroff. Laura Knapp and Marion Hull constructed project data bases. Project maps were drawn by Laurie Miroff. All administrative work was carried out by Maria Pezzuti and Annie Pisani. All field and research personnel meet or exceed the minimum qualifications for professionals in archaeology.

b. Date of survey and soil description of general and subsurface conditions (including season, ground visibility, and relative wetness of soil).

Subsurface testing was conducted on Parcel A from August 3, 2000 to 15, 2000. Conditions for testing were fair with warm temperatures, sunny skies, and occasional rain. The project area was in sports fields or grass. These conditions produced near zero surface visibility (Attachment F, Photos 1-11). Surface survey and subsurface testing was conducted on Parcel B from November 13, 2000 to 28, 2000. Conditions for testing were fair with cold temperatures, cloudy skies, and occasional rain or snow. The project area was in a plowed field, disked field, and unplowed field. The plowed field produced excellent surface visibility, the disked area provided less surface visibility than the plowed area, and the unplowed field produced near zero surface visibility (Attachment F, Photos 14-17). Heavy rains facilitated artifact recovery in recently plowed areas.

c. Outline of field testing strategy, specifying (when appropriate): sampling techniques, surface inspection techniques (transect interval, method of ground examination), subsurface techniques (type, interval, and average depth of excavation unit; for screening, note size of mesh), remote sensing techniques.

In Parcel A, field survey consisted of subsurface testing to check for evidence of sites below the surface in all testable portions of the project area (e.g., areas with limited or no slope, non-asphalt surfaces, non-fill areas and areas not disturbed by recent construction or utilities). Archaeologists excavated a total of 351 shovel test pits (STPs) at 15 m (49 ft) intervals within this parcel (Attachment C). When prehistoric cultural material was identified, STPs were excavated in each cardinal direction at 7.5 m (25 ft) from the original STP. If prehistoric material was not identified in these STPs, the grid was reduced to 1 m (3.3 ft) from the original STP. The STPs were dug by hand with shovels. They were at least 40 cm (15.7 in) in diameter, and extended at least 15 cm (6 in) into the B horizon soils, unless obstructed by rock. In alluvial situations, STP depths increased to 80-100 cm (31.5-39 in). The final depth for STPs ranged from a low of 13 cm (5 in) for an STP stopped by rock to a maximum of 111 cm (43.7 in). The average final depth was 64.0 cm (25 in). Dense and compact gravel hindered subsurface testing in some areas of the parcel. All soil was screened through 7 mm (¼ in) hardware cloth and artifacts were recorded by STP and level. STPs in this parcel were carefully backfilled, given that the fields were currently used for sports by the high school. All soil was carefully placed back in the STP and tamped down. Per Hawk Engineering's request, any soil which could not be placed in the STP level with the ground surface were removed from the site. The area excavated was then watered to prevent drying and grass damage (Attachment F, Photos 7-8). The area in heavy brush to the far northwest of Parcel A was eliminated from the project area according to Katherine Dalrymple, Hawk Engineering (personal communication).

In Parcel B, field survey consisted of surface survey and subsurface testing to check for evidence of sites below the surface in all testable portions of the project area (e.g., areas with limited or no slope, non-asphalt surfaces, non-fill areas and areas not disturbed by recent construction or utilities). The initial testing strategy called for Parcel B to be completely plowed. Archaeologists planned to conduct a walkover survey of the entire parcel and excavate 180 judgmental STPs to test for deep deposits. The testing strategy was altered because only portions of the parcel were plowed. Archaeologists conducted a walkover survey of all plowed and disked portions of Parcel B. The southeastern portion of Parcel B, south of the drive, approximately 1.6 ha (3.9 ac), was plowed prior to our walkover. The area to the west, approximately 6.2 ha (15.4 ac), was only disked prior to our walkover (landowner's preference). A few days after a soaking rain, archaeologists spaced 3 m (10 ft) apart, walked over the plowed and disked areas and examined the ground surface for artifacts from both the prehistoric and historic periods. When artifacts were located, they were collected and the position of the artifact was marked for mapping. A single transect of STPs was placed at a 15 m (49 ft) interval and excavated in the plowed field to identify potentially buried cultural material. In the disked area, transects were placed every 30 m (98 ft) across the area and STPs excavated at 15 m (49 ft) intervals along each transect. The unplowed and undisked areas (2.6 ha [6.4 ac]) provided zero surface visibility and, thus, STPs were excavated every 15 m (49 ft). When prehistoric cultural material was identified, STPs were excavated in each cardinal direction at 7.5 m (25 ft) from the original STP. If prehistoric material was not identified in these STPs, the grid was reduced to 1 m (3.3 ft) from the original STP. STPs were only placed 7.5 m from STP Y33 to avoid the possible feature. The 30 m grid in the vicinity of positive STPs I31, I33, and L33 was closed to 15 m (49 ft) to identify additional prehistoric material. Archaeologists excavated a total of 265 STPs within this parcel of the project area instead of the 180 STPs originally planned (Attachment C). The STPs were dug by hand with shovels. They were at least 40 cm (15.7 in) in diameter and extended at least 15 cm (5.9 in) into the B horizon soils, unless obstructed by rock. The final depth for STPs ranged from a low of 33 cm (13 in) for an STP stopped by rock to a maximum of 113 cm (44.5 in). The average final depth was 73.8 cm (29 in). Dense and compact gravel hindered subsurface testing in some areas of the parcel. All soil was sereened through 7 mm (¼ in) hardware cloth and artifacts were recorded by STP and level.

In addition, because of the potential for deeply buried sites along Owego Creek as noted by the NYS OPR&HP, three backhoe trenches were excavated in Parcel A and four in Parcel B (Attachment F, Photos 12-13, 18-22). The trenches were approximately 0.75 by 5 m (2.5 by 16 ft) in size. The purpose of the trenches was to determine if buried A horizons containing cultural material or features were located within the project area. The walls of the trenches were carefully troweled and inspected for buried A horizons.

The three trenches in Parcel A were placed in the northwest section of the parcel near Owego Creek (in part to avoid playing fields) oriented north-south (Attachment C; Attachment F, Photos 12-13). Trench 1, south end, began with a dark gray/brown silt loam with a small amount of gravel to a depth of 26 cm (10 in) below ground surface. This is followed by a yellow brown silt loam with gravel (more than in the previous level) to 50 cm (20 in). A gray-brown silt loam with gravel and pea gravel followed to a depth of 95 cm (37 in). Gray light brown silt with gravel and pea gravel extends to 129 cm (51 in) and a yellow brown silt with gravel extended to 157 cm (62 in). The north end showed a similar pattern, but there was no gray light brown silt with gravel and pea gravel horizon. Trench 2 began with a dark brown silt loam to 30 cm (12 in) below ground surface followed by gray brown silt with gravel of varying sizes to a depth of 115 cm (45 in). This horizon contained very little soil. Trench 3 began with a brown silt with gravel mottled lightly with yellow brown silt to a depth of 43 cm (17 in) below ground surface. This horizon appears to have been disturbed by previous construction activities. A yellow mottled with brown silt, with less gravel than the previous horizon, follows to 50 cm (20 in). A dark brown silt with clay and some gravel extends to 60 cm (24 in). A gray silt mottled with some red brown silt extends to 80 cm (31 in); undecayed wood is associated with this horizon. To 120 cm (47 in) is a yellow brown silt with some gravel, followed by a gray brown silt with heavy gravel to 155 cm (61 in). All three trenches reached glacial cobbles, indicating that cultural material would not be identified below the trench excavation. No buried A horizons were identified.

The four trenches in Parcel B were placed across the parcel (Attachment C; Attachment F, Photos 19-22). All trenches were oriented east-west. Trench 4 was located nearest Owego Creek, in the western portion of the parcel. The trench (southwest corner) began with a medium brown silt to 37 cm (15 in) below ground surface. A yellow brown clay silt followed to a depth of 49 cm (19 in). Dark yellow brown clay silt (to 105 cm [41 in]) and dark yellow brown sandy clay silt (to 139 cm [55 in]) follow. The trench ended with a gray brown very sandy silt with gravel (C horizon) to 170 cm (67 in). The southeast corner of the trench had a similar profile. However, the dark yellow brown sandy clay silt horizon was absent. Trench 4 lies within the flood plain of Owego Creek. The B horizon silts are much deeper in this trench than in any other trench in Parcel B. Trench 5, located near the central portion of the parcel in the disked area, began (southwest corner) with a medium brown silt to 30 cm (12 in) below ground surface. This was followed by a yellow brown silt to 49 cm (19 in) and then a gray brown silt with gravel (C horizon) to 101 cm (40 in). Trench 6 was placed in the plowed area of the field, in the eastern portion of the parcel, just south of the drive. The profile (southwest corner) began with a medium brown silt with gravel to 29 cm (11 in) below ground surface. A yellow brown silt (little soil) with gravel followed to 41 cm (16 in). The profile ended with a gray, yellow brown sandy silt (little soil) with gravel (C horizon) at 89 cm (35 in). Trench 7, located north of the drive, in the northeastern portion of the parcel (unplowed and undisked), began with a medium brown silt to 29 cm (11 in) below ground surface (southwest corner). This was followed by a yellow brown silt with some gravel to 34 cm (13 in) and a gray brown clay silt with a high density of gravel and little soil to 70 cm (28 in) (C horizon). All three trenches reached glacial cobbles, indicating that cultural material would not be identified below the trench excavation. No buried A horizons were identified.

d. Description of general soil characteristics, including texture and depth to sterile soil.

The majority of STPs in Parcel A exhibited a dark brown to medium brown silt loam (often with rock/gravel) A horizon, with an average depth of 40 cm (16 in) below surface (Attachment D). Below this was a yellow brown silt or silt loam B horizon (often with rock/gravel), averaging 70 cm (28 in) below surface. Several STPs reached the C horizon which consisted of a gray silt with gravel and cobbles. The C horizon was encountered from 47 to 95 cm (19 to 37 in) below ground surface, with an average ending depth of 73 cm (29 in). Several STPs encountered a possible buried A horizon that was dark brown to dark gray brown silt or silt loam. This horizon was encountered between 28 to 107 cm (11 to 42 in) below ground surface and averaged 20 cm in thickness. This A1 horizon contained cultural material. When a buried A horizon was present, it was separated from the initial A horizon by a B horizon (B1) and was followed by a second B horizon (B2). The 0.75 by 5 m (2.5 by 16 ft) trenches excavated in the parcel followed a similar pattern. No buried A horizons were encountered. The more accessible C horizon in the trenches suggests that this glacially deposited layer is a gray brown silt loam which changes to a gray light brown and then a yellow brown silt with gravel and pea sized gravel. Interestingly, the trench nearest Owego Creek (Trench 2) was mainly composed of gravel (extending from 30 to 115 cm [12 to 45 in], the base of the trench). This area does not appear to have been flooded, but may represent prior disturbance or a Post-Pleistocene glacial gravel bar.

The majority of STPs in Parcel B exhibited a medium brown silt loam or clay silt (often with rock/gravel) plow zone (Ap horizon), with an average depth of 37 cm (15 in) (Attachment D). This was followed by a yellow brown silt, silt loam, or clay silt (often with rock/gravel) beginning as high as 18 cm (7 in) below ground surface and extending as deep as 110 cm (43 in) below ground surface with the average depth being reached at 72 cm (28 in). A C horizon was occasionally encountered below the B horizon. It was a medium gray brown to gray brown silt or sandy silt with gravel. The C horizon was encountered between 29 cm and 100 cm (11 and 39 in) below ground surface. The C horizon reached an average depth of 74 cm (29 in). Several STPs possessed a Buried A horizon that was dark brown clay silt. This horizon was encountered between 14 and 106 cm (6 and 42 in) below ground surface and averaged 16 cm in thickness. When a buried A horizon was present, it was separated from the Ap horizon by a B horizon (B1). The 0.75 by 5 m (2.5 by 16 ft) trenches excavated in the parcel have similar profiles. No buried A horizons were encountered. Trench 4, the trench nearest Owego Creek, did however, possess a B2 horizon below the B1 horizon noted in the STPs and the other trenches. This B2 horizon is a dark yellow brown clay silt which extends from approximately 54 to 125 cm (21 to 49 in) and

is followed by the C horizon. Trenches in Parcel A demonstrated a change in land form across the parcel. Trench 4, nearest Owego Creek, lies on the creek's flood plain. Moving away from the creek, the landform changes to a glacial terrace. North of the drive, small glacial bars are visible, rising above the surrounding field.

e. Description of intensity of coverage and rationale for excluding areas from survey. Attach a map with location and type of each excavation unit, and areas surface inspected. Any areas not surveyed should be clearly delineated.

The project was divided into two parcels. Parcel A, south of Huntington Creek, is an approximately 11.0 ha (27 ac) unplowed area in sports fields associated with Owego Free Academy. This area was tested with STPs at 15 m (49 ft) intervals. STPs were excavated in all testable portions of the parcel. Areas adjacent to the school and around the running track were disturbed by prior construction activities, including existing utility lines and, thus, were not tested. The area in brush in the extreme western portion of Parcel A was excluded from the project area and thus not tested (Katherine Dalrymple, Hawk Engineering, personal communication). Many of the STPs and all three of the backhoe trenches reached the C horizon, which demonstrated adequate vertical coverage (Attachment F, Photos 12-13).

Parcel B (10 ha [26 ac]) was divided into four sections based on the agricultural treatment of the areas. The eastern area, approximately 1.6 hectare (3.9 ac), was plowed allowing for 100% coverage through surface survey. A transect of STPs at a 15 m (49 ft) interval was excavated in the center of this area. The area to the west of the plowed area (approximately 6.2 ha [15.4 ac]) was disked, but not plowed. This provided less visibility. Therefore, in addition to the walkover in the disked area, transects 30 m (98 ft) apart with STPs at 15 m intervals along each transect were excavated. Additional transects of STPs were added in order to delineate site boundaries. The area to the extreme west of the parcel (approximately 0.9 ha [2.3 ac]) and the area north of the drive (approximately 1.7 ha [4.1 ac]) were not plowed or disked, providing zero surface visibility. These areas were not surface surveyed. Instead, STPs were excavated at 15 m (49 ft) intervals. Several of the STPs and all four backhoe trenches reached the C horizon (Pleistocene gravels), which demonstrated adequate vertical coverage (Attachment F, Photos 18-22).

f. Description of problems encountered during survey which may have influenced results.

There were no problems encountered during the survey.

2. Results of Field Investigation

____ no sites identified
_3_ site(s) identified

Archaeologists excavated 616 STPs, which produced a total of 158 prehistoric artifacts and 313 historic artifacts. Two possible prehistoric hearth features were also documented. Two flakes identified in STP Y19 (25-35 cm) were not included within any site boundaries. The STP appeared to have been disturbed. Three prehistoric sites were identified within the project limits for the proposed Owego/Apalachin Central School District Project. Historic material appears to be random refuse and is not associated with a historic standing structure or foundation. No historic site was designated.

Huntington Creek Site (SUBi-2088)

Context: The Huntington Creek site is located west of NY 96/38, north of the Village of Owego's center, in the Village of Owego, Tioga County, New York. The site consists of prehistoric lithics and fire-cracked rock. No diagnostic artifacts were recovered. Five distinct spatial loci were identified. Each locus may represent a small camp or processing station or they may be activity areas that are part of one site. The documentation of a number of distinct loci suggests the repeated use of this landform through time. The site files show that the Huntington Creek site is within a 3.2 km (2 mi) radius of 30 prehistoric/protohistoric sites (Pratt and Pratt 2000:18-20). Eight prehistoric sites are located within a 1.6 km (1 mi) radius of the Huntington Creek site (Pratt and Pratt 2000:2, 19-20). The prehistoric sites include camps and villages and date from the Late Archaic to the Contact period. In addition, one multicomponent site includes a component dating from the 1780s to 1850s.

Site Size: At its maximum, the site measures 165 x 150 m (541 x 492 ft) and encompasses 24,750 m^2 (266,407 ft^2) or 2.5 ha (6 ac) within the project limits. Artifacts are unevenly distributed within this area. Five loci of activity were defined within the site boundaries. Individual loci range in size from 225 m^2 (2,421 ft^2) to 338 m^2 (3,638 ft^2).

Locus	Size	Area	Total STPs	Positive STPs
1	15 x 15 m (49 x 49 ft)	225 m^2 (2,421 ft^2)	9	R22, R22/1mW
2	22.5 x 15 m (74 x 49 ft)	338 m^2 (3,638 ft^2)	9	R17, R17/7.5mE
3	15 x 15 m (49 x 49 ft)	225 m^2 (2,421 ft^2)	9	M16, M16/1mW
4	15 x 15 m (49 x 49 ft)	225 m^2 (2,421 ft^2)	9	L14
5	15 x 15 m (49 x 49 ft)	225 m^2 (2,421 ft^2)	9	H13

Site Location: The site is located in the Village of Owego, Tioga County, New York, approximately 2.4 km (1.5 mi) north of the Susquehanna River. The Huntington Creek Site is located on the playing fields of the Owego Free Academy High School. The setting within the surrounding area is the high school building, a field (with baseball diamonds, a running track, a field hockey field and football fields) and woodlands (Attachment C; Attachment F, Photo 23). The site is artificially bounded by the absence of artifacts. The boundaries encompass 5 loci of activity, as well as negative STPs. The site boundaries include areas outside the defined loci, however, the core of activity is confined to the five loci.

Characteristics: The site contains a light density of prehistoric cultural material, that has been grouped into five discrete loci. Archaeologists recovered 10 artifacts within the loci from 8 STPs on the Huntington Creek site. This amounts to roughly 1 artifact per STP.

Summary of Artifacts: STPs produced 9 non-cortical flakes (1 retouched and 1 utilized) and 1 fire-cracked rock. All chipped stone artifacts are made from Onondaga chert. The distribution of artifacts by locus and horizon is as follows:

Table 2. Artifacts from the Huntington Creek Site, Owego/Apalachin Central School District Project.

Locus	Horizon	NCF	FCR	Total
1	A1	1		1
1	B	2		2
2	A1	1		1
2	B	2 (ut=1)		2
3	Ap	1 (ret=1)	1	2
4	Ap	1		1
5	Ap	1		1
Total (%)		9 (90)	1 (10)	10

Key: NCF=non-cortical flake; ut=utilized flake; ret=retouched flake; FCR=fire-cracked rock.

As is typical of most prehistoric sites, the majority of artifacts in the assemblage are the by-products of stone tool manufacture. All flakes in the assemblage lack cortex. Non-cortical flakes indicate an emphasis on the final stages of tool production, rather than on the initial trimming of a core for the manufacture of tools. The assemblage includes a utilized flake and a retouched flake, suggesting that expedient tools were used at the site.

Although no features were identified at the site, the presence of a fire-cracked rock suggests that features may be present at the site.

Artifact Distribution: Loci were defined based on one or two positive STPs with 1 to three artifacts per loci. Artifacts were spread across the field in 5 separate loci. Prehistoric cultural material was recovered mainly from 0 to 64 cm (25 in) in depth, but two were found as deep as 77 cm (30 in). Artifacts were recovered from the Ap (40%), A1 (20%), and B (40%) horizons.

Features: No features were identified at the Huntington Creek site. However, a fire-cracked rock was identified in STP M16/1mW, Locus 3. Fire-cracked rock suggests the presence of a hearth or hearths nearby.

Integrity: The site has excellent integrity.

Research Potential: The lithics have the potential to yield information on reduction sequences, which could assist in a functional interpretation of the site. The recovery of expedient utilized flakes presents an ideal condition for documenting lithic management strategies. Usewear analysis of stone tools would aid in documenting activities occurring on this large glacial terrace.

The observation of fire-cracked rock may suggest the presence of features indicating that the site retains good physical integrity. The recovery of features would provide charred plant remains that could be analyzed to provide data on prehistoric subsistence and aid in the reconstruction of the paleo-landscape of the Susquehanna Valley. Carbon from features would also provide material for radiometric dating useful in establishing the site's chronology.

The location of the site in the vicinity of numerous other sites suggests that this portion of the Susquehanna River was an important focus for groups during prehistoric times. Little is actually known of the prehistoric use of these elevated glacial terraces along the Susquehanna River. Examination of the Huntington Creek site may provide important subsistence, settlement and functional data for addressing critical topics associated with the prehistory of the Susquehanna River Valley.

Potential Impacts: At present, the Huntington Creek site is within an area that will be adversely impacted by construction of a parking lot, the middle school, and sports fields.

Recommendations: We recommend that the site within the project limits is potentially eligible for the National Register of Historic Places. We recommend that impacts to the site be avoided. If impacts can not be avoided, we recommend a site examination consisting of 3 to 4 1 x 1 m (3 x 3 ft) units in Loci 1, 2, and 3 (those with more than 1 artifact) for a total of 9 to 12 units and 10 STPs in each of the remaining loci (Loci 4 and 5; those from which only 1 artifact was recovered).

Owego Free Academy Site (SUBi-2089)

Context: The Owego Free Academy site is located west of NY 96/38, north of the Village of Owego's center, in the Town of Owego, Tioga County, New York. The site consists of prehistoric lithics, rough stone tools, and fire-cracked rock. Two diagnostic artifacts were recovered from the plowed surface, a Susquehanna Broad projectile point and a Brewerton-like Side-Notched projectile point. These projectile points date to the Archaic and Late Archaic/Early Woodland periods (Ritchie 1961). The presence of rhyolite flakes further suggest a Transitional period component. The site files show that the Owego Free Academy site is within a 3.2 km (2 mi) radius of 30 prehistoric/protohistoric sites (Pratt and Pratt 2000:18-20). Eight prehistoric sites are located within a 1.6 km (1 mi) radius of the Owego Free Academy site (Pratt and Pratt 2000:2, 19-20). The prehistoric sites include camps and villages and date from the Late Archaic to the Contact period. In addition, one multicomponent site includes a component dating from the 1780s to 1850s.

Site Size: At its maximum, the site measures 220 x 230 m (722 x 807 ft) and encompasses 29,182 m^2 (314,112 ft^2) or 2.9 ha (7.2 ac) within the project limits. Artifacts are unevenly distributed within this area, but mainly concentrate in the northernmost portion of the plowed field, just south of the existing driveway. One surface find, a piece of utilized Onondaga chert shatter (Bag 4) lies to the south of the defined site boundaries, but may be associated with the site.

Site Location: The site is located in the Town of Owego, Tioga County, New York, approximately 2.4 km (1.5 mi) north of the Susquehanna River. The Owego Free Academy site is located north of Huntington Creek and east of Owego Creek, north of the Owego Free Academy High School. The setting within the surrounding area is plowed and disked agricultural fields (Attachment C; Attachment F, Photo 24). The site is artificially bounded on the north by a driveway, on the east by the project boundary, and on the south and west by the absence of artifacts.

Characteristics: The site contains a high density of prehistoric cultural material identified on the surface and below the ground surface. Archaeologists recovered 127 artifacts from the Owego Free Academy site; 123 from the surface (excluding 1 piece of shatter from an outlying area [Bag 4]) and 4 from three STPs (I31, I33, and L33). This amounts to roughly 1 artifact per STP. Archaeologists excavated 62 STPs within the site boundaries.

Summary of Artifacts: Surface survey and STPs produced 127 prehistoric artifacts, including 80 fire-cracked rock, 6 non-cortical flakes (1 utilized), 1 cortical flake (utilized), 6 bifacial thinning flakes (2 utilized and 1 possibly utilized), 3 cortical chunks (2 utilized), 20 shatter (5 utilized, 2 heat treated/burned, and 1 utilized and heat treated/burned), 3 biface fragments, 2 projectile points (one Susquehanna Broad projectile point and one Brewerton-like Side-Notched projectile point), 1 drill, 3 core fragments (1 heat treated/burned), 1 pitted hammerstone, and 1 bi-pitted hammerstone. Chipped stone artifacts were made from Onondaga chert, rhyolite, or, possibly, chalcedony. One surface find, a piece of utilized Onondaga chert shatter (Bag 4) lies to the south of the defined site boundaries, but may be associated with the site. The distribution of artifacts by horizon is as follows:

Table 3. Artifacts from the Owego Free Academy Site,
Owego/Apalachin Central School District Project.

Horizon	NCF	CF	Bifacial Thinning Flake	FCR	RoughSt	Biface Fragment	Projectile Point	Drill	Core	Other lithics	Total
Surface	4 Onon (ut=1); 2 Rhy	1 Onon (ut=1)	5 Onon (ut=3)	80	2	1 Onon; 2 Rhy	2 Onon	1 Chal (possibly)	3 Onon (ht/b=1)	13 Onon (ut=7; ht/b=1; ut & ht=1); 7 Rhy	123
Ap			1 Onon							1 Onon (ht/b=1)	2
A1										1 Onon	1
B										1 Onon	1
Total (%)	6 (4.7)	1 (.8)	6 (4.7)	80 (63)	2 (1.6)	3 (2.4)	2 (1.6)	1 (.8)	3 (2.4)	23 (18)	127

Key: Onon=Onondaga chert; Rhy=Rhyolite; Chal=Chalcedony; NCF=non-cortical flake; CF=cortical flake; ut=utilized flake; ht/b=heat treated/burned; FCR=fire-cracked rock; RoughSt=roughstone tool; Other lithics=chunks, shatter.

As is typical of most prehistoric sites, the majority of artifacts in the assemblage are the by-products of stone tool manufacture. Flakes lacking cortex comprise a high percentage of the lithics in the collection. Non-cortical flakes indicate an emphasis on the final stages of tool production, rather than on the initial trimming of a core for the manufacture of tools. The equal percentage of bifacial thinning flakes at the site supports the interpretation that site occupants were engaged in the final stages of tool production. In addition, three biface fragments, two projectile points and a drill are present in the collection, suggesting that site occupants engaged in activities which required these tools (hunting, cutting, perforating, etc.) and finished and sharpened stone tools, such as projectile points and knives, at the site. There is also a cortical flake in the assemblage, indicating that some of the initial stages of tool production occurred on the site. The presence of three cores may also suggest early stage reduction. The presence of rhyolite artifacts suggest interregional trade between groups as this raw material is not typically found in this area and was not transported by glacial activity.

The assemblage includes 13 utilized flakes, which suggest that expedient tools were used along with more formal bifacial tools. It is possible that the generation of flakes from the cores was intended to produce sharp flakes for use as expedient tools.

One bi-pitted hammerstone and one pitted hammerstone were identified at the site. These multi-functional tools may have been used as both hammers and as stones to crack nuts. The presence of expedient tools and pitted hammerstones suggests that site occupants were collecting and processing plant materials.

Although no features were identified at the site, the presence of fire-cracked rock and heat treated/burned flakes suggests that features are present at the site.

The Susquehanna Broad projectile point and Brewerton-like Side-Notched projectile point suggest that the site was occupied during at least the Archaic and Late Archaic/Early Woodland periods (Ritchie 1961). In addition, the presence of rhyolite artifacts suggests a Transitional occupation.

Artifact Distribution: Prehistoric cultural material was recovered from either the surface or, mainly, within the upper 39 cm (15 in). However, one artifact was recovered from between 75 and 82 cm (30 and 32 in) below ground surface (B horizon). Of the four artifacts recovered from STPs, 2 were identified in the plow zone, 1 from the A1 horizon, and 1 from the B horizon.

Features: No features were identified at the Owego Free Academy site. However, 80 pieces of fire-cracked rock were identified on the plowed and disked surface. Fire-cracked rock strongly suggests the presence of a hearth or hearths nearby.

Integrity: The site has excellent integrity.

Research Potential: The lithics have the potential to yield information on reduction sequences, which could assist in a functional interpretation of the site. The recovery of bifacial, presumably curated, tools and more expedient utilized flakes presents an ideal condition for documenting lithic management strategies. Usewear analysis of stone tools would aid in documenting activities occurring on this large glacial terrace. The presence of an exotic raw material (rhyolite) presents the potential to examine interregional trade between groups.

The diversity of artifact types identified at the site, including chipped stone (debitage, curated tools, and expedient tools), rough stone tools, and fire-cracked rock suggests that site occupants were conducting diverse activities at the site. Understanding activities associated with this site will provide a better understanding of settlement and subsistence practices in this portion of the Susquehanna Valley.

The observation of fire-cracked rock may suggest the presence of features, indicating that the site retains good physical integrity. The recovery of features would provide charred plant remains that could be analyzed to provide data on prehistoric subsistence and aid in the reconstruction of the paleo-landscape of the Susquehanna Valley. Carbon from features would also provide material for radiometric dating useful in establishing the site's chronology.

The presence of Archaic, Late Archaic/Early Woodland, and Transitional components presents a unique opportunity to explore poorly defined periods of New York's prehistoric past. More intensive investigations may provide more diagnostic artifacts and tools indicative of the use of this site during other time periods.

The location of the site in the vicinity of numerous other sites suggests that this portion of the Susquehanna River was an important focus for groups during prehistoric times. Little is actually known of the prehistoric use of these elevated glacial terraces along the Susquehanna River. Examination of the Owego Free Academy site may provide important subsistence, settlement and functional data for addressing critical topics associated with the prehistory of the Susquehanna River Valley.

Potential Impacts: At present, the Owego Free Academy site is within an area that will be adversely impacted by paving and the construction of a vehicle storage area and playing fields.

Recommendations: We recommend that the site within the project limits is potentially eligible for the National Register of Historic Places. We recommend that impacts to the site be avoided. If impacts to the site can not be avoided, we recommend a site examination, including the plowing/replowing of the site and a second walkover. We also recommend the excavation of approximately 20 to 25 1 x 1 m (3 x 3 ft) units to define site stratigraphy and examine cultural horizons beneath the ground surface.

Owego Creek Site (SUBi-2090)

Context: The Owego Creek site is located west of NY 96/38, north of the Village of Owego's center, in the Town of Owego, Tioga County, New York. The site consists of prehistoric lithics, a rough stone tool, fire-cracked rock, and two possible features. No diagnostic artifacts were recovered. Three distinct loci were identified. Each locus may represent a small camp or processing station or they may be part of one site. The documentation of a number of distinct loci suggests the repeated use of this landform through time. The site files show that the Owego Creek site is within a 3.2 km (2 mi) radius of 30 prehistoric/protohistoric sites (Pratt and Pratt 2000:18-20). Eight prehistoric sites are located within a 1.6 km (1 mi) radius of the Owego Creek site (Pratt and Pratt 2000:2, 19-20). The prehistoric sites include camps and villages and date from the Late Archaic to the Contact period. In addition, one multicomponent site includes a component dating from the 1780s to 1850s.

Site Size: At its maximum, the site measures 80 x 78.5 m (262 x 257 ft) and encompasses 3957 m^2 (42,593 ft^2) or .4 ha (.9 ac) within the project limits. Individual loci range in size from 225 m^2 (2421 ft^2) to 1,518 m^2 (16,334 ft^2). Artifacts are unevenly distributed within this area. Three loci of activity were defined.

Locus	Size	Area	Total STPs	Positive STPs
1	7.5 x 7.5 m (25 x 25 ft)	56 m^2 (603 ft^2)		Surface find
2	15 x 15 m (49 x 49 ft)	225 m^2 (2,421 ft^2)	5	Y33
3	30 x 22.5 m (98 x 74 ft)	675 m^2 (7266 ft^2)	11	X30, X30/7.5mW

Site Location: The site is located in the Town of Owego, Tioga County, New York, approximately 2.4 km (1.5 mi) north of the Susquehanna River. The Owego Creek site is located north of Huntington Creek and east of Owego Creek, north of the Owego Free Academy High School. The setting within the surrounding area is disked and unplowed agricultural fields (Attachment C; Attachment F, Photo 25). The site is bounded by the absence of artifacts and the project area boundary.

Characteristics: The site contains a light density of prehistoric cultural material identified on the surface and below the ground surface. The cultural material has been grouped into three discrete loci. Archaeologists recovered 17 artifacts from 15 STPs on the Owego Creek site. This amounts to roughly 1 artifact per STP. One surface find was also recovered on the Owego Creek site. In addition, two possible hearths were identified by charcoal and reddened soil in two STPs.

Summary of Artifacts: Archaeologists recovered 17 artifacts from STPs and 1 artifact from the surface. Artifacts include 15 fire-cracked rock, 1 bifacial thinning flake (utilized), 1 bi-pitted and flaked stone, and 1 cortical chunk (utilized). All chipped stone artifacts are made from Onondaga chert.

Table 4. Artifacts from the Owego Creek Site,
Owego/Apalachin Central School District Project.

Locus	Horizon	Bifacial Thinning Flake	FCR	RoughSt	Other lithics	Total
1	Surface			1		1
2	Ap		15			15
3	Ap	1 (ut=1)			1 (ut=1)	2
Total (%)		1 (5.6)	15 (83.3)	1 (5.6)	1 (5.6)	18

Key: ut=utilized flake; FCR=fire-cracked rock; RoughSt=roughstone tool; Other lithics=chunks.

The presence of a bifacial thinning flake at the site suggests that site occupants were engaged in the final stages of tool production. The assemblage includes 2 utilized flakes, which suggest that expedient tools were used.

One flaked and bi-pitted stone was identified at the site. This multi-functional tool may have been used to crack nuts. The presence of expedient tools and a pitted stone suggests that site occupants were collecting and processing plant materials.

The presence of fire-cracked rock, along with charcoal and fire-reddened soil, suggests that features are present at the site.

Artifact Distribution: Prehistoric cultural material was recovered from either the surface or within the upper 40 cm (16 in). All artifacts identified in STPs were recovered from the plow zone (Ap horizon).

Features: Two possible features were identified at the Owego Creek site. In STP Y33, Locus 2, 15 pieces of fire-cracked rock were identified associated with reddened soil and charcoal approximately 25-39 cm (9.8-15 in) below surface in the plow zone (Ap horizon) (Attachment F, Photo 26). In STP Y30/7.5mN, Locus 3, charcoal and fire-reddened soil were identified approximately 63-69 cm (25-27 in) below surface in either the plow zone or the transition between the plow zone and the A1 horizon.

Integrity: The site has excellent integrity.

Research Potential: The lithics have the potential to yield information on reduction sequences, which could assist in a functional interpretation of the site. The recovery of expedient utilized flakes presents an ideal condition for documenting lithic management strategies. Usewear analysis of stone tools would aid in documenting activities occurring on this large glacial terrace.

The diversity of artifact types identified at the site, including chipped stone, a rough stone tool, and fire-cracked rock, suggests that site occupants were conducting diverse activities at the site. Understanding activities associated with this site will provide a better understanding of settlement and subsistence practices in this portion of the Susquehanna Valley.

The observation of fire-cracked rock, charcoal, and fire-reddened soil may suggest the presence of features indicating that the site retains good physical integrity. The recovery of features would provide charred plant remains that could be analyzed to provide data on prehistoric subsistence and aid in the reconstruction of the paleo-landscape of the Susquehanna Valley. Carbon from features would also provide material for radiometric dating useful in establishing the site's chronology.

The location of the site in the vicinity of numerous other sites suggests that this portion of the Susquehanna River was an important focus for groups during prehistoric times. Little is actually known of the prehistoric use of these elevated glacial terraces along the Susquehanna River. Examination of the Owego Creek site may provide important subsistence, settlement and functional data for addressing critical topics associated with the prehistory of the Susquehanna River Valley.

Potential Impacts: At present, the Owego Creek site is within an area that will be adversely impacted by construction of sports fields.

Recommendations: We recommend that the site within the project limits is potentially eligible for the National Register of Historic Places. We recommend that impacts to the site be avoided. If impacts to the site can not be avoided, we recommend a site examination including the plowing/replowing of the site and a second walkover. We also recommend the excavation of approximately 3 to 4 1 x 1 m (3 x 3 ft) units in Loci 2 and 3 (those with more than 1 artifact) for a total of 6 to 8 units and 10 STPs in Locus 1 (in which only 1 artifact was recovered).

5. Recommendations

Huntington Creek Site (SUBi-2088)
..... no additional work
...X... additional investigation
..... project modification to avoid sites

We recommend avoidance of the site by relocating proposed construction activities. If this option is selected, each loci will need to be fenced off to protect them from damage during construction. If avoidance is not feasible we recommend excavation to determine NRE.

Owego Free Academy Site (SUBi-2089)
..... no additional work
...X... additional investigation
..... project modification to avoid sites

We recommend avoidance of the site by relocating proposed construction activities. If this option is selected, each loci will need to be fenced off to protect them from damage during construction. If avoidance is not feasible we recommend excavation to determine NRE.

Owego Creek Site (SUBi-2090)
..... no additional work
...X... additional investigation
..... project modification to avoid sites

We recommend avoidance of the site by relocating proposed construction activities. If this option is selected, each loci will need to be fenced off to protect them from damage during construction. If avoidance is not feasible we recommend excavation to determine NRE.

6. Rationale

a. Evaluate the effect of the proposed undertaking on identified cultural resources.

The proposed project will adversely impact the Huntington Creek, Owego Free Academy, and Owego Creek sites.

b. Describe possible precautions, protective measures or project modifications that would avoid or alleviate these impacts.

Avoidance of construction activities or land modification within the boundaries of the Huntington Creek, Owego Free Academy, and Owego Creek sites would alleviate impacts to the sites. If avoidance of Huntington Creek, Owego Free Academy, and Owego Creek sites is pursued, the sites would need to be fenced off to avoid accidental destruction during construction.

c. Identify sites and/or areas which require additional study.

If impacts can not be avoided, the Huntington Creek, Owego Free Academy, and Owego Creek sites will require Stage 2 Site Examinations.

d. Outline the nature and extent of additional investigation(s).

To evaluate NRE, we recommend the excavation of a series of 1 x 1 m (3.3 x 3.3 ft) units at the Huntington Creek site, and surface survey and the excavation of STPs and a series of 1 x 1 m (3.3 x 3.3 ft) units at the Owego Free Academy and Owego Creek sites. The number of units and STPs recommended is summarized as follows:

Huntington Creek Site

Locus	Size	Area	STPs	Units
1	15 x 15 m (49 x 49 ft)	225 m^2 (2,421 ft^2)	0	3-4
2	22.5 x 15 m (74 x 49 ft)	338 m^2 (3,638 ft^2)	0	3-4
3	15 x 15 m (49 x 49 ft)	225 m^2 (2,421 ft^2)	0	3-4
4	15 x 15 m (49 x 49 ft)	225 m^2 (2,421 ft^2)	10	0
5	15 x 15 m (49 x 49 ft)	225 m^2 (2,421 ft^2)	10	0
Total			20	9-12

Owego Free Academy Site

Surface Survey

Size	Area	STPs	Units
220 x 230 m (722 ft x 807 ft)	29,182 m^2 (314,112 ft^2)	0	20-25

Owego Creek Site

Surface Survey

Locus	Size	Area	STPs	Units
1	7.5 x 7.5 m (25 x 25 ft)	56 m^2 (603 ft^2)	10	0
2	15 x 15 m (49 x 49 ft)	225 m^2 (2,421 ft^2)	0	3-4
3	30 x 22.5 m (98 x 74 ft)	675 m^2 (7266 ft^2)	0	3-4
Total			10	6-8

END PART 1

If site evaluation is not completed at this time, proceed to Part 3.

PART 3: SUPPORTIVE DATA

Reports should include the items listed below. Bracketed information is optional. Put a check next to each item appended.

PLEASE NOTE: Most attachments listed below often provide precise locational and compositional data on archaeological sites. This information is confidential to protect the resource from vandalism. All attachments with site specific information should be omitted from report copies which will be available to the general public.

..A.. qualifications of the principal investigator(s)

..B.. topographic and soils maps with project area noted

.... site files checks (Confidential: Not for Public Release)

.... copies of relevant historic maps

..C.. map(s) of test locations, field inspection, and areas of cultural material; maps must have title, legend, bar scale, and directional arrow

..D.. record of soil stratigraphy in each test unit and trench

..E.. artifact catalog

..F.. photographs of the project area

..G... OPR&HP Prehistoric Site form

Certification: I certify that I directed the cultural resource investigation reported here, that my observations and methods are fully reported, and that this report is complete and accurate to the best of my knowledge.

12/20/2000
date

signature of preparer

ATTACHMENT A:
Qualifications of the Principal Investigators

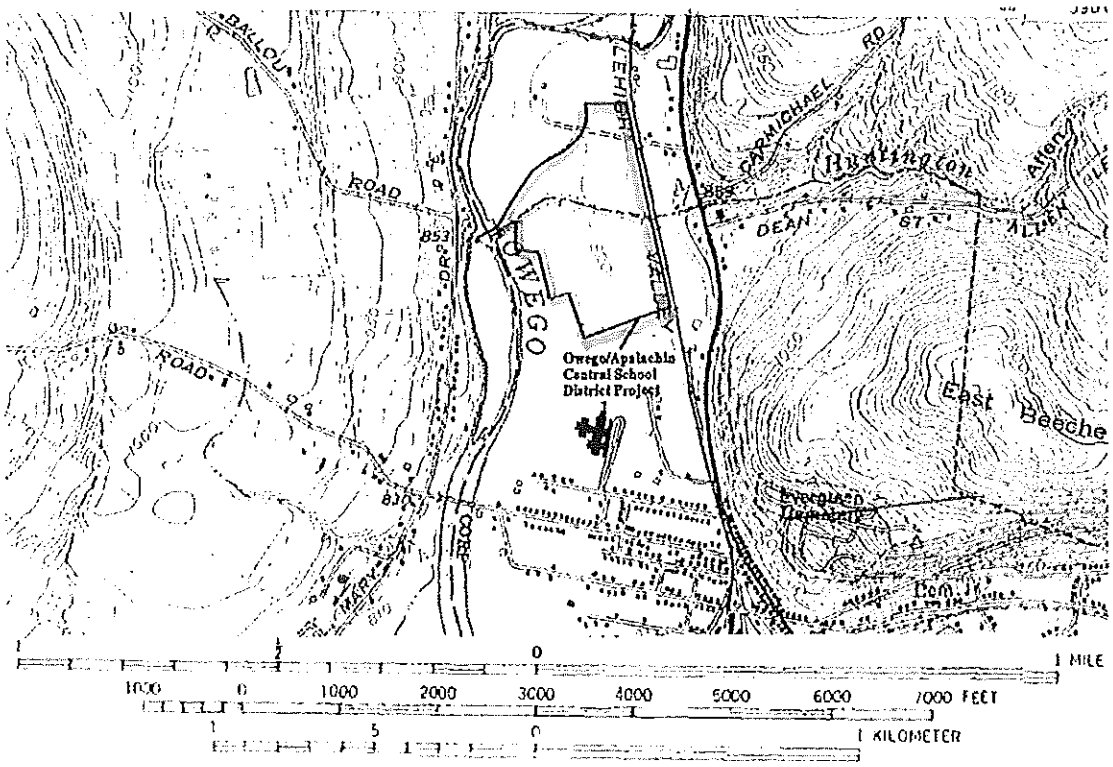
Dr. Nina M. Versaggi
Director and Principal Investigator, Public Archaeology Facility.

Versaggi received her doctorate in Anthropology from SUNY-Binghamton in 1988, her MA from SUNY University at Binghamton in 1976 and her BA from Rutgers University in 1974. She has been active in professional archaeology since 1972. Professional positions held include Director of the Public Archaeology Facility since 1988, Partner in Compliance Survey Associates for 6 years, Guest Curator at the Roberson Museum and Science Center, and Post-doctoral Fellow at the Hartwick College Museums. She serves as principal investigator for all current and past projects of the Public Archaeology Facility whose recent major projects include the Rainbow Plaza Data Recovery in Niagara Falls and the state-wide highway subcontract with the New York State Museum and NYSDOT. She has authored "Hunter to Farmer: 10,000 Years of Susquehanna Valley Prehistory," "Prehistoric Hunter-Gatherer Settlement Models: Interpreting the Upper Susquehanna Valley," and "Upland Foraging Sites in the Northeast: Engendering Prehistory," which are based on NYSDOT and pipeline prehistoric data. She is a member of the board for the Preservation Association of the Southern Tier, and for the New York Archaeological Council she chairs the Professional Survey and Report Standards Committee. She serves as an Adjunct Associate Professor at Binghamton University.

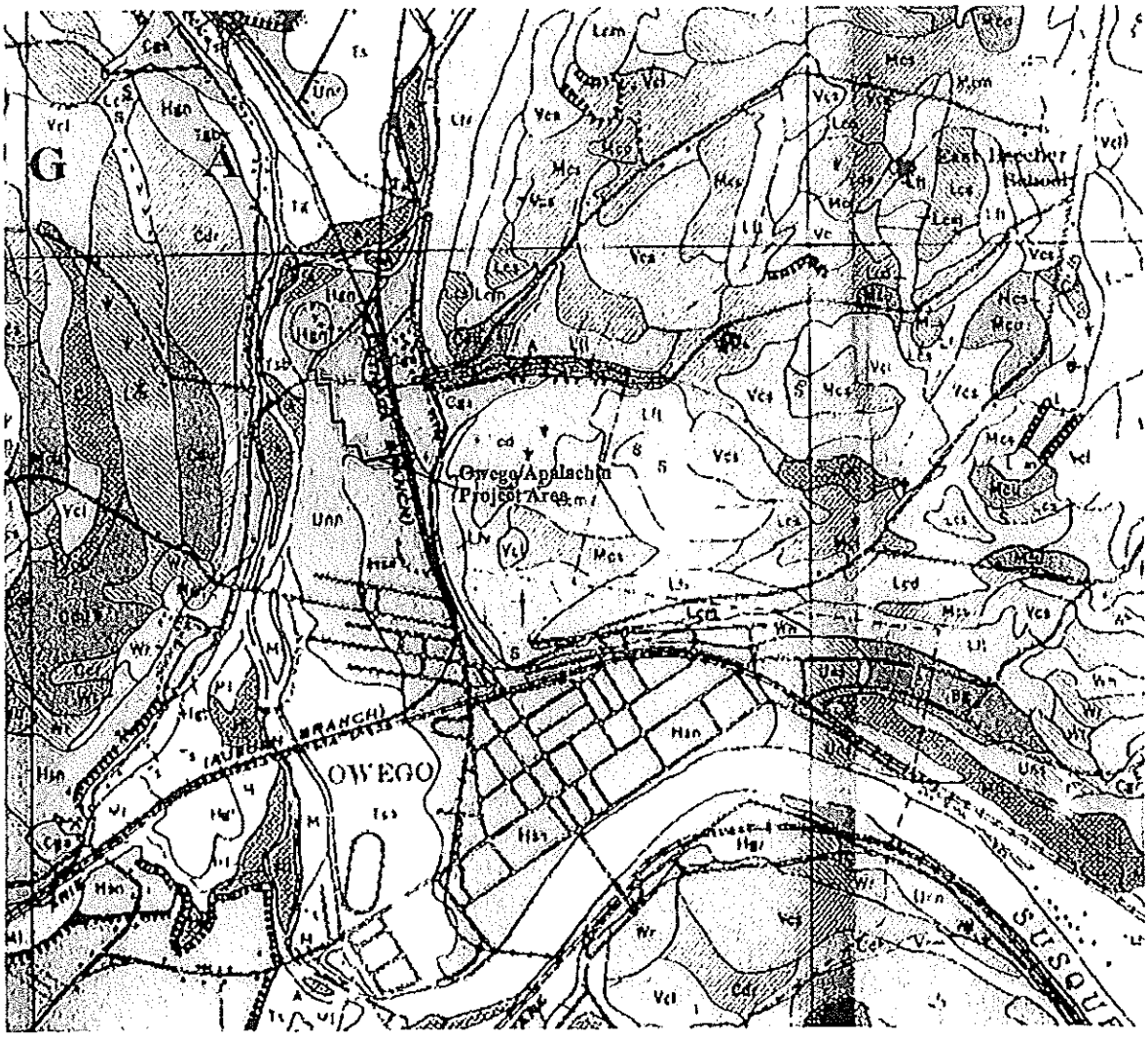
Laurie Miroff
Project Director, Public Archaeology Facility

Miroff is a doctoral candidate in Anthropology at Binghamton University, specializing in prehistoric Northeastern North America. She completed her MA in Teaching in 1995 and her MA in Anthropology in 1994 from Binghamton University. In 1991 she received her BA from the University of Connecticut, Storrs. She has worked professionally in archaeology since 1989. Her research interests include Late Woodland Owasco/Iroquois community organization, household archaeology and lithic and ceramic analysis. She is co-author of several articles on Southern New England ceramics. Her dissertation research focuses on the Thomas/Luckey site, an Owasco village in the Chemung Valley, New York. She has also worked in educational outreach, including Kids on Campus and the Community Archaeology Program at Binghamton University. She is associate editor of *Northeast Anthropology* and has been a member of the New York Archaeological Council since 1996.

ATTACHMENT B:
B.1: Topographic Map with Project Area Noted
1969 15 minute, Owego, NY quadrangle.



B.2: Soil Map of the Project Area
1953 Soil Survey of Tioga County, NY.



Key: Unn=Unadilla silt loam; Hsn=Howard gravelly silt loam; Hgn= Howard gravelly loam, Nearly level phase; A=Allis channery silt loam; and Tsb=Tioga silt loam, High-bottom phase.

ATTACHMENT C:
Map of the project area showing testing locations and results

ATTACHMENT D
D.1: SHOVEL TEST PIT RECORD

LT=LIGHT MD=MEDIUM DK=DARK
BR=BROWN GR=GRAY YL=YELLOW OL=OLIVE TN=TAN RD=RED BK=BLACK WH=WHITE
SI=SILT SA=SAND CL=CLAY LO=LOAM GVL=GRAVEL
P=PREHISTORIC H=HISTORIC N=NO CULTURAL MATERIAL
DISC.=DISCARDED

STP#	4.RND	LEV	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
A 37		1	0-25	Md Ol Br Si Lo	N	MD/ED	11/22/00
A 37		2	25-41	Md Ol Br Si Lo	N	MD/ED	11/22/00
A 37		3	41-64	Lt Yl Br Sa Si W/Gvl	N	MD/ED	11/22/00
A 37		4	64-72	Lt Yl Br Sa Si W/Gvl + Rock; Stopped By Rock	N	MD/ED	11/22/00
A 38		1	0-25	Md Br Sl Lo; Coal, Slag - Disc.	N	NM/RW	11/22/00
A 38		2	25-50	Md Br Si Lo	N	NM/RW	11/22/00
A 38		3	50-59	Md Br Si Lo	N	NM/RW	11/22/00
A 38		4	59-90	Yl Br Si; Charcoal - Disc.	N	NM/RW	11/22/00
A 38		5	90-93	Yl Br Si W/Rock	N	NM/RW	11/22/00
A 39		1	0-25	Md Br Sl Lo W/Heavy Gvl + Cobbles	N	MD/ED	11/22/00
A 39		2	25-33	Md Br Si Lo W/Heavy Cobbles + Gvl	N	MD/ED	11/22/00
A 39		3	33-34	Md Br Si Lo W/Heavy Cobbles + Gvl; Stopped By Rock + Gvl	N	MD/ED	11/22/00
A 40		1	0-31	Md Br Cl Si	N	LM/WG	11/22/00
A 40		2	31-37	Md Br Cl Si	N	LM/WG	11/22/00
A 40		3	37-57	Dk Br Cl Si	N	LM/WG	11/22/00
A 40		4	57-73	Yl Br Cl Si; Stopped By Gvl	N	LM/WG	11/22/00
A 41		1	0-25	Md Br Cl Si	N	LM/WG	11/22/00
A 41		2	25-50	Md Br Cl Si	N	LM/WG	11/22/00
A 41		3	50-58	Dk Br Cl Si	N	LM/WG	11/22/00
A 41		4	58-83	Yl Br Cl Si	N	LM/WG	11/22/00
A 42		1	0-31	Md Br Si W/Gvl	N	LM/WG	11/22/00
A 42		2	31-51	Gr Yl Sa Si	N	LM/WG	11/22/00
A 42		3	51-75	Gr Br Yl Sa W/Gvl	N	LM/WG	11/22/00
A 43		1	0-23	Md Br Si W/Gvl	N	LM/WG	11/22/00
A 43		2	23-41	Yl Br Sa Si W/Gvl	N	LM/WG	11/22/00
A 44		1	0-21	Md Br Si Lo W/Gvl; Coal Ash - Disc.	N	LM/WG	11/22/00
A 44		2	21-49	Yl Br Sa Si W/Gvl	N	LM/WG	11/22/00
AA 9		1	0-20	Dk Br Si Lo	N	MR/BG	08/14/00
AA 9		2	20-43	Yl Br Sa Si W/Cobbles; Stopped By Rock	N	MR/BG	08/14/00
AA 11		1	0-22	Dk Br Si Lo	N	MR/BG	08/14/00
AA 11		2	22-38	Gr Br Sa W/Gvl + Cobbles; Stopped By Rock	N	MR/BG	08/14/00
AA 12		1	0-18	Dk Br Si Lo	H	MR/BG	08/14/00
AA 12		2	18-32	Yl Br Compact Sa Lo W/Cobbles; Stopped By Rock	N	MR/BG	08/14/00
AA 13		1	0-21	Dk Br Si Lo	N	MR/BG	08/14/00
AA 13		2	21-43	Yl Br Compact Sa W/Gvl + Cobbles; Stopped By Rock	N	MR/BG	08/14/00
AA 14		1	0-22	Dk Br Si Lo W/Gvl	H	SK/JW	08/14/00
AA 14		2	22-52	Yl Br Cl Si W/Gvl; Stopped By Cobbles	N	SK/JW	08/14/00
AA 15		1	0-23	Br Si Lo W/Gvl; Tin Foil - Disc.	H	SK/JW	08/14/00
AA 15		2	23-56	Dk Br Cl Si Lo	N	SK/JW	08/14/00
AA 15		3	56-80	Lt Ol Cl Si	N	SK/JW	08/14/00
AA 15		4	80-85	Lt Ol Cl Si W/Gvl; Stopped By Gvl	N	SK/JW	08/14/00
AA 16		1	0-22	Dk Gr Br Si Lo	N	SK/JW	08/14/00
AA 16		2	22-55	Dk Gr Br/Dk Yl Br Cl Si	N	SK/JW	08/14/00
AA 16		3	55-70	Dk Yl Br Cl Si	N	SK/JW	08/14/00
AA 16		4	70-75	Dk Yl Br Cl Si W/Cobbles; Stopped By Cobbles	N	SK/JW	08/14/00
AA 17		1	0-25	Dk Gr Br Si Lo	N	BG/MR	08/14/00
AA 17		2	25-32	Dk Gr Br Si Lo	N	BG/MR	08/14/00
AA 17		3	32-70	Br Si	N	BG/MR	08/14/00
AA 17		4	70-81	Yl Br Cl Si W/Gvl + Cobbles; Stopped By Rock	N	BG/MR	08/14/00
AA 18		1	0-25	Dk Gr Br Si Lo	N	BG/MR	08/14/00
AA 18		2	25-38	Dk Gr Br Si Lo	H	BG/MR	08/14/00
AA 18		3	38-71	Yl Br Sa Lo	N	BG/MR	08/14/00
AA 18		4	71-86	Gr Yl Br Sa Lo W/Gvl + Cobbles	N	BG/MR	08/14/00
AA 19		1	0-18	Md Gr Br Si Lo	N	BG/MR	08/14/00
AA 19		2	18-50	Dk Gr Br Si Lo	H	BG/MR	08/14/00
AA 19		3	50-100	Dk Yl Br Cl Si	N	BG/MR	08/14/00
AA 30		1	0-28	Md Br Si Lo; Styrofoam - Disc.	N	MR/RW	11/20/00
AA 30		2	28-48	Md Gr Si Lo	H	MR/RW	11/20/00
AA 30		3	48-61	Md Gr Si Lo	N	MR/RW	11/20/00
AA 30		4	61-81	Dk Gr Si Lo	N	MR/RW	11/20/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
AA 30		5	81-91	Dk Gr Si Lo	N	MR/RW	11/20/00
AA 30		6	91-102	Dk Gr Si W/Rock + Gvl	N	MR/RW	11/20/00
AA 31		1	0-25	Md Br Si Lo; Alum.Foil, Styrofoam, Slag, Coal - Disc.	N	MR/RW	11/20/00
AA 31		2	25-39	Md Br Si Lo	N	MR/RW	11/20/00
AA 31		3	39-57	Dk Gr Br Si Lo; Coal - Disc.	N	MR/RW	11/20/00
AA 31		4	57-87	Yl Br Si	N	MR/RW	11/20/00
AA 32		1	0-25	Md Br Si Lo; Styrofoam - Disc.	N	MR/RW	11/20/00
AA 32		2	25-45	Md Br Si Lo; Coal - Disc.	H	MR/RW	11/20/00
AA 32		3	45-65	Yl Br Si	N	MR/RW	11/20/00
AA 32		4	65-85	Yl Br Si	N	MR/RW	11/20/00
AA 32		5	85-101	Yl Br Si	N	MR/RW	11/20/00
AA 33		1	0-25	Md Br Si Lo; Styrofoam, Coal - Disc.	N	MR/RW	11/20/00
AA 33		2	25-45	Md Br Si Lo	N	MR/RW	11/20/00
AA 33		3	45-52	Yl Br Si	N	MR/RW	11/20/00
AA 33		4	52-80	Yl Br Si	N	MR/RW	11/20/00
AA 33		5	80-86	Yl Br Si W/Gvl	N	MR/RW	11/20/00
AA 34		1	0-25	Md Br Si Lo; Plastic - Disc.	H	MR/RW	11/20/00
AA 34		2	25-39	Md Br Si Lo	N	MR/RW	11/20/00
AA 34		3	39-55	Dk Gr Si Lo	N	MR/RW	11/20/00
AA 34		4	55-75	Yl Br Si	N	MR/RW	11/20/00
AA 34		5	75-83	Yl Br Si	N	MR/RW	11/20/00
AA 34		6	83-100	Yl Br Si W/Rock + Gvl	N	MR/RW	11/20/00
AB 14		1	0-25	Gr Br Si Lo; Coal - Disc.	N	SK/JW	08/14/00
AB 14		2	25-30	Gr Br Si Lo; Coal - Disc.	N	SK/JW	08/14/00
AB 14		3	30-40	Gr Br W/Yl Br Cl Si	N	SK/JW	08/14/00
AB 14		4	40-90	Dk Gr Br Cl Si	N	SK/JW	08/14/00
AB 14		5	90-100	Yl Br Cl Si	N	SK/JW	08/14/00
AB 15		1	0-25	Br Si Lo W/Gvl	N	SK/JW	08/14/00
AB 15		2	25-37	Dk Br Cl Si Lo	N	SK/JW	08/14/00
AB 15		3	37-42	Lt Ol Cl Si	N	SK/JW	08/14/00
AB 15		4	42-60	Lt Ol Cl Si	N	SK/JW	08/14/00
AB 15		5	60-70	Dk Ol Cl Si	N	SK/JW	08/14/00
AB 15		6	70-95	Dk Br Cl Si	N	SK/JW	08/14/00
AB 16		1	0-22	Dk Br Si Lo	N	BG/MR	08/14/00
AB 16		2	22-51	Compact Dk Gr Br Cl Si	N	BG/MR	08/14/00
AB 16		3	51-65	Compact Yl Br Cl Sa; Stopped By Rock	N	BG/MR	08/14/00
AB 17		1	0-20	Md Gr Br Si Lo	N	BG/MR	08/14/00
AB 17		2	20-43	Dk Gr Br Compact Cl Si	N	BG/MR	08/14/00
AB 17		3	43-68	Br Compact Si	N	BG/MR	08/14/00
AB 17		4	68-95	Yl Br Compact Si	N	BG/MR	08/14/00
AB 18		1	0-25	Dk Br Si Lo	N	SK/JW	08/14/00
AB 18		2	25-40	Mottled Dk Br W/Yl Cl Si W/Gvl	N	SK/JW	08/14/00
AB 18		3	40-85	Yl Br Cl Si; Brick - Disc.; Stopped By Cobbles	N	SK/JW	08/14/00
AB 30		1	0-13	Dk Gr Cl Lo	N	JD/NM	11/21/00
AB 30		2	13-38	Ol Br Cl Si	N	JD/NM	11/21/00
AB 30		3	38-56	Ol Br Cl Si	N	JD/NM	11/21/00
AB 30		4	56-78	Dk Gr Br Cl Si; Brick - Disc.	N	JD/NM	11/21/00
AB 30		5	78-82	Yl Br Cl Si	N	JD/NM	11/21/00
AB 31		1	0-25	Ol Br Cl Si	N	JD/NM	11/21/00
AB 31		2	25-40	Ol Br Cl Si	N	JD/NM	11/21/00
AB 31		3	40-80	Yl Br Cl Si	N	JD/NM	11/21/00
AB 32		1	0-31	Md Br Cl Si	N	TK/LM	11/20/00
AB 32		2	31-57	Md Br Cl Si W/Gvl	N	TK/LM	11/20/00
AB 33		1	0-25	Ol Br Cl Si; Styrofoam - Disc.	N	JD/MD	11/20/00
AB 33		2	25-50	Ol Br Cl Si; Styrofoam - Disc.	H	JD/MD	11/20/00
AB 33		3	50-80	Ol Br Cl Si	N	JD/MD	11/20/00
AB 33		4	80-97	Yl Br Cl Si	N	JD/MD	11/20/00
AB 34		1	0-25	Md Ol Br Cl Si	N	JD/MD	11/20/00
AB 34		2	25-39	Md Ol Br Cl Si	N	JD/MD	11/20/00
AB 34		3	39-52	Md Br Cl Si W/Lt Charcoal; Charcoal - Disc.	N	JD/MD	11/20/00
AB 34		4	52-80	Lt Ol Yl Cl Si	N	JD/MD	11/20/00
AC 13		1	0-43	Md Gr Br Cl Lo; Coal - Disc.	N	NM/KH	08/14/00
AC 13		2	43-63	Yl Br Cl Lo W/Rock; Stopped By Rock	N	NM/KH	08/14/00
AC 14		1	0-25	Mottled Dk Gr Br W/Dk Yl Cl Si W/Gvl + Cobbles	H	SK/JW	08/14/00
AC 14		2	25-40	Mottled Dk Gr Br W/Dk Yl Cl Si W/Gvl + Cobbles; Stopped By Gvl + Cobbles	N	SK/JW	08/14/00
AC 15		1	0-18	Gr Br Si Lo W/Gvl; Poss.Fill	H	SK/JW	08/14/00
AC 15		2	18-40	Mottled Gr Br/Dk Yl Br Si Lo; Poss.Fill	N	SK/JW	08/14/00
AC 15		3	40-85	Dk Gr Br Cl Si; Poss.Original Topsoil; Coal - Disc.	N	SK/JW	08/14/00
AC 15		4	85-95	Yl Br Cl Si	N	SK/JW	08/14/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
AC 29		1	0-25	Ol Br Cl Si	N	JD/NM	11/21/00
AC 29		2	25-43	Ol Br Cl Si; Coal, Charcoal - Disc.	N	JD/NM	11/21/00
AC 29		3	43-58	Dk Br Cl Si; Charcoal - Disc.	N	JD/NM	11/21/00
AC 29		4	58-80	Yl Br Cl Si	N	JD/NM	11/21/00
AC 30		1	0-25	Ol Br Cl Si	N	JD/NM	11/21/00
AC 30		2	25-50	Ol Br Cl Si	N	JD/NM	11/21/00
AC 30		3	50-60	Dk Br Cl Si	N	JD/NM	11/21/00
AC 30		4	60-86	Yl Br Cl Si	N	JD/NM	11/21/00
AC 31		1	0-25	Ol Br Cl Si	N	JD/NM	11/21/00
AC 31		2	25-90	Ol Br Cl Si	N	JD/NM	11/21/00
AC 31		3	90-105	Dk Br Cl Si	N	JD/NM	11/21/00
AC 31		4	105-110	Mottled Yl Br & Dk Br Cl Si	N	JD/NM	11/21/00
AD 12		1	0-30	Md Gr Br Cl Lo W/Cobbles; Coal - Disc.	H	NM/KH	08/14/00
AD 12		2	30-100	Yl Br Cl Lo	N	NM/KH	08/14/00
AD 13		1	0-50	Md Gr Br Cl Lo W/Rock	H	NM/KH	08/14/00
AD 13		2	50-100	Yl Br Cl Lo	N	NM/KH	08/14/00
AD 30		1	0-25	Ol Br Cl Si	H	JD/NM	11/21/00
AD 30		2	25-50	Ol Br Cl Si	N	JD/NM	11/21/00
AD 30		3	50-59	Br Cl Si	N	JD/NM	11/21/00
AD 30		4	59-86	Mottled Yl Br & Dk Br Cl Si	N	JD/NM	11/21/00
AE 10		1	0-74	Md Gr Br Cl Lo; Coal - Disc.	H	NM/KH	08/14/00
AE 10		2	74-100	Yl Br Cl Lo	N	NM/KH	08/14/00
B 35		1	0-25	Md Br Si Lo W/Lt Gvl	N	ED/MD	11/22/00
B 35		2	25-30	Md Br Si Lo W/Lt Gvl	N	ED/MD	11/22/00
B 35		3	30-85	Lt Yl Br Si Lo	N	ED/MD	11/22/00
B 36		1	0-25	Md Ol Br Sa Si; Coal, Slag, Brick - Disc.	H	ED/MD	11/22/00
B 36		2	25-37	Md Ol Br Sa Si	N	ED/MD	11/22/00
B 36		3	37-85	Lt Yl Br Cl Si	N	ED/MD	11/22/00
B 37		1	0-25	Md Ol Br Si Lo W/Lt Gvl	H	ED/MD	11/22/00
B 37		2	25-38	Md Ol Br Si Lo W/Lt Gvl; Coal - Disc.	N	ED/MD	11/22/00
B 37		3	38-53	Dk Br Cl Si Lo; Charcoal Flecks - Disc.	N	ED/MD	11/22/00
B 37		4	53-83	Lt Yl Br Cl Si	N	ED/MD	11/22/00
B 38		1	0-25	Md Br Si Lo W/Heavy Gvl	H	ED/MD	11/22/00
B 38		2	25-32	Md Br Si Lo W/Heavy Gvl	N	ED/MD	11/22/00
B 38		3	32-33	Md Br Si Lo; Stopped By Gvl + Cobbles	N	ED/MD	11/22/00
B 39		1	0-25	Md Br Si Lo; Coal - Disc.	N	ED/MD	11/22/00
B 39		2	25-40	Md Br Si Lo	N	ED/MD	11/22/00
B 39		3	40-49	Lt Yl Br Sa Si	N	ED/MD	11/22/00
B 39		4	49-53	Lt Yl Br Sa Si W/Rock	N	ED/MD	11/22/00
B 40		1	0-25	Md Br Si Lo; Styrofoam - Disc.	N	ED/MD	11/22/00
B 40		2	25-33	Md Br Si Lo	N	ED/MD	11/22/00
B 40		3	33-61	Lt Yl Br Sa Si W/Gvl	N	ED/MD	11/22/00
B 40		4	61-62	Lt Yl Br Sa Si W/Gvl; Stopped By Rock	N	ED/MD	11/22/00
B 41		1	0-25	Md Br Si Lo W/Gvl + Cobbles	N	MD/ED	11/22/00
B 41		2	25-40	Very Compact Md Br Si Lo W/Gvl, Cobbles, & Rock; Stopped By Rock	H	MD/ED	11/22/00
B 42		1	0-25	Md Br Si Lo W/Lt Gvl + Cobbles	N	MD/ED	11/22/00
B 42		2	25-40	Md Br Si Lo W/Gvl + Cobbles	N	MD/ED	11/22/00
B 42		3	40-67	Lt Yl Br Cl Si	N	MD/ED	11/22/00
B 43		1	0-25	Md Br Si Lo	H	NM/RW	11/22/00
B 43		2	25-35	Md Br Si Lo	N	NM/RW	11/22/00
B 43		3	35-55	Yl Br Si	N	NM/RW	11/22/00
B 43		4	55-86	Yl Br Si	N	NM/RW	11/22/00
B 43		5	86-102	Yl Br Si W/Rock + Gvl	N	NM/RW	11/22/00
B 44		1	0-25	Dk Br Si Lo	N	NM/RW	11/22/00
B 44		2	25-40	Dk Br Si Lo; Stopped By Rock	N	NM/RW	11/22/00
C 36		1	0-25	Md Br Si Lo W/Lt Gvl	N	ED/MD	11/22/00
C 36		2	25-44	Md Br Si Lo W/Lt Gvl	N	ED/MD	11/22/00
C 36		3	44-63	Dk Br Cl Si	N	ED/MD	11/22/00
C 36		4	63-80	Lt Yl Br Cl Si	N	ED/MD	11/22/00
C 37		1	0-25	Md Br Si Lo W/Lt Gvl	H	ED/MD	11/22/00
C 37		2	25-30	Md Br Si Lo W/Lt Gvl	N	ED/MD	11/22/00
C 37		3	30-76	Lt Yl Br Si Lo	N	ED/MD	11/22/00
C 37		4	76-77	Lt Yl Br Si Lo W/Gvl + Rock; Stopped By Rock	N	ED/MD	11/22/00
C 38		1	0-25	Md Br Si Lo W/Lt Gvl	N	MD/ED	11/22/00
C 38		2	25-30	Md Br Si Lo W/Lt Gvl	H	MD/ED	11/22/00
C 38		3	30-62	Lt Yl Br Si Lo W/Rock At Base Of Level; Stopped By Rock	N	MD/ED	11/22/00
C 39		1	0-25	Md Br Si Lo W/Some Gvl	H	MD/ED	11/22/00
C 39		2	25-64	Lt Yl Br Si Lo	N	MD/ED	11/22/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
C 39		3	64-65	Lt Yl Br Si Lo; Stopped By Rock	N	MD/ED	11/22/00
C 40		1	0-26	Md Br Si Lo W/Some Gvl; Coal - Disc.	N	MD/ED	11/22/00
C 40		2	26-60	Lt Yl Br Si Lo	N	MD/ED	11/22/00
C 40		3	60-62	Lt Yl Br Si Lo W/Rock; Stopped By Rock	N	MD/ED	11/22/00
C 41		1	0-25	Md Br Si Lo W/Lt Gvl	N	MD/ED	11/22/00
C 41		2	25-30	Md Br Si Lo W/Lt Gvl	N	MD/ED	11/22/00
C 41		3	30-45	Md Br Sa Si W/Heavy Gvl, Cobbles, & Rock; Stopped By Rock	N	MD/ED	11/22/00
C 42		1	0-25	Md Br Cl Si Mottled W/Md Yl Br Cl Si	N	MD/ED	11/22/00
C 42		2	25-35	Md Br Cl Si Mottled W/Md Yl Br Cl Si	N	MD/ED	11/22/00
C 42		3	35-79	Lt Yl Br Cl Si	N	MD/ED	11/22/00
C 42		4	79-80	Lt Yl Br Cl Si W/Rock	N	MD/ED	11/22/00
C 43		1	0-25	Dk Yl Br Si Lo W/Gvl + Cobbles	N	MD/ED	11/22/00
C 43		2	25-66	Lt Yl Br Cl Si	N	MD/ED	11/22/00
C 43		3	66-67	Lt Yl Br Cl Si W/Heavy Cobbles; Stopped By Rock	N	MD/ED	11/22/00
C 44		1	0-25	Dk Yl Br Sa Si W/Gvl + Rock	N	MD/ED	11/22/00
C 44		2	25-32	Dk Yl Br Sa Si W/Gvl + Rock	N	MD/ED	11/22/00
C 44		3	32-50	Lt Yl Br Sa Si W/Gvl + Rock	N	MD/ED	11/22/00
D 11		1	0-9	Dk Br Si Lo; Slag - Disc.	H	KS/DR	08/07/00
D 11		2	9-38	Md Br Si Lo W/Gvl + Cobbles; Stopped By Rock	N	KS/DR	08/07/00
D 12		1	0-24	Dk Br Si Lo; Coal - Disc.	N	KS/DR	08/07/00
D 12		2	24-36	Dk Br Si Lo W/Rock; Stopped By Rock	N	KS/DR	08/07/00
D 13		1	0-18	Dk Br Si Lo; Coal - Disc.	H	KS/DR	08/07/00
D 13		2	18-55	Md Br Si Lo W/Gvl; Stopped By Rock	H	KS/DR	08/07/00
D 14		1	0-7	Dk Br Si Lo	N	KS/DR	08/07/00
D 14		2	7-18	Md Br Si Lo W/Gvl + Cobbles; Coal - Disc.	N	KS/DR	08/07/00
D 15		1	0-25	Md Br Si Lo W/Cobbles + Gvl; Coal - Disc.	N	KS/DR	08/07/00
D 15		2	25-27	Md Br Si Lo W/Cobbles + Gvl; Stopped By Rock	N	KS/DR	08/07/00
D 16		1	0-21	Dk Br Si Lo W/Cobbles; Coal - Disc.; Stopped By Rock	H	KS/DR	08/07/00
D 19		1	0-25	Lt Br Si Lo W/Gvl + Rock	H	KH/RW	11/14/00
D 19		2	25-30	Lt Br Si Lo W/Gvl + Rock	N	KH/RW	11/14/00
D 19		3	30-60	Yl Br Si W/Gvl + Rock	N	KH/RW	11/14/00
D 20		1	0-25	Lt Br Si Lo W/Rock; Brick, Coal - Disc.	H	KH/RW	11/14/00
D 20		2	25-38	Lt Br Si Lo W/Rock; Brick, Coal - Disc.	N	KH/RW	11/14/00
D 20		3	38-61	Yl Br Si	N	KH/RW	11/14/00
D 21		1	0-25	Lt Br Si Lo W/Rock + Gvl	N	KH/RW	11/14/00
D 21		2	25-30	Lt Br Si Lo W/Rock + Gvl	N	KH/RW	11/14/00
D 21		3	30-52	Yl Br Si W/Rock + Gvl; Stopped By Rock	N	KH/RW	11/14/00
D 22		1	0-25	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 22		2	25-44	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 22		3	44-60	Yl Br Si W/Rock; Stopped By Rock	N	KH/RW	11/14/00
D 23		1	0-25	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 23		2	25-32	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 23		3	32-55	Yl Br Si W/Gvl + Rock; Stopped By Rock	N	KH/RW	11/14/00
D 24		1	0-25	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 24		2	25-44	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 24		3	44-62	Yl Br Si W/Gvl + Rock	N	KH/RW	11/14/00
D 25		1	0-25	Lt Br Si Lo W/Rock	H	KH/RW	11/14/00
D 25		2	25-38	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 25		3	38-62	Yl Br Si W/Gvl	N	KH/RW	11/14/00
D 26		1	0-25	Lt Br Si Lo W/Rock	H	KH/RW	11/14/00
D 26		2	25-37	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 26		3	37-57	Yl Br Si W/Gvl + Rock	N	KH/RW	11/14/00
D 26		4	57-66	Yl Br Si W/Gvl + Rock	N	KH/RW	11/14/00
D 27		1	0-25	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 27		2	25-37	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 27		3	37-62	Yl Br Si Lo W/Rock; Charcoal - Disc.	N	KH/RW	11/14/00
D 28		1	0-25	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 28		2	25-28	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 28		3	28-47	Yl Br Si W/Gvl + Rock	N	KH/RW	11/14/00
D 29		1	0-25	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 29		2	25-39	Lt Br Si Lo W/Rock	N	KH/RW	11/14/00
D 29		3	39-59	Yl Br Si W/Rock; Charcoal - Disc.	N	KH/RW	11/14/00
D 30		1	0-25	Lt Br Si Lo W/Rock; Brick - Disc.	H	KH/RW	11/14/00
D 30		2	25-43	Lt Br Si Lo W/Rock; Brick - Disc.	N	KH/RW	11/14/00
D 30		3	43-66	Yl Br Si W/Rock	N	KH/RW	11/14/00
D 31		1	0-30	Md Br Si Lo W/Gvl + Rock	N	AM/WG	11/14/00
D 31		2	30-50	Yl Br Si Lo	N	AM/WG	11/14/00
D 31		3	50-70	Yl Br Si Lo	N	AM/WG	11/14/00
D 31		4	70-90	Yl Br Si Lo	N	AM/WG	11/14/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
D 31		5	90-100	Yl Br Si Lo	N	AM/WG	11/14/00
D 32		1	0-25	Md Br Si Lo W/Rock	N	AM/WG	11/14/00
D 32		2	25-38	Md Br Si Lo W/Rock	N	AM/WG	11/14/00
D 32		3	38-71	Yl Br Si W/Gvl	N	AM/WG	11/14/00
D 33		1	0-25	Md Br Si Lo	N	AM/WG	11/14/00
D 33		2	25-46	Md Br Si Lo	N	AM/WG	11/14/00
D 33		3	46-66	Yl Br Si Lo	N	AM/WG	11/14/00
D 33		4	66-70	Yl Br Si Lo	N	AM/WG	11/14/00
D 33		5	70-92	Yl Br Si	N	AM/WG	11/14/00
D 34		1	0-30	Md Br Si Lo	N	AM/WG	11/14/00
D 34		2	30-57	Yl Br Si Lo	N	AM/WG	11/14/00
D 34		3	57-60	Md Br Si W/Rock; Stopped By Rock	N	AM/WG	11/14/00
D 36		1	0-25	Ol Br Cl Si	H	RW/NM	11/22/00
D 36		2	25-39	Ol Br Cl Si	N	RW/NM	11/22/00
D 36		3	39-60	Br Cl Si	N	RW/NM	11/22/00
D 36		4	60-75	Br Si W/Gvl	N	RW/NM	11/22/00
D 37		1	0-3	Frozen; Not Screened	N	RW/NM	11/22/00
D 37		2	3-14	Md Br Si Lo	N	RW/NM	11/22/00
D 37		3	14-28	Dk Gr Si Lo	N	RW/NM	11/22/00
D 37		4	28-48	Dk Gr Sa Si W/Gvl + Rock	N	RW/NM	11/22/00
D 37		5	48-77	Yl Br Cl Si W/Gvl; Stopped By Rock	N	RW/NM	11/22/00
D 38		1	0-25	Md Br Si Lo	N	RW/NM	11/22/00
D 38		2	25-60	Yl & Dk Gr Sa Si W/Gvl + Rock; Stopped By Rock	N	RW/NM	11/22/00
D 39		1	0-27	Md Br Si Lo	N	RW/NM	11/22/00
D 39		2	27-41	Yl Br Si	N	RW/NM	11/22/00
D 39		3	41-61	Yl Br Si W/Rock + Gvl; Stopped By Rock	N	RW/NM	11/22/00
D 40		1	0-25	Md Br Si Lo	N	RW/NM	11/22/00
D 40		2	25-40	Md Br Si Lo	N	RW/NM	11/22/00
D 40		3	40-100	Yl Br Si Lo	N	RW/NM	11/22/00
D 41		1	0-4	Frozen; Not Screened	N	RW/NM	11/22/00
D 41		2	4-23	Md Br Si Lo W/Gvl	N	RW/NM	11/22/00
D 41		3	23-44	Rock & Gvl W/Md Br Sa Si; Stopped By Rock	N	RW/NM	11/22/00
D 42		1	0-25	Md Br Si Lo W/Rock + Gvl	N	RW/NM	11/22/00
D 42		2	25-50	Md Br Si Lo W/Rock + Gvl	N	RW/NM	11/22/00
D 43		1	0-24	Md Br Si Lo	N	NM/RW	11/22/00
D 43		2	24-43	Md Gr Br Si Lo	N	NM/RW	11/22/00
D 43		3	43-68	Md Gr Br Si W/Gvl + Rock; Stopped By Rock	N	NM/RW	11/22/00
D 44		1	0-25	Md Br Si Lo	N	NM/RW	11/22/00
D 44		2	25-36	Md Br Si Lo	N	NM/RW	11/22/00
D 44		3	36-56	Yl Br Si Lo	N	NM/RW	11/22/00
D 44		4	56-75	Md Gr Br Si W/Gvl + Rock; Stopped By Rock	N	NM/RW	11/22/00
D 45		1	0-4	Frozen; Not Screened	N	NM/RW	11/22/00
D 45		2	4-30	Md Br Si Lo W/Sm.Amt.Gvl	N	NM/RW	11/22/00
D 45		3	30-56	Md Gr Br Sa Si W/Gvl + Rock; Stopped By Rock	N	NM/RW	11/22/00
E 5			-	Not Dug - Due To Utilities		MR/KH	08/07/00
E 6		1	0-20	Dk Gr Br Cl Si	N	MR/KH	08/07/00
E 6		2	20-50	Yl Br Sa Si W/Rock; Stopped By Rock	N	MR/KH	08/07/00
E 7		1	0-14	Dk Br Si Lo	N	KS/DR	08/07/00
E 7		2	14-38	Dk Br Mottled W/Ol Br Si Lo W/Cl; Coal - Disc.	N	KS/DR	08/07/00
E 7		3	38-60	Dk Br Si Lo W/Gvl + Cobbles; Stopped By Rock	N	KS/DR	08/07/00
E 9		1	0-11	Dk Br Si Lo	N	KS/DR	08/07/00
E 9		2	11-17	Md Br Si W/Rock + Cobbles; Stopped By Rock	N	KS/DR	08/07/00
E 10		1	0-25	Mottled Md Gr Br/Yl Br Sa Lo W/Rock	N	MR/KH	08/07/00
E 10		2	25-33	Mottled Md Gr Br/Yl Br Sa Lo W/Rock	N	MR/KH	08/07/00
E 10		3	33-59	Yl Br Sa Si W/Rock; Charcoal - Disc.; Stopped By Rock	N	MR/KH	08/07/00
E 11		1	0-23	Dk Gr Br Sa Lo; Asphalt - Disc.	N	MR/KH	08/07/00
E 11		2	23-43	Yl Br Sa Si W/Rock; Stopped By Rock	H	MR/KH	08/07/00
E 12		1	0-29	Mottled Dk Br/Yl Br Sa Lo	H	MR/KH	08/07/00
E 12		2	29-42	Yl Br Sa Si W/Rock; Stopped By Rock	N	MR/KH	08/07/00
E 13		1	0-25	Dk Gr Br Sa Lo	N	MR/KH	08/07/00
E 13		2	25-44	Dk Yl Br Sa Lo; Stopped By Rock	N	MR/KH	08/07/00
E 14		1	0-25	Md Gr Br Sa Lo W/Rock; Coal - Disc.	H	MR/KH	08/07/00
E 14		2	25-30	Md Gr Br Sa Lo W/Rock	N	MR/KH	08/07/00
E 14		3	30-37	Mottled Yl Br/Gr Br Sa Si; Stopped By Rock	N	MR/KH	08/07/00
E 15		1	0-25	Md Gr Br Cl Lo W/Rock; Brick, Coal - Disc.	N	MR/KH	08/07/00
E 15		2	25-49	Md Gr Br Cl Lo W/Rock; Coal - Disc.	H	MR/KH	08/07/00
E 15		3	49-56	Yl Br Sa Si; Stopped By Rock	N	MR/KH	08/07/00
E 16		1	0-25	Dk Br Si Lo W/Gvl	N	MR/KH	08/07/00
E 16		2	25-45	Dk Br Si Lo W/Gvl; Stopped By Rock	N	MR/KH	08/07/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
E 37		1	0-31	Md Br Cl Si	H	WG/LM	11/22/00
E 37		2	31-51	Yl Br Cl Si	N	WG/LM	11/22/00
E 37		3	51-77	Yl Br Cl Si; Stopped By Gvl	N	WG/LM	11/22/00
E 38		1	0-25	Md Yl Br Si Lo	N	WG/LM	11/22/00
E 38		2	25-46	Br Cl Si W/Gvl; Stopped By Dense Gvl	N	WG/LM	11/22/00
E 39		1	0-26	Md Br Cl Si	N	WG/LM	11/22/00
E 39		2	26-38	Dk Br Cl Si	N	WG/LM	11/22/00
E 39		3	38-57	Yl Br Cl Si W/Gvl; Stopped By Rock	N	WG/LM	11/22/00
E 40		1	0-31	Md Br Cl Si	N	WG/LM	11/22/00
E 40		2	31-58	Yl Br Cl Si W/Dense Gvl; Stopped By Gvl	N	WG/LM	11/22/00
E 41		1	0-30	Md Br Cl Si W/Gvl	N	WG/LM	11/22/00
E 41		2	30-43	Yl Br Cl Si W/Gvl; Stopped By Rock	N	WG/LM	11/22/00
E 42		1	0-25	Md Br Cl Si W/Gvl	H	WG/LM	11/22/00
E 42		2	25-45	Yl Br Cl Si W/Gvl; Stopped By Rock	N	WG/LM	11/22/00
E 43		1	0-29	Md Br Cl Si W/Gvl; Plastic - Disc.	N	WG/LM	11/22/00
E 43		2	29-38	Dk Br Cl Si W/Gvl	N	WG/LM	11/22/00
E 43		3	38-63	Yl Br Cl Si W/Gvl; Stopped By Rock	N	WG/LM	11/22/00
E 44		1	0-9	Yl Gr Br Sa Si	N	WG/LM	11/22/00
E 44		2	9-50	Dk Gr Br Si Lo	N	WG/LM	11/22/00
E 44		3	50-75	Yl Br Sa Si; Stopped By Rock	N	WG/LM	11/22/00
E 45		1	0-28	Md Br Si W/Gvl	N	WG/LM	11/22/00
E 45		2	28-58	Yl Br Sa Si W/Gvl	N	WG/LM	11/22/00
F 6		1	0-10	Dk Br Si Lo	N	KS/DR	08/07/00
F 6		2	10-17	Br Si W/Rock + Shale; Stopped By Rock	N	KS/DR	08/07/00
F 7		1	0-9	Dk Br Si Lo	N	KS/DR	08/07/00
F 7		2	9-17	Br Si W/Rock + Cobbles; Stopped By Rock	N	KS/DR	08/07/00
F 10		1	0-20	Dk Gr Br Si Lo	H	KS/DR	08/07/00
F 10		2	20-31	Dk Gr Br Si W/Gvl + Rock; Stopped By Rock	N	KS/DR	08/07/00
F 11		1	0-22	Dk Gr Br Si Lo; Coal - Disc.	N	KS/DR	08/07/00
F 11		2	22-46	Dk Gr Br Si Lo W/Gvl + Rock; Stopped By Rock	H	KS/DR	08/07/00
F 12		1	0-12	Dk Br Si Lo	N	KS/DR	08/07/00
F 12		2	12-31	Mottled Dk Br/Yl Br Si; Stopped By Rock	H	KS/DR	08/07/00
F 13		1	0-15	Dk Gr Br Si Lo	N	KS/DR	08/07/00
F 13		2	15-60	Dk Gr Br Si Lo W/Rock; Mortar, Concrete, Coal - Disc.; Stopped By Rock	N	KS/DR	08/07/00
F 14		1	0-16	Dk Br Si Lo	N	KS/DR	08/07/00
F 14		2	16-44	Dk Gr Br Si Lo W/Rock	N	KS/DR	08/07/00
F 14		3	44-73	Yl Br Si; Coal, Charcoal - Disc.; Stopped By Rock	N	KS/DR	08/07/00
F 15		1	0-23	Dk Br Si Lo	N	KS/DR	08/07/00
F 15		2	23-45	Dk Br Si Lo W/Rock; Coal - Disc.; Stopped By Rock	H	KS/DR	08/07/00
F 16		1	0-10	Dk Br Si Lo	N	KS/DR	08/07/00
F 16		2	10-23	Mottled Dk Br/Yl Br Si Lo; Coal - Disc.; Stopped By Rock	H	KS/DR	08/07/00
F 17		1	0-25	Dk Br Si Lo W/Rock	N	KS/DR	08/07/00
F 17		2	25-55	Dk Br Si Lo W/Rock; Stopped By Rock	N	KS/DR	08/07/00
F 28		1	0-23	Br Si Lo	N	AM/WG	11/14/00
F 28		2	23-48	Dk Yl Br Si	N	AM/WG	11/14/00
F 28		3	48-69	Yl Br Si; Stopped By Rock	N	AM/WG	11/14/00
F 29		1	0-25	Dk Br Si Cl Lo	N	TS/NP	11/14/00
F 29		2	25-30	Dk Br Si Cl Lo	N	TS/NP	11/14/00
F 29		3	30-40	Yl Br Si; Coal - Disc.	N	TS/NP	11/14/00
F 29		4	40-50	Yl Br Si	N	TS/NP	11/14/00
F 29		5	50-60	Yl Br Si	N	TS/NP	11/14/00
F 29		6	60-70	Yl Br Si	N	TS/NP	11/14/00
F 29		7	70-80	Yl Br Si	N	TS/NP	11/14/00
F 29		8	80-90	Yl Br Si W/Some Cobbles	N	TS/NP	11/14/00
F 29		9	90-100	Yl Br Si W/Some Cobbles	N	TS/NP	11/14/00
F 30		1	0-25	Dk Br Si Lo W/Gvl/Cobbles	N	TS/NP	11/14/00
F 30		2	25-35	Md Br Si Lo	N	TS/NP	11/14/00
F 30		3	35-45	Md Br Si Lo	N	TS/NP	11/14/00
F 30		4	45-60	Md Br Si Lo	N	TS/NP	11/14/00
F 31		1	0-25	Dk Br Si Cl Lo W/Gvl/Cobbles	N	TS/NP	11/14/00
F 31		2	25-30	Dk Br Si Cl Lo W/Gvl/Cobbles	N	TS/NP	11/14/00
F 31		3	30-40	Dk Br Si Cl Lo W/Gvl	N	TS/NP	11/14/00
F 31		4	40-50	Dk Br Si Cl Lo W/Gvl	N	TS/NP	11/14/00
F 31		5	50-60	Md Br Si Cl Lo W/Lt Gvl/Cobbles	N	TS/NP	11/14/00
F 32		1	0-25	Dk Br Si Cl Lo W/Gvl	N	TS/NP	11/14/00
F 32		2	25-35	Md Br Si Cl	N	TS/NP	11/14/00
F 32		3	35-45	Md Br Si Cl	N	TS/NP	11/14/00
F 32		4	45-55	Md Br Si Cl	N	TS/NP	11/14/00
F 32		5	55-70	Md Br Si Cl	N	TS/NP	11/14/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
F 33		1	0-25	Dk Br Si Cl Lo W/Gvl/Cobbles	N	TS/NP	11/14/00
F 33		2	25-35	Dk Br Si Cl Lo W/Gvl/Cobbles	N	TS/NP	11/14/00
F 33		3	35-45	Dk Br Si Cl Lo W/Gvl/Cobbles	N	TS/NP	11/14/00
F 33		4	45-55	Dk Br Si Cl Lo W/Gvl/Cobbles	N	TS/NP	11/14/00
F 33		5	55-60	Dk Br Si Cl Lo W/Gvl/Cobbles	N	TS/NP	11/14/00
F 34		1	0-25	Lt Br Si Lo	N	AM/WG	11/14/00
F 34		2	25-30	Lt Br Si Lo	N	AM/WG	11/14/00
F 34		3	30-50	Lt Br Si Lo W/Rock + Gvl	N	AM/WG	11/14/00
F 34		4	50-62	Lt Br Si Lo W/Rock + Gvl	N	AM/WG	11/14/00
F 35		1	0-30	Dk Br Si Cl Lo	N	TS/NP	11/14/00
F 35		2	30-40	Yl Br Si Lo	N	TS/NP	11/14/00
F 35		3	40-50	Yl Br Si Lo	N	TS/NP	11/14/00
F 35		4	50-60	Yl Br Si Lo	N	TS/NP	11/14/00
F 35		5	60-70	Yl Br Si Lo	N	TS/NP	11/14/00
F 35		6	70-80	Yl Br Si Lo	N	TS/NP	11/14/00
F 35		7	80-90	Yl Br Si Lo; Stopped By Rock	N	TS/NP	11/14/00
F 36		1	0-25	Br Si Lo; Charcoal - Disc.	N	AM/WG	11/14/00
F 36		2	25-57	Br Si Lo	N	AM/WG	11/14/00
F 36		3	57-93	Yl Br Si	N	AM/WG	11/14/00
F 37		1	0-25	Md Br Si Lo; Coal - Disc.	H	MM/RW	11/21/00
F 37		2	25-33	Md Br Si Lo; Charcoal - Disc.	N	MM/RW	11/21/00
F 37		3	33-54	Ol Br Si	N	MM/RW	11/21/00
F 37		4	54-75	Ol Br Si W/Gvl + Rock; Stopped By Rock	N	MM/RW	11/21/00
F 38		1	0-25	Md Br Si Lo	N	MM/RW	11/21/00
F 38		2	25-43	Ol Br Si	N	MM/RW	11/21/00
F 38		3	43-63	Ol Br Si W/Gvl + Rock	N	MM/RW	11/21/00
F 38		4	63-74	Ol Br Si W/Gvl + Rock; Stopped By Rock	N	MM/RW	11/21/00
F 39		1	0-26	Md Br Si Lo	N	MM/RW	11/21/00
F 39		2	26-38	Md Br Si W/Gvl + Rock	N	MM/RW	11/21/00
F 39		3	38-57	Yl Br Si W/Gvl + Rock; Stopped By Rock	N	MM/RW	11/21/00
F 40		1	0-25	Md Br Si Lo; Coal - Disc.	N	AM/KH	11/21/00
F 40		2	25-32	Md Br Si Lo	H	AM/KH	11/21/00
F 40		3	32-55	Yl Br Si Lo W/Gvl; Stopped By Rock	N	AM/KH	11/21/00
F 41		1	0-25	Ol Br Cl Si	N	JD/NM	11/21/00
F 41		2	25-70	Ol Br Cl Si; Coal - Disc.	H	JD/NM	11/21/00
F 41		3	70-92	Yl Br Cl Si	N	JD/NM	11/21/00
F 42		1	0-25	Md Gr Br Sa Lo W/Gvl, Rock, & Cobbles; Styrofoam - Disc.	N	AM/KH	11/21/00
F 42		2	25-35	Md Gr Br Sa Lo W/Gvl, Rock, & Cobbles	N	AM/KH	11/21/00
F 42		3	35-65	Lt Gr Br Sa Lo W/Gvl, Rock, & Cobbles; Stopped By Gvl/Collapsing Stp	N	AM/KH	11/21/00
F 43		1	0-27	Dk Gr Br Si Lo	N	MM/RW	11/21/00
F 43		2	27-47	Md Gr Br Si W/Gvl + Rock	N	MM/RW	11/21/00
F 43		3	47-65	Md Gr Br Si W/Gvl + Rock; Stopped By Rock	N	MM/RW	11/21/00
F 44		1	0-25	Ol Br Cl Si	N	JD/NM	11/21/00
F 44		2	25-42	Ol Br Cl Si	N	JD/NM	11/21/00
F 44		3	42-60	Yl Br Cl Si	N	JD/NM	11/21/00
F 45		1	0-25	Md Br Si Lo W/Gvl + Cobbles	N	MD/ED	11/22/00
F 45		2	25-30	Md Br Si Lo W/Gvl + Cobbles	N	MD/ED	11/22/00
F 45		3	30-47	Lt Yl Br Sa Si W/Compact Gvl	N	MD/ED	11/22/00
G 9			-	Not Dug - Due To Telephone Line		AM/TH	08/04/00
G 10		1	0-12	Md Dk Gr Br Si; Fill	N	AM/TH	08/04/00
G 10		2	12-16	Yl Rd Sa ; Fill	N	AM/TH	08/04/00
G 10		3	16-17.5	Dk Gr Br Sa W/Pea Gvl; Fill	N	AM/TH	08/04/00
G 10		4	17.5-22	Md Dk Gr Br Si; Fill	N	AM/TH	08/04/00
G 10		5	22-35	Md Dk Gr Br Si Mottled W/Yl Br Si; Fill	N	AM/TH	08/04/00
G 11		1	0-13	Md Br Si	N	DC/JM	08/07/00
G 11		2	13-38	Lt Br Si W/Gvl; Fill	N	DC/JM	08/07/00
G 11		3	38-56	Lt Br Si W/Gvl; Fill; Stopped By Rock	N	DC/JM	08/07/00
G 12		1	0-13	Md Br Si	N	DC/JM	08/07/00
G 12		2	13-38	Lt Br Si W/Gvl; Fill; Stopped By Rock	N	DC/JM	08/07/00
G 13		1	0-18	Md Br Si	N	DC/JM	08/07/00
G 13		2	18-43	Lt Br Si W/Gvl; Fill	N	DC/JM	08/07/00
G 13		3	43-56	Lt Br Si W/Gvl; Fill; Stopped By Rock	N	DC/JM	08/07/00
G 14		1	0-16	Md Br Si	N	DC/JM	08/07/00
G 14		2	16-39	Lt Br Si W/Gvl; Fill	N	DC/JM	08/07/00
G 14		3	39-50	Lt Gr Br Si W/Gvl; Fill; Stopped By Rock	N	DC/JM	08/07/00
G 15		1	0-14	Md Br Si	N	DC/JM	08/07/00
G 15		2	14-39	Md Br Si Mottled W/Lt Br Si W/Gvl	H	DC/JM	08/07/00
G 15		3	39-44	Md Br Si Mottled W/Lt Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/07/00
G 16		1	0-19	Md Br Si	N	DC/JM	08/07/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
G 16		2	19-40	Lt Br Si W/Gvl; Fill; Stopped By Rock	N	DC/JM	08/07/00
G 17		1	0-12	Md Br Si	N	DC/JM	08/07/00
G 17		2	12-37	Lt Br Si W/Gvl Fill; Stopped By Fill/Rock	N	DC/JM	08/07/00
G 18		1	0-30	Lt Br Si W/Rock + Roots; Stopped By Rock	N	DC/JM	08/07/00
G 30		1	0-30	Lt Br Si Lo	N	LM/WG	11/22/00
G 30		2	30-65	Yl Br Si Lo	N	LM/WG	11/22/00
G 31		1	0-25	Md Br Si Lo	N	LM/WG	11/22/00
G 31		2	25-47	Yl Br Si Lo W/Gvl	N	LM/WG	11/22/00
G 31		3	47-71	Md Br Sa W/Gvl	N	LM/WG	11/22/00
G 32		1	0-25	Md Gr Br Sa Si Lo	N	WG/RF	11/27/00
G 32		2	25-34	Md Gr Br Sa Si Lo	N	WG/RF	11/27/00
G 32		3	34-56	Gr Br Si Sa W/Much Gvl	N	WG/RF	11/27/00
G 33		1	0-27	Md Gr Br Sa Si; Charcoal - Disc.	H	WG/RF	11/27/00
G 33		2	27-68	Gr Br Si; Charcoal - Disc.	N	WG/RF	11/27/00
G 33		3	68-93	Yl Gr Br Si; Stopped By Rock	N	WG/RF	11/27/00
G 38		1	0-25	Md Ol Br Cl Si	N	MD/LM	11/21/00
G 38		2	25-37	Md Ol Br Cl Si	N	MD/LM	11/21/00
G 38		3	37-75	Lt Ol Yl Cl Si	N	MD/LM	11/21/00
G 38		4	75-77	Lt Ol Yl Sa Si W/Gvl	N	MD/LM	11/21/00
G 39		1	0-28	Md Br Cl Si	N	MD/LM	11/21/00
G 39		2	28-53	Yl Br Cl Si W/Gvl; Stopped By Rock	N	MD/LM	11/21/00
G 40		1	0-23	Md Ol Br Cl Si	H	MD/LM	11/21/00
G 40		2	23-48	Lt Ol Yl Cl Si W/Diffuse Charcoal; Charcoal - Disc.	N	MD/LM	11/21/00
G 41		1	0-20	Md Br Cl Si W/Rock	N	MD/LM	11/21/00
G 41		2	20-31	Gr Br Cl Si W/Rock	N	MD/LM	11/21/00
G 41		3	31-55	Yl Br Cl Si W/Gvl; Stopped By Rock	N	MD/LM	11/21/00
G 42		1	0-25	Md Br Sa Si W/Gvl + Cobbles	N	MD/LM	11/21/00
G 42		2	25-30	Md Br Sa Si W/Gvl + Cobbles	N	MD/LM	11/21/00
G 42		3	30-50	Md Yl Br Sa Si W/Gvl, Cobbles, & Rock	N	MD/LM	11/21/00
G 43		1	0-18	Md Br Sa Si W/Gvl + Rock	N	MD/LM	11/21/00
G 43		2	18-38	Lt Br Si Cl W/Gvl + Rock	N	MD/LM	11/21/00
G 44		1	0-10	Dk Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
G 44		2	10-20	Dk Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
G 44		3	20-30	Dk Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
G 44		4	30-40	Dk Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
G 44		5	40-50	Dk Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
G 44		6	50-60	Dk Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
H 10		1	0-25	Md Gr Br Sa Lo W/Gvl; Fill	N	MR/KH	08/07/00
H 10		2	25-50	Md Gr Br Sa Lo W/Gvl; Fill; Stopped By Rock	N	MR/KH	08/07/00
H 11		1	0-25	Br Si Lo W/Gvl	N	MR/KH	08/07/00
H 11		2	25-40	Br Si Lo W/Gvl; Stopped By Rock	N	MR/KH	08/07/00
H 12		1	0-28	Br Si Lo W/Gvl	N	MR/KH	08/07/00
H 12		2	28-46	Dk Gr Br Si Cl; Coal - Disc.	N	MR/KH	08/07/00
H 12		3	46-59	Br Sa Si W/Gvl; Stopped By Rock	N	MR/KH	08/07/00
H 13		1	0-25	Mottled Yl W/Dk Br Sa Lo	P	MR/KH	08/07/00
H 13		2	25-45	Mottled Yl W/Dk Br Sa Lo; Stopped By Rock	N	MR/KH	08/07/00
H 13	1mE	1	0-24	Md Br Si Lo; Coal - Disc.	H	MR/KS	08/08/00
H 13	1mE	2	24-34	Mottled Md Br/Yl Br Si Lo; Stopped By Rock	N	MR/KS	08/08/00
H 13	1mN	1	0-13	Md Br Si Lo	N	MR/KS	08/08/00
H 13	1mN	2	13-34	Mottled Md Br/Yl Br Si Lo; Stopped By Rock	N	MR/KS	08/08/00
H 13	1mS	1	0-25	Md Br Si Lo W/Yl Br Mottles	N	MR/KS	08/08/00
H 13	1mS	2	25-29	Md Br Si Lo W/Yl Br Mottles	N	MR/KS	08/08/00
H 13	1mS	3	29-42	Md Gr Br Sa Si W/Rock; Stopped By Rock	N	MR/KS	08/08/00
H 13	1mW	1	0-25	Md Gr Br Si Lo W/Yl Br Mottles	N	MR/KS	08/08/00
H 13	1mW	2	25-31	Md Gr Br Si Lo W/Yl Br Mottles	N	MR/KS	08/08/00
H 13	1mW	3	31-42	Yl Br Sa Si W/Rock; Stopped By Rock	N	MR/KS	08/08/00
H 13	7.5mE	1	0-25	Mottled Md Br/Yl Br Sa Lo W/Gvl	N	MR/KS	08/08/00
H 13	7.5mE	2	25-37	Mottled Md Br/Yl Br Sa Lo W/Gvl	N	MR/KS	08/08/00
H 13	7.5mE	3	37-47	Gr Br Sa Si W/Rock; Stopped By Rock	N	MR/KS	08/08/00
H 13	7.5mN	1	0-17	Dk Br Si Lo; Clay Pigeon - Disc.	N	MR/KS	08/08/00
H 13	7.5mN	2	17-22	Mottled Md Br/Yl Br Si Lo	N	MR/KS	08/08/00
H 13	7.5mN	3	22-34	Md Br Si Cl	N	MR/KS	08/08/00
H 13	7.5mN	4	34-39	Yl Br Si	N	MR/KS	08/08/00
H 13	7.5mS	1	0-25	Mottled Md Br/Yl Br Sa Lo W/Gvl + Rock; Coal - Disc.	H	MR/KS	08/08/00
H 13	7.5mS	2	25-43	Mottled Md Br/Yl Br Sa Lo W/Gvl + Rock; Stopped By Rock	N	MR/KS	08/08/00
H 13	7.5mW	1	0-19	Md Br Si Lo; Coal, Brick - Disc.	N	MR/KS	08/08/00
H 13	7.5mW	2	19-38	Mottled Yl Br/Md Br Si Lo; Stopped By Rock	N	MR/KS	08/08/00
H 14		1	0-25	Dk Br Sa Lo W/Yl Br Mottles; Coal, Clay Pigeon - Disc.	N	MR/KH	08/07/00
H 14		2	25-33	Dk Br Sa Lo W/Yl Br Mottles	N	MR/KH	08/07/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
H 14		3	33-50	Lt Br Sa Si W/Rock; Stopped By Rock	N	MR/KH	08/07/00
H 15		1	0-57	Md Gr Br Si Lo W/Rock; Stopped By Compact Gvl	N	NM/GD	08/04/00
H 16		1	0-25	Md Gr Br Si Lo W/Rock	N	NM/GD	08/04/00
H 16		2	25-33	Md Gr Br Si Lo W/Rock	N	NM/GD	08/04/00
H 16		3	33-48	Yl Br Si Lo W/Rock; Stopped By Rock	N	NM/GD	08/04/00
H 17		1	0-27	Md Br Gr Si Lo	N	NM/GD	08/04/00
H 17		2	27-51	Yl Br Gr Si Lo W/Gvl + Rock	N	NM/GD	08/04/00
H 18		1	0-32	Dk Gr Br Si Lo W/Rock	N	NM/GD	08/04/00
H 18		2	32-41	Yl Br Si Lo W/Rock	N	NM/GD	08/04/00
H 24		1	0-25	Md Br Si Lo	N	AM/WG	11/14/00
H 24		2	25-45	Yl Br Si Lo W/Gvl + Rock	N	AM/WG	11/14/00
H 24		3	45-60	Yl Br Si Lo W/Gvl + Rock	N	AM/WG	11/14/00
H 25		1	0-25	Br Si Lo W/Gvl	N	AM/WG	11/15/00
H 25		2	25-34	Yl Br Si W/Gvl	N	AM/WG	11/15/00
H 25		3	34-60	Yl Gr Br Sa Si W/Gvl	N	AM/WG	11/15/00
H 26		1	0-25	Md Br Si Lo W/Gvl; Plastic - Disc.	N	AM/WG	11/15/00
H 26		2	25-45	Yl Br Sa Si W/Gvl	N	AM/WG	11/15/00
H 26		3	45-60	Yl Br Sa Si W/Gvl	N	AM/WG	11/15/00
H 27		1	0-25	Md Br Si Lo W/Rock + Gvl; Coal - Disc.	N	AM/WG	11/15/00
H 27		2	25-60	Yl Br Sa Si W/Rock + Gvl	N	AM/WG	11/15/00
H 28		1	0-30	Md Br Si Lo W/Rock + Gvl; Coal - Disc.	N	AM/WG	11/15/00
H 28		2	30-42	Yl Br Si Lo W/Rock + Gvl	N	AM/WG	11/15/00
H 28		3	42-63	Yl Br Si	N	AM/WG	11/15/00
H 29		1	0-25	Md Br Si Lo; Coal - Disc.	N	AM/WG	11/15/00
H 29		2	25-50	Yl Br Si Lo	N	AM/WG	11/15/00
H 29		3	50-90	Yl Br Si; Stopped By Rock	N	AM/WG	11/15/00
H 30		1	0-33	Md Br Si Lo; Coal - Disc.	N	AM/WG	11/15/00
H 30		2	33-58	Yl Br Si Lo	N	AM/WG	11/15/00
H 30		3	58-75	Yl Br Si; Stopped By Rock	N	AM/WG	11/15/00
H 31		1	0-26	Md Br Si Lo; Coal - Disc.	N	AM/WG	11/15/00
H 31		2	26-45	Yl Br Sa Si	N	AM/WG	11/15/00
H 32		1	0-31	Md Br Si Lo	N	AM/WG	11/15/00
H 32		2	31-58	Yl Br Si Lo	N	AM/WG	11/15/00
H 32		3	58-78	Yl Br Si	N	AM/WG	11/15/00
H 32		4	78-100	Yl Br Si	N	AM/WG	11/15/00
H 33		1	0-12	Gr Br Si Lo	N	AM/WG	11/15/00
H 33		2	12-60	Yl Gr Si Lo	N	AM/WG	11/15/00
H 33		3	60-74	Gr Yl Br Si W/Much Gvl; Stopped By Compact Gvl	N	AM/WG	11/15/00
H 34		1	0-25	Md Br Si Lo	N	AM/WG	11/15/00
H 34		2	25-45	Md Br Si Lo	N	AM/WG	11/15/00
H 34		3	45-65	Yl Br Si Lo W/Gvl	N	AM/WG	11/15/00
H 34		4	65-80	Yl Br Si Lo W/Gvl; Stopped By Rock	N	AM/WG	11/15/00
H 35		1	0-25	Md Br Si Lo	N	AM/WG	11/15/00
H 35		2	25-33	Md Br Si Lo	N	AM/WG	11/15/00
H 35		3	33-105	Yl Br Si Lo	N	AM/WG	11/15/00
H 36		1	0-36	Md Br Si Lo; Coal - Disc.	N	AM/WG	11/15/00
H 36		2	36-54	Yl Br Si Lo	N	AM/WG	11/15/00
H 36		3	54-74	Yl Br Si	N	AM/WG	11/15/00
H 36		4	74-97	Yl Br Si; Stopped By Rock	N	AM/WG	11/15/00
H 37		1	0-60	Md Br Si Lo; Coal - Disc.	N	AM/WG	11/15/00
H 37		2	60-81	Yl Br Si Lo	N	AM/WG	11/15/00
H 37		3	81-95	Yl Br Si W/Gvl; Stopped By Compact Gvl	N	AM/WG	11/15/00
H 39		1	0-25	Ol Br Cl Si; Charcoal - Disc.	N	JD/NM	11/21/00
H 39		2	25-40	Ol Br Cl Si	N	JD/NM	11/21/00
H 39		3	40-86	Yl Br Cl Si	N	JD/NM	11/21/00
H 40		1	0-25	Ol Br Cl Si	N	JD/NM	11/21/00
H 40		2	25-43	Ol Br Cl Si; Coal - Disc.	H	JD/NM	11/21/00
H 40		3	43-82	Yl Br Cl Si	N	JD/NM	11/21/00
H 41		1	0-25	Ol Br Cl Si W/Rock	N	JD/NM	11/21/00
H 41		2	25-38	Ol Br Cl Si W/Rock	N	JD/NM	11/21/00
H 41		3	38-52	Yl Br Cl Si W/Rock; Stopped By Rock	N	JD/NM	11/21/00
H 42		1	0-25	Ol Br Cl Si W/Rock	N	JD/NM	11/21/00
H 42		2	25-30	Ol Br Cl Si W/Rock	N	JD/NM	11/21/00
H 42		3	30-53	Yl Br Sa Si W/Rock; Stopped By Rock	N	JD/NM	11/21/00
H 43		1	0-25	Ol Br Cl Si W/Rock	N	JD/NM	11/21/00
H 43		2	25-40	Ol Br Cl Si W/Rock	N	JD/NM	11/21/00
H 43		3	40-61	Yl Br Sa Si W/Rock	N	JD/NM	11/21/00
I 11		1	0-25	Md Br Si Lo W/Gvl	N	LM/SK	08/04/00
I 11		2	25-46	Md Br Si Lo W/Gvl	N	LM/SK	08/04/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
I 12		1	0-25	Br Si Lo	N	LM/SK	08/04/00
I 12		2	25-35	Br Si Lo	N	LM/SK	08/04/00
I 12		3	35-60	Yl Br Si Lo W/Gvl; Stopped By Rock	N	LM/SK	08/04/00
I 13		1	0-25	Md Br Si Lo W/Gvl; Slag - Disc.	H	LM/SK	08/04/00
I 13		2	25-40	Md Br Si Lo W/Gvl	N	LM/SK	08/04/00
I 14		1	0-25	Br Si Lo W/Gvl; Brick - Disc.	N	LM/SK	08/04/00
I 14		2	25-30	Br Si Lo W/Gvl	N	LM/SK	08/04/00
I 14		3	30-45	Yl Br Si Lo W/Gvl; Stopped By Rock	N	LM/SK	08/04/00
I 15		1	0-25	Md Br Si Lo W/Gvl; Coal Ash, Coal - Disc.	H	LM/SK	08/04/00
I 15		2	25-40	Md Br Si Lo W/Gvl	N	LM/SK	08/04/00
I 15		3	40-52	Yl Br Si Lo W/Less Gvl	N	LM/SK	08/04/00
I 16		1	0-25	Gr Br Si Lo W/Gvl	N	LM/SK	08/04/00
I 16		2	25-40	Gr Br Si Lo W/Larger Gvl; Stopped By Rock	N	LM/SK	08/04/00
I 17		1	0-25	Gr Br Si Lo W/Gvl; Poss.Fill; Brick - Disc.	N	LM/SK	08/04/00
I 17		2	25-30	Gr Br Si Lo W/Gvl; Poss.Fill; Stopped By Rock	N	LM/SK	08/04/00
I 18		1	0-25	Gr Br Si Lo W/Gvl; Poss.Fill	H	LM/SK	08/04/00
I 18		2	25-45	Gr Br Si Lo W/Gvl; Poss.Fill; Stopped By Rock	N	LM/SK	08/04/00
I 19		1	0-25	Gr Md Br Si Cl W/Rock + Gvl; Coal, Slag - Disc.	H	LM/SK	08/04/00
I 19		2	25-36	Gr Md Br Si Cl W/Rock + Gvl	N	LM/SK	08/04/00
I 19		3	36-48	Yl Br Si Lo W/Less Gvl	N	LM/SK	08/04/00
I 28		1	0-25	Md Br Si Cl Lo; Coal - Disc.	H	WG/RF	11/27/00
I 28		2	25-35	Md Br Si Cl Lo	N	WG/RF	11/27/00
I 28		3	35-43	Md Yl Br Si Cl	N	WG/RF	11/27/00
I 28		4	43-63	Md Yl Br Si Cl	N	WG/RF	11/27/00
I 28		5	63-80	Md Yl Br Si Cl	N	WG/RF	11/27/00
I 29		1	0-25	Md Br Si Lo	N	WG/RF	11/27/00
I 29		2	25-41	Yl Br Si Sa	N	WG/RF	11/27/00
I 29		3	41-57	Br Sa Si	N	WG/RF	11/27/00
I 30		1	0-29	Md Br Si Lo	N	NM/RW	11/22/00
I 30		2	29-38	Yl Br Si W/Rock + Gvl	N	NM/RW	11/22/00
I 30		3	38-58	Md Br Sa Si W/Gvl, Rock, & Cobbles	N	NM/RW	11/22/00
I 30		4	58-66	Md Br Sa Si W/Gvl, Rock, & Cobbles; Stopped By Rock	N	NM/RW	11/22/00
I 31		1	0-25	Md Br Si Lo	P	NM/RW	11/22/00
I 31		2	25-48	Md Br Si Lo	N	NM/RW	11/22/00
I 31		3	48-93	Yl Gr Br Si Lo	N	NM/RW	11/22/00
I 32		1	0-35	Md Br Cl Si; Coal Slag - Disc.	N	TK/LM	11/27/00
I 32		2	35-56	Yl Br Cl Si	N	TK/LM	11/27/00
I 32		3	56-69	Gr Br Cl Si W/Gvl; Stopped By Rock	N	TK/LM	11/27/00
I 33		1	0-25	Md Br Cl Si	N	TK/LM	11/27/00
I 33		2	25-39	Md Br Cl Si W/Gvl	P	TK/LM	11/27/00
I 33		3	39-48	Dk Br Cl Si	N	TK/LM	11/27/00
I 33		4	48-69	Yl Br Cl Si W/Gvl	N	TK/LM	11/27/00
I 34		1	0-29	Md Br Cl Si	N	TK/LM	11/27/00
I 34		2	29-45	Gr Br Si W/Gvl	N	TK/LM	11/27/00
I 39		1	0-38	Dk Br Si Lo; Coal - Disc.	N	TS/NP	11/21/00
I 39		2	38-52	Yl Br Si Lo	N	TS/NP	11/21/00
I 39		3	52-64	Md Br Si Lo W/Gvl + Cobbles	N	TS/NP	11/21/00
I 40		1	0-25	Dk Br Si Cl Lo W/River Pebbles	N	TS/NP	11/21/00
I 40		2	25-30	Dk Br Si Cl Lo W/River Pebbles	N	TS/NP	11/21/00
I 40		3	30-40	Dk Br Si Cl Lo W/River Pebbles	N	TS/NP	11/21/00
I 40		4	40-50	Yl Br Si	N	TS/NP	11/21/00
I 40		5	50-60	Yl Br Si	N	TS/NP	11/21/00
I 40		6	60-70	Yl Br Si	N	TS/NP	11/21/00
I 40		7	70-80	Yl Br Si	N	TS/NP	11/21/00
I 40		8	80-90	Yl Br Si	N	TS/NP	11/21/00
I 40		9	90-100	Yl Br Si	N	TS/NP	11/21/00
I 41		1	0-10	Dk Br Si Lo W/Gvl + Cobbles	N	TS/NP	11/21/00
I 41		2	10-20	Dk Br Si Lo W/Gvl + Cobbles	N	TS/NP	11/21/00
I 41		3	20-35	Dk Br Si Lo W/Gvl + Cobbles	N	TS/NP	11/21/00
I 41		4	35-45	Md Dk Br Sa Si Lo W/Gvl + Cobbles	N	TS/NP	11/21/00
I 41		5	45-60	Md Dk Br Sa Si Lo W/Gvl + Cobbles	N	TS/NP	11/21/00
I 42		1	0-15	Md Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
I 42		2	15-25	Dk Gr Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
I 42		3	25-35	Dk Gr Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
I 42		4	35-45	Dk Gr Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
I 42		5	45-55	Dk Gr Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
I 42		6	55-60	Dk Gr Br Si Lo W/Pebbles + Cobbles	N	TS/NP	11/21/00
J 10		1	0-25	Md Br Si Lo; Plastic - Disc.	N	BG/CO	08/04/00
J 10		2	25-37	Md Br Si Lo	N	BG/CO	08/04/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
J 10		3	37-45	Yl Br Si	N	BG/CO	08/04/00
J 10		4	45-76	Md Br Si	N	BG/CO	08/04/00
J 10		5	76-88	Yl Br Si	N	BG/CO	08/04/00
J 11		1	0-25	Md Gr Br Compact Si	N	AM/TH	08/04/00
J 11		2	25-50	Md Gr Br Compact Si	N	AM/TH	08/04/00
J 11		3	50-75	Md Gr Br Compact Si W/Yl Br Mottling; Stopped By Extremely Compact Soil	N	AM/TH	08/04/00
J 12		1	0-25	Compact Dk Br Cl Si W/Rock; Slag - Disc.	N	BG/CO	08/04/00
J 12		2	25-35	Compact Dk Br Cl Si W/Rock; Charcoal - Disc.	N	BG/CO	08/04/00
J 12		3	35-86	Compact Md Yl/Br Si W/Rock; Stopped By Rock	N	BG/CO	08/04/00
J 13		1	0-25	Md Br Si Lo	N	BG/CO	08/04/00
J 13		2	25-30	Md Br Si Lo	N	BG/CO	08/04/00
J 13		3	30-55	Dk Br Si Lo	N	BG/CO	08/04/00
J 13		4	55-70	Lt Yl Si	N	BG/CO	08/04/00
J 14		1	0-25	Md Gr Br Si	N	AM/TH	08/04/00
J 14		2	25-36	Md Gr Br Si	H	AM/TH	08/04/00
J 14		3	36-53	Ol Br Compact Si	N	AM/TH	08/04/00
J 14		4	53-58	Ol Br Si W/Heavy Gvl; Stopped By Gvl	N	AM/TH	08/04/00
J 15		1	0-32	Md Gr Br Si Mottled W/Yl Br Cl Si	N	AM/TH	08/04/00
J 15		2	32-53	Md Gr Br Si Mottled W/Yl Br Cl Si W/Heavy Gvl; Coal - Disc.; Stopped By Gvl	N	AM/TH	08/04/00
J 16		1	0-27	Md Gr Br Si Mottled W/Yl Br Cl Si; Fill	N	AM/TH	08/04/00
J 16		2	27-44	Md Gr Br Si W/Heavy Gvl; Fill; Stopped By Gvl	N	AM/TH	08/04/00
J 17		1	0-23	Md Gr Br Si Mottled W/Yl Br Cl Si; Fill	N	AM/TH	08/04/00
J 17		2	23-47	Md Gr Br Si W/Heavy Gvl; Fill; Stopped By Gvl	N	AM/TH	08/04/00
J 18		1	0-24	Md Gr Br Si	H	AM/TH	08/04/00
J 18		2	24-36	Md Gr Br Si W/Yl Br Mottling + Gvl; Fill?; Stopped By Gvl	N	AM/TH	08/04/00
J 19		1	0-25	Md Gr Br Si W/Heavy Gvl; Fill?	N	AM/TH	08/04/00
J 19		2	25-50	Md Gr Br Si W/Heavy Gvl; Fill?; Stopped By Compact Gvl	H	AM/TH	08/04/00
J 20		1	0-25	Md Gr Br Si W/Cobbles	N	AM/TH	08/04/00
J 20		2	25-42	Md Gr Br Si W/Cobbles; Stopped By Lg.Root	N	AM/TH	08/04/00
J 23		1	0-25	Md Gr Br Si Lo W/Rock	N	KH/RW	11/15/00
J 23		2	25-35	Md Gr Br Si Lo W/Rock	N	KH/RW	11/15/00
J 23		3	35-61	Lt Gr Br Si W/Rock	N	KH/RW	11/15/00
J 24		1	0-24	Md Gr Br Si Lo W/Rock	H	KH/RW	11/15/00
J 24		2	24-49	Lt Gr Br Si W/Rock; Stopped By Rock	N	KH/RW	11/15/00
J 25		1	0-25	Md Gr Br Si Lo W/Rock; Alum.Bev.Can, Brick - Disc.	N	KH/RW	11/15/00
J 25		2	25-50	Lt Gr Br Si W/Rock; Stopped By Rock	N	KH/RW	11/15/00
J 26		1	0-23	Md Gr Si Lo W/Rock; Coal - Disc.	N	KH/RW	11/15/00
J 26		2	23-58	Lt Gr Sa Si W/Gvl + Rock; Stopped By Rock	N	KH/RW	11/15/00
J 27		1	0-25	Md Gr Br Si	N	KH/RW	11/15/00
J 27		2	25-55	Lt Gr Br Si; Coal, Charcoal - Disc.	N	KH/RW	11/15/00
J 27		3	55-75	Lt Gr Br Si W/Gvl + Cobbles; Stopped By Rock	N	KH/RW	11/15/00
J 28		1	0-25	Md Gr Br Si Lo; Coal, Slag - Disc.	N	KH/RW	11/15/00
J 28		2	25-45	Md Gr Br Si Lo	N	KH/RW	11/15/00
J 28		3	45-66	Md Gr Br Si Lo	N	KH/RW	11/15/00
J 28		4	66-83	Lt Gr Br Si	N	KH/RW	11/15/00
J 28		5	83-102	Lt Gr Br Sa Si W/Gvl + Rock	N	KH/RW	11/15/00
J 29		1	0-25	Md Gr Br Si Lo W/Rock	H	KH/RW	11/15/00
J 29		2	25-40	Md Gr Br Si Lo W/Rock	N	KH/RW	11/15/00
J 29		3	40-65	Lt Gr Br Si	N	KH/RW	11/15/00
J 29		4	65-100	Lt Gr Br Si	N	KH/RW	11/15/00
J 30		1	0-25	Md Gr Br Si Lo	N	KH/RW	11/15/00
J 30		2	25-33	Md Gr Br Si Lo; Charcoal - Disc.	N	KH/RW	11/15/00
J 30		3	33-53	Yl Br Si W/Sm.Amt.Rock + Gvl; Charcoal - Disc.	N	KH/RW	11/15/00
J 30		4	53-73	Yl Br Si W/Sm.Amt.Rock + Gvl; Charcoal - Disc.	N	KH/RW	11/15/00
J 30		5	73-82	Yl Br Si W/Sm.Amt.Rock + Gvl; Charcoal - Disc.	N	KH/RW	11/15/00
J 30		6	82-100	Lt Gr Br Si W/Sm.Amt.Rock + Gvl	N	KH/RW	11/15/00
J 31		1	0-25	Md Gr Br Si Lo W/Rock	N	KH/RW	11/15/00
J 31		2	25-50	Md Gr Br Si Lo W/Rock	N	KH/RW	11/15/00
J 31		3	50-75	Yl Br Si; Charcoal - Disc.	N	KH/RW	11/15/00
J 31		4	75-86	Yl Br Si; Charcoal - Disc.	N	KH/RW	11/15/00
J 31		5	86-100	Lt Gr Br Sa Si	N	KH/RW	11/15/00
J 32		1	0-25	Md Gr Br Si Lo W/Rock	N	KH/RW	11/15/00
J 32		2	25-46	Md Gr Br Si Lo W/Rock	N	KH/RW	11/15/00
J 32		3	46-66	Lt Br Sa Si W/Rock + Gvl	N	KH/RW	11/15/00
J 32		4	66-78	Lt Br Sa Si W/Rock + Gvl; Stopped By Rock	N	KH/RW	11/15/00
J 33		1	0-25	Md Gr Br Si Lo W/Rock	N	KH/RW	11/15/00
J 33		2	25-30	Md Gr Br Si Lo W/Rock	N	KH/RW	11/15/00
J 33		3	30-50	Lt Yl Br Si W/Cobbles + Rock	N	KH/RW	11/15/00
J 33		4	50-62	Lt Yl Br Si W/Cobbles + Rock; Stopped By Rock	N	KH/RW	11/15/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
J 34		1	0-25	Md Gr Br Si Lo; Coal - Disc.	N	KH/RW	11/15/00
J 34		2	25-32	Md Gr Br Si Lo	N	KH/RW	11/15/00
J 34		3	32-52	Lt Yl Br Si	N	KH/RW	11/15/00
J 34		4	52-62	Lt Yl Br Si	N	KH/RW	11/15/00
J 34		5	62-84	Lt Yl Br Si W/Rock + Cobbles; Stopped By Rock	N	KH/RW	11/15/00
J 35		1	0-25	Md Gr Br Si Lo W/Rock	N	RW/KH	11/15/00
J 35		2	25-35	Md Gr Br Si Lo W/Rock	N	RW/KH	11/15/00
J 35		3	35-55	Yl Br Si W/Gvl	N	RW/KH	11/15/00
J 35		4	55-86	Yl Br Si W/Gvl; Stopped By Rock	N	RW/KH	11/15/00
J 36		1	0-21	Md Gr Br Si Lo W/Rock; Coal - Disc.	N	RW/KH	11/15/00
J 36		2	21-41	Yl Br Si W/Gvl + Rock	N	RW/KH	11/15/00
J 36		3	41-52	Yl Br Si W/Gvl + Rock; Stopped By Rock	N	RW/KH	11/15/00
J 37		1	0-25	Md Gr Br Si Lo W/Rock	N	RW/KH	11/15/00
J 37		2	25-40	Md Gr Br Si Lo W/Rock	N	RW/KH	11/15/00
J 37		3	40-65	Dk Br Si Lo W/Rock	N	RW/KH	11/15/00
J 37		4	65-88	Yl Br Si W/Rock	N	RW/KH	11/15/00
J 38		1	0-27	Md Gr Si Lo W/Rock	N	RW/KH	11/15/00
J 38		2	27-47	Yl Br Si W/Gvl + Rock	N	RW/KH	11/15/00
J 38		3	47-64	Yl Br Si W/Gvl + Rock; Stopped By Rock	N	RW/KH	11/15/00
J 39		1	0-25	Md Gr Si Lo W/Rock + Gvl; Coal - Disc.	N	KH/RW	11/16/00
J 39		2	25-43	Md Gr Si Lo W/Rock + Gvl; Coal - Disc.	H	KH/RW	11/16/00
J 39		3	43-54	Md Gr Si Lo; Charcoal - Disc.	N	KH/RW	11/16/00
J 39		4	54-79	Ol Si; Charcoal - Disc.	N	KH/RW	11/16/00
J 39		5	79-102	Ol Si; Charcoal - Disc.	N	KH/RW	11/16/00
J 40		1	0-25	Md Br Si W/Gvl	H	MD/LM	11/21/00
J 40		2	25-45	Md Br Si W/Gvl	N	MD/LM	11/21/00
J 40		3	45-71	Yl Br Si	N	MD/LM	11/21/00
J 41		1	0-24	Md Br Si Lo	H	LM/MD	11/21/00
J 41		2	24-50	Md Yl Br Sa Si W/Gvl	N	LM/MD	11/21/00
K 11		1	0-25	Very Compact Md Gr Br Si Lo	N	NM/GD	08/04/00
K 11		2	25-60	Very Compact Md Gr Br Si Lo; Stopped By Rock	N	NM/GD	08/04/00
K 12		1	0-25	Md Gr Br Si Lo	N	NM/GD	08/04/00
K 12		2	25-42	Md Gr Br Si Lo; Charcoal - Disc.	N	NM/GD	08/04/00
K 12		3	42-49	Yl/Br Si W/Gvl	N	NM/GD	08/04/00
K 12		4	49-51	Md Gr Si Lo	N	NM/GD	08/04/00
K 12		5	51-81	Compact Gr Sa W/Gvl + Cobbles	N	NM/GD	08/04/00
K 13		1	0-17	Dk Gr Br Si Lo W/Rock	N	NM/GD	08/04/00
K 13		2	17-38	Yl Gr Br Si Lo W/Gvl; Stopped By Rock	N	NM/GD	08/04/00
K 14		1	0-36	Md Gr Br Si Lo	N	NM/GD	08/04/00
K 14		2	36-47	Yl Gr Br Si Lo	N	NM/GD	08/04/00
K 14		3	47-57	Dk Gr Br Cl Lo	N	NM/GD	08/04/00
K 14		4	57-72	Dk Gr Br Cl Lo W/Loose Gvl	N	NM/GD	08/04/00
K 15		1	0-25	Md Gr Br Si Lo	H	NM/GD	08/04/00
K 15		2	25-50	Md Gr Br Si Lo	N	NM/GD	08/04/00
K 15		3	50-85	Yl/Br Cl Lo	N	NM/GD	08/04/00
K 16		1	0-25	Md Gr Br Si Lo W/Rock	N	NM/GD	08/04/00
K 16		2	25-50	Md Gr Br Si Lo W/Rock; Stopped By Rock	N	NM/GD	08/04/00
K 17		1	0-25	Md Gr Br Si Lo	N	NM/GD	08/04/00
K 17		2	25-62	Md Gr Br Si Lo	H	NM/GD	08/04/00
K 18		1	0-25	Md Gr Br Si Lo	N	NM/GD	08/04/00
K 18		2	25-29	Md Gr Br Si Lo	N	NM/GD	08/04/00
K 18		3	29-40	Md Gr Br Si Lo W/Gvl + Rock; Stopped By Rock	N	NM/GD	08/04/00
K 19		1	0-28	Md Gr Br Si Lo	N	NM/GD	08/04/00
K 19		2	28-41	Gr Br Si Lo W/Gvl + Rock; Stopped By Rock	N	NM/GD	08/04/00
K 20		1	0-21	Dk Br Si Lo W/Rock; Stopped By Rock	N	NM/GD	08/04/00
K 28		1	0-25	Md Gr Br Si Lo; Charcoal, Coal - Disc.	H	WG/RF	11/27/00
K 28		2	25-30	Md Gr Br Si Lo	N	WG/RF	11/27/00
K 28		3	30-56	Gr Br Si	N	WG/RF	11/27/00
K 28		4	56-76	Rd Gr Br Si; Stopped By Gvl	N	WG/RF	11/27/00
K 29		1	0-25	Md Gr Br Si Cl Lo	H	WG/RF	11/27/00
K 29		2	25-30	Md Gr Br Si Cl Lo	N	WG/RF	11/27/00
K 29		3	30-40	Lt Yl Br Si Cl	N	WG/RF	11/27/00
K 29		4	40-60	Md Yl Br Si Cl	N	WG/RF	11/27/00
K 29		5	60-82	Md Yl Br Si Cl	N	WG/RF	11/27/00
K 30		1	0-25	Md Br Si Lo W/Lt Gvl	N	MD/ED	11/22/00
K 30		2	25-33	Md Br Si Lo	N	MD/ED	11/22/00
K 30		3	33-75	Lt Yl Br Si Cl	N	MD/ED	11/22/00
K 30		4	75-76	Lt Yl Br Si Cl W/Heavy Rocks; Stopped By Rock	N	MD/ED	11/22/00
K 31		1	0-20	Md Ol Br Cl Si	N	MD/ED	11/22/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
K 31		2	20-40	Md Or Br Cl Si	N	MD/ED	11/22/00
K 31		3	40-70	Lt Or Yl Cl Si	N	MD/ED	11/22/00
K 31		4	70-72	Lt Or Yl Cl Si W/Rock; Stopped By Rock	N	MD/ED	11/22/00
K 32		1	0-25	Md Gr Br Si Lo	H	WG/RF	11/27/00
K 32		2	25-45	Md Gr Br Si Lo	N	WG/RF	11/27/00
K 32		3	45-56	Md Gr Br Si Lo	N	WG/RF	11/27/00
K 32		4	56-70	Md Gr Br Si Sa W/Gvl	N	WG/RF	11/27/00
K 32		5	70-85	Md Yl Br Si Sa W/Gvl	N	WG/RF	11/27/00
K 33		1	0-25	Or Br Cl Si	N	JD/NM	11/21/00
K 33		2	25-43	Or Br Cl Si	H	JD/NM	11/21/00
K 33		3	43-57	Dk Br Cl Si	N	JD/NM	11/21/00
K 33		4	57-81	Yl/Br Cl Si	N	JD/NM	11/21/00
L 10		1	0-25	Md Br Si Lo	N	BG/CO	08/04/00
L 10		2	25-35	Md Br Si Lo	N	BG/CO	08/04/00
L 10		3	35-43	Yl Br Si	N	BG/CO	08/04/00
L 10		4	43-60	Dk Br Si	N	BG/CO	08/04/00
L 10		5	60-89	Yl Br Si	N	BG/CO	08/04/00
L 11		1	0-25	Dk Br Cl Si	N	BG/CO	08/04/00
L 11		2	25-37	Dk Br Cl Si	N	BG/CO	08/04/00
L 11		3	37-57	Dk Br Si Lo	N	BG/CO	08/04/00
L 11		4	57-101	Yl/Br Si	N	BG/CO	08/04/00
L 12		1	0-28	Md Br Si Lo	N	BG/CO	08/04/00
L 12		2	28-50	Yl Br Si W/Rock + Gvl	N	BG/CO	08/04/00
L 12		3	50-60	Yl Br Si; Coal - Disc.; Stopped By Rock	N	BG/CO	08/04/00
L 13		1	0-45	Md Br Gr Si Lo W/Some Rock	H	SK/LM	08/03/00
L 13		2	45-75	Yl Br Si Lo	N	SK/LM	08/03/00
L 13		3	75-90	Gr & Br Cl (Wetlands Soil)	N	SK/LM	08/03/00
L 14		1	0-40	Md Gr Br Si Lo W/Sparse Rock	P	SK/LM	08/03/00
L 14		2	40-43	Yl Gr Si Lo	N	SK/LM	08/03/00
L 14		3	43-54	Md Br Si Lo W/Sparse Charcoal Flecks	N	SK/LM	08/03/00
L 14		4	54-100	Or Cl Lo	N	SK/LM	08/03/00
L 14	1mE	1	0-25	Md Br Si	N	JM/DC	08/07/00
L 14	1mE	2	25-40	Md Br Si	N	JM/DC	08/07/00
L 14	1mE	3	40-63	Yl Br Si	N	JM/DC	08/07/00
L 14	1mN	1	0-25	Md Br Si	H	JM/DC	08/07/00
L 14	1mN	2	25-42	Md Br Si	H	JM/DC	08/07/00
L 14	1mN	3	42-60	Yl Br Si	N	JM/DC	08/07/00
L 14	1mS	1	0-25	Dk Br Si Cl W/Gvl	H	JW/CO	08/07/00
L 14	1mS	2	25-43	Dk Br Si Cl W/Gvl	N	JW/CO	08/07/00
L 14	1mS	3	43-60	Md Yl Si W/Gvl	N	JW/CO	08/07/00
L 14	1mW	1	0-25	Md Br Si	N	JM/DC	08/07/00
L 14	1mW	2	25-38	Md Br Si	H	JM/DC	08/07/00
L 14	1mW	3	38-58	Yl Br Si	N	JM/DC	08/07/00
L 14	7.5mE	1	0-36	Md Br Si	N	JM/DC	08/07/00
L 14	7.5mE	2	36-64	Yl Br Si	N	JM/DC	08/07/00
L 14	7.5mE	3	64-93	Lt Br Si	N	JM/DC	08/07/00
L 14	7.5mN	1	0-25	Dk Br Si Cl W/Gvl	N	JW/CO	08/07/00
L 14	7.5mN	2	25-46	Dk Br Si Cl W/Gvl; Charcoal - Disc.	N	JW/CO	08/07/00
L 14	7.5mN	3	46-80	Md Yl Br Si W/Gvl	N	JW/CO	08/07/00
L 14	7.5mN	4	80-100	Dk Yl Br Si W/Gvl	N	JW/CO	08/07/00
L 14	7.5mS	1	0-25	Dk Br Si Cl W/Lg.Rocks + Gvl	N	JW/CO	08/07/00
L 14	7.5mS	2	25-47	Dk Br Si Cl W/Lg.Rocks + Gvl	H	JW/CO	08/07/00
L 14	7.5mS	3	47-68	Md Yl/Br Si W/Lg.Rocks + Gvl; Charcoal - Disc.	N	JW/CO	08/07/00
L 14	7.5mS	4	68-100	Md Br Sa W/Gvl	N	JW/CO	08/07/00
L 14	7.5mW	1	0-25	Very Compact Dk Br Si Cl W/Gvl	N	JW/CO	08/07/00
L 14	7.5mW	2	25-50	Very Compact Dk Br Si Cl W/Gvl	N	JW/CO	08/07/00
L 14	7.5mW	3	50-73	Very Compact Md Yl/Br Si W/Gvl	N	JW/CO	08/07/00
L 15		1	0-23	Md Br Si Lo	N	BG/CO	08/03/00
L 15		2	23-57	Md Br Mottled W/Yl Br Si	N	BG/CO	08/03/00
L 15		3	57-78	Dk Br Si	N	BG/CO	08/03/00
L 15		4	78-91	Yl Br Si	N	BG/CO	08/03/00
L 16		1	0-56	Gr Br Si Lo	N	LM/SK	08/04/00
L 16		2	56-62	Gr Br Si Lo W/Sm.Gvl	N	LM/SK	08/04/00
L 16		3	62-90	Dk Gr Cl Si	N	LM/SK	08/04/00
L 16		4	90-100	Dk Yl Br Cl Lo	N	LM/SK	08/04/00
L 17		1	0-25	Gr Br Si Lo W/Sm.Cobbles; Plastic - Disc.	N	LM/SK	08/04/00
L 17		2	25-50	Gr Br Si Lo W/Sm.Cobbles	N	LM/SK	08/04/00
L 17		3	50-67	Yl Br Si Lo	N	LM/SK	08/04/00
L 17		4	67-70	Dk Br Si Lo; Poss.Buried "A"	N	LM/SK	08/04/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
L 17		5	70-90	Md Br Si Lo	N	LM/SK	08/04/00
L 18		1	0-25	Gr Br Si Lo W/Gvl	N	LM/SK	08/04/00
L 18		2	25-64	Gr Br Si Lo W/Gvl	N	LM/SK	08/04/00
L 18		3	64-80	Gr Br Cl Lo	N	LM/SK	08/04/00
L 18		4	80-93	Dk Yl Br Cl Lo	N	LM/SK	08/04/00
L 19		1	0-25	Md Br Si W/Cl + Gvl; Fill?; Brick, Coal - Disc.	N	LM/SK	08/04/00
L 19		2	25-40	Md Br Si W/Cl + Gvl; Fill?; Stopped By Rock	H	LM/SK	08/04/00
L 20		1	0-25	Gr Br Si Lo	N	LM/SK	08/04/00
L 20		2	25-45	Gr Br Si Lo W/Gvl; Poss.Gvl Fill; Coal, Slag - Disc.; Stopped By Rock	N	LM/SK	08/04/00
L 24		1	0-20	Md Br Cl Si W/Rock	H	MD/LM	11/15/00
L 24		2	20-43	Ol Br Cl Si W/Less Rock; Stopped By Rock	N	MD/LM	11/15/00
L 25		1	0-25	Md Ol Br Cl Si W/Rock	H	MD/LM	11/15/00
L 25		2	25-55	Md Ol Br Cl Si W/Rock	N	MD/LM	11/15/00
L 25		3	55-68	Md Ol Yl Cl Si	N	MD/LM	11/15/00
L 26		1	0-15	Md Br Cl Si W/Rock	N	MD/LM	11/15/00
L 26		2	15-35	Md Br Cl Si W/Rock	N	MD/LM	11/15/00
L 26		3	35-60	Yl Br Cl Si W/Less Rock	N	MD/LM	11/15/00
L 27		1	0-25	Md Ol Br Cl Si W/Ovl	N	MD/LM	11/15/00
L 27		2	25-44	Md Ol Br Cl Si	N	MD/LM	11/15/00
L 27		3	44-63	Md Ol Yl Si	N	MD/LM	11/15/00
L 28		1	0-25	Md Br Cl Si W/Gvl	H	MD/LM	11/15/00
L 28		2	25-33	Md Br Cl Si	N	MD/LM	11/15/00
L 28		3	33-42	Yl Br Cl Si; Stopped By Rock	N	MD/LM	11/15/00
L 29		1	0-25	Md Ol Br Cl Si W/Ovl; Coal - Disc.	N	MD/LM	11/15/00
L 29		2	25-55	Md Ol Br Cl Si	N	MD/LM	11/15/00
L 29		3	55-94	Md Ol Yl Si; Stopped By Rock	N	MD/LM	11/15/00
L 30		1	0-24	Md Br Cl Si W/Gvl; Slag - Disc.	N	MD/LM	11/15/00
L 30		2	24-34	Yl Br Cl Si	N	MD/LM	11/15/00
L 30		3	34-44	Yl Br Cl Si	N	MD/LM	11/15/00
L 30		4	44-54	Yl Br Cl Si	N	MD/LM	11/15/00
L 30		5	54-60	Yl Br Cl Si	N	MD/LM	11/15/00
L 30		6	60-78	Dk Br Cl Si	N	MD/LM	11/15/00
L 30		7	78-86	Yl Br Cl Si	N	MD/LM	11/15/00
L 31		1	0-25	Md Ol Br Cl Si	N	MD/LM	11/15/00
L 31		2	25-54	Md Ol Br Cl Si	N	MD/LM	11/15/00
L 31		3	54-70	Dk Br Cl Si Mottled W/Md Ol Br Cl Si	N	MD/LM	11/15/00
L 31		4	70-84	Md Yl Br Cl Si W/Rock; Stopped By Rock	N	MD/LM	11/15/00
L 32		1	0-25	Md Br Cl Si W/Gvl	N	MD/LM	11/15/00
L 32		2	25-40	Md Br Cl Si W/Gvl	N	MD/LM	11/15/00
L 32		3	40-55	Md Br Cl Si W/Gvl	N	MD/LM	11/15/00
L 32		4	55-61	Md Br Cl Si W/Gvl	N	MD/LM	11/15/00
L 32		5	61-68	Dk Br Cl Si W/Gvl; Charcoal - Disc.	N	MD/LM	11/15/00
L 32		6	68-90	Yl Br Cl Si	N	MD/LM	11/15/00
L 33		1	0-25	Md Ol Br Cl Si W/Gvl	N	MD/LM	11/15/00
L 33		2	25-29	Md Ol Br Cl Si W/Gvl	N	MD/LM	11/15/00
L 33		3	29-42	Ok Br Cl Si Mottled W/Md Ol Br Cl Si	N	MD/LM	11/15/00
L 33		4	42-65	Md Ol Yl Sa Si	N	MD/LM	11/15/00
L 33		5	65-75	Md Ol Yl Sa Si W/Rock	N	MD/LM	11/15/00
L 33		6	75-82	Md Ol Yl Sa Si W/Rock; Stopped By Rock	P	MD/LM	11/15/00
L 33	ImE	1	0-25	Ol Br Cl Si	N	JD/NM	11/21/00
L 33	ImE	2	25-30	Ol Br Cl Si	N	JD/NM	11/21/00
L 33	ImE	3	30-85	Yl Br Cl Sa Si W/Rock	N	JD/NM	11/21/00
L 33	ImN	1	0-25	Md Br Si Lo	N	MM/RW	11/21/00
L 33	ImN	2	25-33	Md Br Si Lo	N	MM/RW	11/21/00
L 33	ImN	3	33-53	Md Ol Br Si	N	MM/RW	11/21/00
L 33	ImN	4	53-64	Md Ol Br Si	N	MM/RW	11/21/00
L 33	ImN	5	64-84	Md Ol Br Si W/Gvl + Rock	N	MM/RW	11/21/00
L 33	ImN	6	84-94	Md Ol Br Si W/Gvl + Rock; Stopped By Rock	N	MM/RW	11/21/00
L 33	ImS	1	0-25	Md Br Si Lo; Charcoal - Disc.	N	MM/RW	11/21/00
L 33	ImS	2	25-34	Md Br Si Lo	N	MM/RW	11/21/00
L 33	ImS	3	34-54	Ol Br Si	N	MM/RW	11/21/00
L 33	ImS	4	54-74	Ol Br Si W/Gvl + Rock	N	MM/RW	11/21/00
L 33	ImS	5	74-80	Ol Br Si W/Gvl + Rock	N	MM/RW	11/21/00
L 33	ImW	1	0-25	Md Br Si Lo	N	MM/RW	11/21/00
L 33	ImW	2	25-30	Ol Br Si	N	MM/RW	11/21/00
L 33	ImW	3	30-36	Very Dk Gr Br Si Mottled W/Ol Br Si; Charcoal - Disc.	N	MM/RW	11/21/00
L 33	ImW	4	36-56	Ol Br Si	N	MM/RW	11/21/00
L 33	ImW	5	56-61	Ol Br Si W/Gvl + Rock	N	MM/RW	11/21/00
L 33	ImW	6	61-83	Ol Br Si W/Gvl + Rock	N	MM/RW	11/21/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
L 33	7.5mE	1	0-25	Ol Br Cl Si; Coal - Disc.	N	JD/NM	11/21/00
L 33	7.5mE	2	25-38	Ol Br Cl Si	N	JD/NM	11/21/00
L 33	7.5mE	3	38-50	Dk Gr Br Gvl; Stopped By Rock	N	JD/NM	11/21/00
L 33	7.5mN	1	0-25	Md Br Si Lo	N	MM/RW	11/21/00
L 33	7.5mN	2	25-65	Md Ol Br Si	N	MM/RW	11/21/00
L 33	7.5mN	3	65-80	Md Ol Br Si W/Gvl + Rock	N	MM/RW	11/21/00
L 33	7.5mS	1	0-25	Md Br Si Lo; Coal - Disc.	N	MM/RW	11/21/00
L 33	7.5mS	2	25-29	Md Br Si Lo	N	MM/RW	11/21/00
L 33	7.5mS	3	29-46	Ol Br Si	N	MM/RW	11/21/00
L 33	7.5mS	4	46-66	Ol Br Si W/Gvl + Rock; Stopped By Rock	N	MM/RW	11/21/00
L 33	7.5mW	1	0-27	Md Br Si Lo	N	MM/RW	11/21/00
L 33	7.5mW	2	27-49	Ol Br Si	N	MM/RW	11/21/00
L 33	7.5mW	3	49-70	Ol Br Si W/Gvl + Rock; Stopped By Rock	N	MM/RW	11/21/00
L 34		1	0-30	Md Br Cl Si W/Gvl	N	MD/LM	11/15/00
L 34		2	30-40	Yl Br Cl Si	N	MD/LM	11/15/00
L 34		3	40-60	Yl Br Cl Si W/Gvl	N	MD/LM	11/15/00
L 35		1	0-25	Md Ol Br Cl Si	N	AM/MD	11/16/00
L 35		2	25-31	Md Ol Br Cl Si	N	AM/MD	11/16/00
L 35		3	31-56	Md Ol Yl Sa Si	N	AM/MD	11/16/00
L 35		4	56-97	Md Ol Yl Sa Si W/Lt Gvl	N	AM/MD	11/16/00
L 36		1	0-33	Md Br Si Lo	N	AM/MD	11/16/00
L 36		2	33-53	Md Yl Br Cl Si	N	AM/MD	11/16/00
L 36		3	53-73	Md Yl Br Cl Si	N	AM/MD	11/16/00
L 36		4	73-96	Md Yl Br Cl Si; Stopped By Rock	N	AM/MD	11/16/00
L 37		1	0-25	Md Ol Br Cl Si; Styrofoam - Disc.	N	AM/MD	11/16/00
L 37		2	25-36	Md Ol Br Cl Si	N	AM/MD	11/16/00
L 37		3	36-39	Dk Br Cl Si	N	AM/MD	11/16/00
L 37		4	39-95	Md Ol Yl Cl Si	N	AM/MD	11/16/00
L 38		1	0-27	Md Ol Br Cl Si	N	AM/MD	11/16/00
L 38		2	27-56	Yl Br Si Lo	N	AM/MD	11/16/00
L 38		3	56-69	Yl Br Sa Si W/Gvl + Rock; Stopped By Rock	N	AM/MD	11/16/00
L 39		1	0-25	Md Ol Br Cl Si	N	AM/MD	11/16/00
L 39		2	25-31	Md Ol Br Cl Si	N	AM/MD	11/16/00
L 39		3	31-66	Md Ol Yl Cl Si W/Gvl, Cobbles, & Rock; Stopped By Rock	N	AM/MD	11/16/00
M 10		1	0-80	Md Gr Br Si Lo	N	NM/GD	08/04/00
M 11		1	0-26	Md Br Si Lo	N	GD/NM	08/03/00
M 11		2	26-41	Yl Br Si Lo	N	GD/NM	08/03/00
M 11		3	41-71	Dk Br Si Lo	N	GD/NM	08/03/00
M 12		1	0-26	Md Gr Br Si Lo	N	GD/NM	08/03/00
M 12		2	26-46	Compact Yl Gr Br Si Lo	N	GD/NM	08/03/00
M 12		3	46-73	Dk Br Si Lo	N	GD/NM	08/03/00
M 12		4	73-84	Lt Yl Gr Greenish Br Sa Si	N	GD/NM	08/03/00
M 13		1	0-50	Md Gr Br Si Lo	N	GD/NM	08/03/00
M 13		2	50-70	Compact Lt Gr Br Si Lo W/Gvl	N	GD/NM	08/03/00
M 14		1	0-73	Md Gr Br Si Lo	N	GD/NM	08/03/00
M 14		2	73-84	Yl/Br Si Lo	N	GD/NM	08/03/00
M 15		1	0-40	Md Gr Br Si Lo	N	GD/NM	08/03/00
M 15		2	40-65	Very Compact Yl Br Si Lo	N	GD/NM	08/03/00
M 15		3	65-100	Dk Br Si Lo	H	GD/NM	08/03/00
M 16		1	0-60	Md Gr Br Si Lo W/Gvl	P	NM/GD	08/03/00
M 16		2	60-90	Md Gr Br Si Lo W/Gvl	N	NM/GD	08/03/00
M 16	1mE	1	0-25	Md Br Si Lo W/Gvl; Coal, Clay Pigeon - Disc.	N	WG/LM	08/07/00
M 16	1mE	2	25-30	Md Br Si Lo W/Gvl; Coal, Clay Pigeon - Disc.	N	WG/LM	08/07/00
M 16	1mE	3	30-56	Slightly Lighter Md Br Si Lo	H	WG/LM	08/07/00
M 16	1mE	4	56-62	Yl Br Si Lo	N	WG/LM	08/07/00
M 16	1mE	5	62-80	Dk Yl Br Si Lo	N	WG/LM	08/07/00
M 16	1mN	1	0-25	Md Br Si Lo W/Gvl; Clay Pigeon, Coal, Coal Ash - Disc.; Artifact (Glass) - Missing	H	WG/LM	08/07/00
M 16	1mN	2	25-30	Md Br Si Lo W/Gvl	N	WG/LM	08/07/00
M 16	1mN	3	30-70	Slightly Lighter Md Br Si Lo	N	WG/LM	08/07/00
M 16	1mN	4	70-80	Dk Br Si Lo	N	WG/LM	08/07/00
M 16	1mS	1	0-27	Md Br Si Lo W/Gvl; Coal, Clay Pigeon - Disc.	N	WG/LM	08/07/00
M 16	1mS	2	27-59	Md Dk Br Si Lo	H	WG/LM	08/07/00
M 16	1mS	3	59-76	Dk Br Si Lo	N	WG/LM	08/07/00
M 16	1mS	4	76-86	Dk Yl Br Si Lo	N	WG/LM	08/07/00
M 16	1mW	1	0-22	Md Br Si Lo; Coal, Clay Pigeon - Disc.	N	WG/LM	08/07/00
M 16	1mW	2	22-36	Md Br Si Lo W/Gvl; Coal, Clay Pigeon - Disc.	P	WG/LM	08/07/00
M 16	1mW	3	36-66	Gr Br Si Lo	N	WG/LM	08/07/00
M 16	1mW	4	66-77	Dk Yl Br Si Lo	N	WG/LM	08/07/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
M 16	7.5mE	1	0-15	Md Br Si Lo	N	WG/LM	08/07/00
M 16	7.5mE	2	15-31	Md Gr Br Si Lo W/Rock	N	WG/LM	08/07/00
M 16	7.5mE	3	31-56	Gr Br Si Lo	N	WG/LM	08/07/00
M 16	7.5mE	4	56-76	Md Gr Br Si Cl	N	WG/LM	08/07/00
M 16	7.5mN	1	0-25	Md Br Si W/Cl + Gvl; Plastic - Disc.	N	WG/LM	08/07/00
M 16	7.5mN	2	25-37	Md Br Si W/Cl + Gvl	N	WG/LM	08/07/00
M 16	7.5mN	3	37-60	Md Br Si W/Cl	N	WG/LM	08/07/00
M 16	7.5mN	4	60-67	Dk Br Si W/Cl	N	WG/LM	08/07/00
M 16	7.5mN	5	67-75	Yl Br Si W/Cl	N	WG/LM	08/07/00
M 16	7.5mS	1	0-25	Md Br Si W/Cl	N	WG/LM	08/07/00
M 16	7.5mS	2	25-50	Md Br Si W/Cl	N	WG/LM	08/07/00
M 16	7.5mS	3	50-53	Dk Br Si W/Cl	N	WG/LM	08/07/00
M 16	7.5mS	4	53-73	Yl Br Si W/Cl	N	WG/LM	08/07/00
M 16	7.5mW	1	0-25	Md Br Si W/Cl	N	WG/LM	08/07/00
M 16	7.5mW	2	25-53	Md Br Si W/Cl	N	WG/LM	08/07/00
M 16	7.5mW	3	53-63	Gr Br Sa Si W/Cl	N	WG/LM	08/07/00
M 16	7.5mW	4	63-101	Yl Br Si W/Cl	N	WG/LM	08/07/00
M 17		1	0-55	Md Gr Br Si Lo W/Gvl; Stopped By Rock	N	NM/GD	08/03/00
M 18		1	0-72	Md Gr Br Si Lo W/Gvl; Coal - Disc.	N	NM/GD	08/03/00
M 18		2	72-85	Lt Br Si Lo	N	NM/GD	08/03/00
M 19		1	0-39	Md Gr Br Si Lo W/Gvl; Coal - Disc.; Stopped By Rock	N	NM/GD	08/03/00
M 20		1	0-27	Md Br Si Lo W/Gvl + Cobbles; Stopped By Rock	H	NM/GD	08/03/00
M 21		1	0-34	Md Br Si Lo W/Gvl; Plastic - Disc.	N	NM/GD	08/03/00
M 21		2	34-49	Md Yl Br Si Lo W/Gvl; Stopped By Rock	N	NM/GD	08/03/00
M 22		1	0-27	Md Gr Br Si Lo W/Gvl; Stopped By Rock	H	NM/GD	08/03/00
M 33		1	0-28	Md Br Si Lo	H	MM/RW	11/21/00
M 33		2	28-48	Md Br Si W/Gvl + Rock	N	MM/RW	11/21/00
M 33		3	48-55	Md Br Si W/Gvl + Rock; Stopped By Rock	N	MM/RW	11/21/00
N 10		1	0-25	Very Compact Md Br Si Lo	H	BG/CO	08/04/00
N 10		2	25-48	Very Compact Md Br Si Lo	N	BG/CO	08/04/00
N 10		3	48-71	Very Compact Dk Br Cl Si	N	BG/CO	08/04/00
N 10		4	71-102	Very Compact Yl/Br Si	N	BG/CO	08/04/00
N 11		1	0-8	Dk Br Si Lo	N	BG/CO	08/04/00
N 11		2	8-25	Md Br Si Lo	N	BG/CO	08/04/00
N 11		3	25-35	Md Br Si Lo	N	BG/CO	08/04/00
N 11		4	35-50	Yl Br Si	N	BG/CO	08/04/00
N 11		5	50-83	Dk Br Compact Si; Stopped By Compact Soil + Proximity To Fence	N	BG/CO	08/04/00
N 12		1	0-7	Yl/Br Sa (In Baseball Diamond)	N	BG/CO	08/04/00
N 12		2	7-25	Dk Gr Cl	N	BG/CO	08/04/00
N 12		3	25-53	Dk Gr Cl	N	BG/CO	08/04/00
N 12		4	53-76	Md Br Si	N	BG/CO	08/04/00
N 13		1	0-9	Yl Br Sa (From Baseball Diamond)	N	BG/CO	08/04/00
N 13		2	9-50	Gr Cl	N	BG/CO	08/04/00
N 13		3	50-67	Md Br Si; Stopped By Rock	N	BG/CO	08/04/00
N 14		1	0-65	Md Br Si Lo Mottled W/Yl Br Si	N	BG/CO	08/03/00
N 14		2	65-100	Very Dk Yl/Br Cl Si	N	BG/CO	08/03/00
N 15		1	0-30	Md Br Si Lo; Plastic - Disc.	N	BG/CO	08/03/00
N 15		2	30-54	Yl Br Si	N	BG/CO	08/03/00
N 15		3	54-76	Dk Br Si	N	BG/CO	08/03/00
N 15		4	76-96	Yl Br Si	N	BG/CO	08/03/00
N 16		1	0-50	Md Br Si Lo	N	BG/CO	08/03/00
N 16		2	50-66	Dk Br Si	N	BG/CO	08/03/00
N 16		3	66-100	Yl/Br Si	N	BG/CO	08/03/00
N 17		1	0-32	Md Br Mottled W/Yl Br Si Lo; Slag - Disc.	H	BG/CO	08/03/00
N 17		2	32-86	Yl Br Si	N	BG/CO	08/03/00
N 18		1	0-62	Md Br Si Lo; Plastic, Coal - Disc.	H	BG/CO	08/03/00
N 18		2	62-100	Yl/Br Si	N	BG/CO	08/03/00
N 19		1	0-30	Md Br Si Lo	H	BG/CO	08/03/00
N 19		2	30-59	Yl Br Mottled W/Md Br Si	N	BG/CO	08/03/00
N 19		3	59-79	Yl Br Si	N	BG/CO	08/03/00
N 20		1	0-48	Md Br Cl Si; Coal, Slag - Disc.	N	BG/CO	08/03/00
N 20		2	48-69	Lt Yl/Br Mottled W/Dk Br Si; Coal, Slag - Disc.	H	BG/CO	08/03/00
N 20		3	69-100	Dk Yl/Br Si; Coal, Slag - Disc.	N	BG/CO	08/03/00
N 21		1	0-34	Md Br Cl Si W/Rock + Gvl; Coal, Slag - Disc.	N	BG/CO	08/03/00
N 21		2	34-46	Dk Br Si W/Rock + Gvl; Coal, Slag - Disc.	H	BG/CO	08/03/00
N 21		3	46-79	Dk Yl/Br Si W/Rock + Gvl; Coal, Slag, Tin Foil - Disc.	N	BG/CO	08/03/00
N 22		1	0-18	Md Br Cl	N	BG/CO	08/03/00
N 22		2	18-84	Md Br Cl Si W/Gvl; Stopped By Rock	H	BG/CO	08/03/00
N 23		1	0-85	Md Gr Br Si Lo W/Gvl; Stopped By Rock	N	NM/GD	08/03/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
N 26		1	0-25	Md Gr Br Si Lo W/Rock; Coal - Disc.	H	KH/RW	11/16/00
N 26		2	25-55	Md Gr Br Si Lo W/Rock	N	KH/RW	11/16/00
N 26		3	55-75	Br Bk Si	N	KH/RW	11/16/00
N 26		4	75-95	Yl Br Si W/Rock; Stopped By Rock	N	KH/RW	11/16/00
N 27		1	0-25	Md Gr Br Si; Coal - Disc.	H	KH/RW	11/16/00
N 27		2	25-46	Md Gr Br Si; Coal - Disc.	N	KH/RW	11/16/00
N 27		3	46-61	Yl Br Si	N	KH/RW	11/16/00
N 27		4	61-82	Yl Br Sa Si W/Gvl + Rock	N	KH/RW	11/16/00
N 28		1	0-20	Md Gr Br Si; Coal, Slag, Charcoal - Disc.	N	KH/RW	11/16/00
N 28		2	20-40	Md Gr Br Si; Coal, Slag, Charcoal - Disc.	N	KH/RW	11/16/00
N 28		3	40-60	Md Gr Br Si	N	KH/RW	11/16/00
N 28		4	60-80	Md Gr Br Si	N	KH/RW	11/16/00
N 28		5	80-90	Md Gr Br Si	N	KH/RW	11/16/00
N 28		6	90-103	Dk Br Bk Si	N	KH/RW	11/16/00
N 29		1	0-25	Md Gr Br Si Lo W/Very Sm.Amt.Rock + Gvl	N	KH/RW	11/16/00
N 29		2	25-45	Md Gr Br Si Lo W/Very Sm.Amt.Rock + Gvl	N	KH/RW	11/16/00
N 29		3	45-63	Md Gr Br Si Lo W/Very Sm.Amt.Rock + Gvl	N	KH/RW	11/16/00
N 29		4	63-88	Yl Br Si W/Very Sm.Amt.Rock + Gvl	N	KH/RW	11/16/00
N 30		1	0-26	Md Gr Br Si Lo W/Rock + Gvl	N	KH/RW	11/16/00
N 30		2	26-46	Yl Br Si W/Gvl + Rock	N	KH/RW	11/16/00
N 30		3	46-61	Yl Br Si W/Gvl + Rock	N	KH/RW	11/16/00
N 31		1	0-25	Md Gr Br Si Lo W/Gvl + Rock; Coal, Slag - Disc.	N	KH/RW	11/16/00
N 31		2	25-38	Md Gr Br Si Lo W/Gvl + Rock	N	KH/RW	11/16/00
N 31		3	38-59	Yl Br Si	N	KH/RW	11/16/00
N 31		4	59-81	Yl Br Sa Si W/Gvl + Rock	N	KH/RW	11/16/00
N 32		1	0-25	Md Gr Br Si Lo W/Rock	N	KH/RW	11/16/00
N 32		2	25-30	Md Gr Br Si Lo W/Rock	N	KH/RW	11/16/00
N 32		3	30-62	Md Gr Br Sa Si W/Gvl, Cobbles, & Rock; Stopped By Rock	N	KH/RW	11/16/00
N 33		1	0-23	Md Gr Br Si Lo W/Rock; Coal, Slag - Disc.	N	KH/RW	11/16/00
N 33		2	23-43	Md Gr Br Sa Si W/Gvl, Cobbles, & Rock	N	KH/RW	11/16/00
N 33		3	43-60	Md Gr Br Sa Si W/Gvl, Cobbles, & Rock; Stopped By Rock	N	KH/RW	11/16/00
N 34		1	0-25	Md Gr Br Si Lo W/Rock; Charcoal - Disc.	N	KH/RW	11/16/00
N 34		2	25-30	Md Gr Br Si Lo W/Rock	N	KH/RW	11/16/00
N 34		3	30-50	Yl Br Si	N	KH/RW	11/16/00
N 34		4	50-70	Yl Br Sa Si W/Rock, Gvl, & Cobbles	N	KH/RW	11/16/00
N 35		1	0-25	Md Gr Br Si Lo	H	KH/RW	11/16/00
N 35		2	25-33	Md Gr Br Si Lo	N	KH/RW	11/16/00
N 35		3	33-55	Yl Br Si	N	KH/RW	11/16/00
N 35		4	55-73	Yl Br Si W/Rock + Gvl; Stopped By Rock	N	KH/RW	11/16/00
N 36		1	0-28	Md Gr Br Si Lo W/Rock	N	KH/RW	11/16/00
N 36		2	28-50	Yl Br Si W/Rock + Gvl; Stopped By Rock	N	KH/RW	11/16/00
N 37		1	0-25	Md Gr Si Lo; Coal, Slag - Disc.	N	KH/RW	11/16/00
N 37		2	25-33	Md Gr Si Lo; Coal, Slag - Disc.	N	KH/RW	11/16/00
N 37		3	33-53	Yl Br Si	N	KH/RW	11/16/00
N 37		4	53-73	Yl Br Si	N	KH/RW	11/16/00
N 37		5	73-100	Yl Br Si W/Rock + Gvl	N	KH/RW	11/16/00
N 38		1	0-25	Md Gr Br Si Lo	N	KH/RW	11/16/00
N 38		2	25-35	Md Gr Br Si Lo	N	KH/RW	11/16/00
N 38		3	35-45	Yl Br Si	H	KH/RW	11/16/00
N 38		4	45-55	Yl Br Si W/Gvl, Rock, & Cobbles; Stopped By Rock	N	KH/RW	11/16/00
O 10		1	0-25	Md Br Si	N	DC/JM	08/08/00
O 10		2	25-44	Md Br Si	N	DC/JM	08/08/00
O 10		3	44-69	Yl Br Si W/Some Rock + Cobbles	N	DC/JM	08/08/00
O 10		4	69-83	Yl Br Si W/Some Rock + Cobbles; Stopped By Rock	N	DC/JM	08/08/00
O 11		1	0-25	Md Br Si	N	JM/DC	08/07/00
O 11		2	25-46	Md Br Si	N	JM/DC	08/07/00
O 11		3	46-54	Lt Yl Br Si W/Rock; Stopped By Rock	N	JM/DC	08/07/00
O 12		1	0-10	Lt Br Sa; Baseball Diamond	N	JM/DC	08/07/00
O 12		2	10-35	Dk Gr Si	N	JM/DC	08/07/00
O 12		3	35-56	Yl Br Si	N	JM/DC	08/07/00
O 13		1	0-10	Lt Br Sa; Baseball Diamond	N	JM/DC	08/07/00
O 13		2	10-64	Dk Gr Si	N	JM/DC	08/07/00
O 13		3	64-70	Lt Yl Br Si W/Rock	N	JM/DC	08/07/00
O 14		1	0-30	Md Gr Br Cl Si	N	AM/TH	08/04/00
O 14		2	30-48	Md Ol Br Compact Si; Artifact (Modern Lead Bullet) - Missing	H	AM/TH	08/04/00
O 14		3	48-97	Dk Ol Br Compact Si	N	AM/TH	08/04/00
O 15		1	0-25	Md Gr Br Cl Si	N	AM/TH	08/04/00
O 15		2	25-39	Md Gr Br Cl Si	N	AM/TH	08/04/00
O 15		3	39-60	Dk Gr Br Compact Si	N	AM/TH	08/04/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
O 15		4	60-95	Md Ol Br Si	N	AM/TH	08/04/00
O 16		1	0-25	Md Gr Br Cl Si	N	AM/TH	08/04/00
O 16		2	25-37	Md Gr Br Cl Si	N	AM/TH	08/04/00
O 16		3	37-74	Dk Gr Br Compact Si	N	AM/TH	08/04/00
O 16		4	74-100	Md Ol Br Si	N	AM/TH	08/04/00
O 17		1	0-25	Md Gr Br Cl Si	N	AM/TH	08/04/00
O 17		2	25-53	Md Gr Br Cl Si	N	AM/TH	08/04/00
O 17		3	53-70	Md Ol Br Si	N	AM/TH	08/04/00
O 17		4	70-94	Br Si W/Gvl; Stopped By Gvl	N	AM/TH	08/04/00
O 18		1	0-25	Md Gr Br Cl Si	N	AM/TH	08/04/00
O 18		2	25-60	Md Gr Br Cl Si	N	AM/TH	08/04/00
O 18		3	60-95	Md Ol Br Si; Stopped By Rock	N	AM/TH	08/04/00
O 19		1	0-25	Md Gr Br Cl Si W/Cobbles	N	AM/TH	08/04/00
O 19		2	25-47	Md Gr Br Cl Si W/Cobbles	N	AM/TH	08/04/00
O 19		3	47-93	Md Ol Br Si	N	AM/TH	08/04/00
O 20		1	0-25	Md Gr Br Cl Si W/Cobbles	N	AM/TH	08/04/00
O 20		2	25-64	Md Gr Br Cl Si; Coal - Disc.	H	AM/TH	08/04/00
O 20		3	64-100	Md Ol Br Si	N	AM/TH	08/04/00
O 21		1	0-25	Dk Br Si Cl; Slag, Charcoal - Disc	H	JW/CO	08/07/00
O 21		2	25-32	Dk Br Si Cl; Slag, Charcoal - Disc	H	JW/CO	08/07/00
O 21		3	32-68	Md Br/Yl Si	N	JW/CO	08/07/00
O 22		1	0-25	Md Br Si W/Gvl + Lg.Rocks; Coal, Charcoal, Slag, Clay Pigeon Pcs. - Disc.	H	JW/CO	08/07/00
O 22		2	25-45	Md Br Si W/Gvl + Lg.Rocks	N	JW/CO	08/07/00
O 22		3	45-65	Lt Br Si Lo	N	JW/CO	08/07/00
O 23		1	0-91	Md Gr Br Si Lo W/Gvl; Plastic - Disc.	N	NM/GD	08/03/00
P 10		1	0-22	Dk Br Si Lo	H	KS/DR	08/07/00
P 10		2	22-29	Mottled Dk Br/Yl Br Si Lo	N	KS/DR	08/07/00
P 10		3	29-53	Dk Br Si Cl	N	KS/DR	08/07/00
P 10		4	53-64	Yl Br Compact Si; Stopped By Rock	N	KS/DR	08/07/00
P 11		1	0-25	Dk Br Si Lo	N	KS/DR	08/07/00
P 11		2	25-30	Dk Br Si Lo	N	KS/DR	08/07/00
P 11		3	30-60	Dk Br Mottled W/Lt Br Si Lo W/Cl	N	KS/DR	08/07/00
P 11		4	60-100	Lt Br Compact Si Lo W/Cl	N	KS/DR	08/07/00
P 12		1	0-22	Dk Br Si Lo	N	KS/DR	08/07/00
P 12		2	22-35	Mottled Dk Br/Yl Br Si Lo	N	KS/DR	08/07/00
P 12		3	35-61	Dk Br Si Cl	N	KS/DR	08/07/00
P 12		4	61-101	Yl Br Si	N	KS/DR	08/07/00
P 13		1	0-25	Md Br Si W/Cl + Gvl; Coal, Ash - Disc.	N	WG/LM	08/08/00
P 13		2	25-40	Md Br Si W/Cl + Gvl	N	WG/LM	08/08/00
P 13		3	40-60	Yl Br Si W/Cl	N	WG/LM	08/08/00
P 13		4	60-77	Md Br Si W/Cl	N	WG/LM	08/08/00
P 13		5	77-90	Yl Br Si W/Cl	N	WG/LM	08/08/00
P 14		1	0-25	Md Br Si W/Cl	N	WG/LM	08/08/00
P 14		2	25-57	Yl Gr Br Si	N	WG/LM	08/08/00
P 14		3	57-88	Mottled Yl Gr/Yl Br Si	N	WG/LM	08/08/00
P 15		1	0-25	Md Br Si W/Cl	H	WG/LM	08/08/00
P 15		2	25-35	Md Br Si W/Cl	N	WG/LM	08/08/00
P 15		3	35-80	Yl Br Si W/Cl	N	WG/LM	08/08/00
P 16		1	0-27	Md Br Si Lo	N	WG/LM	08/08/00
P 16		2	27-49	Yl Br Si Lo	N	WG/LM	08/08/00
P 16		3	49-78	Md Br Sa W/Gvl	N	WG/LM	08/08/00
P 17		1	0-25	Md Br Si W/Cl	H	WG/LM	08/08/00
P 17		2	25-37	Md Br Si W/Cl	N	WG/LM	08/08/00
P 17		3	37-68	Mottled Yl & Br Si W/Cl	N	WG/LM	08/08/00
P 17		4	68-85	Yl Br Si W/Cl + Sa	N	WG/LM	08/08/00
P 18		1	0-25	Md Br Si Lo W/Gvl	N	WG/LM	08/08/00
P 18		2	25-37	Md Br Si Lo W/Gvl	N	WG/LM	08/08/00
P 18		3	37-62	Md Br Si Lo	N	WG/LM	08/08/00
P 18		4	62-76	Yl Br Si Lo W/Some Rock; Stopped By Rock	N	WG/LM	08/08/00
P 19		1	0-25	Md Br Si Lo W/Gvl	N	MR/LM	08/09/00
P 19		2	25-32	Md Br Si Lo W/Gvl	N	MR/LM	08/09/00
P 19		3	32-58	Md Br Si Lo	N	MR/LM	08/09/00
P 19		4	58-70	Yl Br Si Lo W/Some Rock; Stopped By Rock	N	MR/LM	08/09/00
P 21		1	0-25	Md Br Cl Si	N	CO/JW	08/08/00
P 21		2	25-60	Md Br Cl Si; Coal, Brick, Clay Pigeon - Disc.	H	CO/JW	08/08/00
P 21		3	60-82	Md Yl/Br Cl Si	N	CO/JW	08/08/00
P 22		1	0-25	Md Br Cl Si	N	CO/JW	08/08/00
P 22		2	25-45	Md Br Cl Si; Coal, Skeet, Slag - Disc.; Stopped By Rock	H	CO/JW	08/08/00
P 23		1	0-25	Md Br Si Cl	N	CO/JW	08/08/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
P 23		2	25-56	Md Br Si Cl	H	CO/JW	08/08/00
P 23		3	56-86	Md Yl Si Cl	N	CO/JW	08/08/00
P 24		1	0-25	Md Br Si Lo	H	BG/CO	08/03/00
P 24		2	25-58	Yl Br Si	N	BG/CO	08/03/00
P 24		3	58-90	Lt Yl Br Si	N	BG/CO	08/03/00
P 24		4	90-110	Lt Yl Br Cl Si	N	BG/CO	08/03/00
P 27		1	0-25	Md Ol Br Cl Si	H	AM/MD	11/16/00
P 27		2	25-95	Md Ol Br Cl Si; Charcoal - Disc.	N	AM/MD	11/16/00
P 27		3	95-100	Dk Bk Cl Si	N	AM/MD	11/16/00
P 27		4	100-113	Md Ol Yl Cl Si	N	AM/MD	11/16/00
P 28		1	0-25	Md Br Cl Si	N	AM/MD	11/16/00
P 28		2	25-45	Md Br Cl Si	N	AM/MD	11/16/00
P 28		3	45-64	Md Br Cl Si	N	AM/MD	11/16/00
P 28		4	64-87	Dk Bk Sa Si	N	AM/MD	11/16/00
P 28		5	87-96	Yl Br Sa Si W/Sm.Amt.Gvl; Stopped By Rock	N	AM/MD	11/16/00
P 29		1	0-25	Md Ol Br Cl Si; Brick - Disc.	N	MD/AM	11/16/00
P 29		2	25-32	Md Ol Br Cl Si	N	MD/AM	11/16/00
P 29		3	32-52	Dk Bk Sa Si	N	MD/AM	11/16/00
P 29		4	52-76	Md Ol Yl Sa Si W/Gvl, Cobbles, & Rock; Stopped By Rock	N	MD/AM	11/16/00
P 30		1	0-28	Md Br Si Lo	N	MD/AM	11/16/00
P 30		2	28-48	Yl Br Sa Si W/Gvl	N	MD/AM	11/16/00
P 30		3	48-60	Yl Br Sa Si W/Gvl	N	MD/AM	11/16/00
P 31		1	0-25	Md Ol Br Cl Si W/Rock	N	MD/AM	11/16/00
P 31		2	25-34	Md Ol Br Cl Si	N	MD/AM	11/16/00
P 31		3	34-50	Md Dl Yl Sa Si	N	MD/AM	11/16/00
P 31		4	50-80	Md Ol Yl Sa Si W/Gvl, Cobbles, & Rock; Stopped By Rock	N	MD/AM	11/16/00
P 32		1	0-25	Md Br Cl Si; Coal - Disc.	N	MD/AM	11/16/00
P 32		2	25-43	Md Br Cl Si	N	MD/AM	11/16/00
P 32		3	43-66	Dk Bk Cl Si W/Flecks Of Rd Burned Soil; Coal - Disc.	N	MD/AM	11/16/00
P 32		4	66-81	Yl Br Cl Si W/Sm.Amt.Gvl	N	MD/AM	11/16/00
P 33		1	0-25	Md Ol Br Cl Si	N	MD/AM	11/16/00
P 33		2	25-30	Md Ol Br Cl Si	N	MD/AM	11/16/00
P 33		3	30-50	Md Ol Yl Cl Si	N	MD/AM	11/16/00
P 33		4	50-63	Md Ol Yl Cl Si W/Gvl + Cobbles	N	MD/AM	11/16/00
P 34		1	0-32	Md Br Cl Si	N	MD/AM	11/16/00
P 34		2	32-36	Dk Bk Cl Si	N	MD/AM	11/16/00
P 34		3	36-63	Yl Br Cl Si	N	MD/AM	11/16/00
P 34		4	63-82	Yl Br Sa Si	N	MD/AM	11/16/00
P 35		1	0-25	Md Ol Br Cl Si	N	MD/AM	11/16/00
P 35		2	25-30	Md Ol Br Cl Si	N	MD/AM	11/16/00
P 35		3	30-52	Md Ol Yl Cl Si W/Lt Gvl	N	MD/AM	11/16/00
P 35		4	52-58	Md Ol Yl Sa Si W/Gvl + Cobbles	N	MD/AM	11/16/00
P 36		1	0-32	Md Br Si Lo	N	AM/MD	11/16/00
P 36		2	32-44	Yl Br Cl Si; Sm.Band Of Dk Br Cl Si On W.Wall	N	AM/MD	11/16/00
P 36		3	44-51	Yl Br Si Lo W/Gvl; Stopped By Rock	N	AM/MD	11/16/00
P 37		1	0-25	Md Ol Br Cl Si W/Rock	N	AM/MD	11/16/00
P 37		2	25-42	Md Ol Br Cl Si	N	AM/MD	11/16/00
P 37		3	42-65	Md Ol Yl Cl Si W/Gvl, Cobbles, & Rock; Stopped By Rock	N	AM/MD	11/16/00
P 38		1	0-26	Md Br Si Lo	N	AM/MD	11/16/00
P 38		2	26-46	Yl Br Sa Si W/Gvl + Cobbles	N	AM/MD	11/16/00
P 38		3	46-62	Yl Br Sa Si W/Gvl + Cobbles	N	AM/MD	11/16/00
Q 10		1	0-25	Dk Br Si Lo	N	MR/KH	08/07/00
Q 10		2	25-33	Dk Br Si Lo	N	MR/KH	08/07/00
Q 10		3	33-53	Very Dk Br Si Lo	N	MR/KH	08/07/00
Q 10		4	53-95	Yl Br Cl Si	N	MR/KH	08/07/00
Q 11		1	0-25	Md Br Si Lo	N	MR/KH	08/07/00
Q 11		2	25-43	Md Br Si Lo	N	MR/KH	08/07/00
Q 11		3	43-80	Dk Br Si Lo	N	MR/KH	08/07/00
Q 11		4	80-97	Yl Br Cl Si	N	MR/KH	08/07/00
Q 12		1	0-25	Md Br Si	N	DC/JM	08/08/00
Q 12		2	25-50	Yl Br Si	N	DC/JM	08/08/00
Q 12		3	50-75	Yl Br Si	N	DC/JM	08/08/00
Q 12		4	75-100	Yl Br Si	N	DC/JM	08/08/00
Q 13		1	0-24	Md Br Si	N	DC/JM	08/08/00
Q 13		2	24-49	Yl Br Si	N	DC/JM	08/08/00
Q 13		3	49-74	Gr Br Si W/Many Rocks + Gvl	N	DC/JM	08/08/00
Q 13		4	74-78	Gr Br Si W/Many Rocks + Gvl; Stopped By Gvl/Fill?	N	DC/JM	08/08/00
Q 14		1	0-25	Md Br Si	N	DC/JM	08/08/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
Q 14		2	25-40	Md Br Si	N	DC/JM	08/08/00
Q 14		3	40-62	Yl Br Si	N	DC/JM	08/08/00
Q 14		4	62-64	Gr Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/08/00
Q 15		1	0-25	Md Br Si	N	DC/JM	08/08/00
Q 15		2	25-30	Md Br Si	N	DC/JM	08/08/00
Q 15		3	30-50	Yl Br Si	N	DC/JM	08/08/00
Q 15		4	50-66	Gr Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/08/00
Q 16		1	0-25	Md Br Si W/Gvl + Cobbles	N	DC/JM	08/08/00
Q 16		2	25-31	Md Br Si W/Gvl + Cobbles	N	DC/JM	08/08/00
Q 16		3	31-51	Yl Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/08/00
Q 17		1	0-25	Md Br Si	N	DC/JM	08/08/00
Q 17		2	25-43	Md Br Si	N	DC/JM	08/08/00
Q 17		3	43-61	Yl Br Si	N	DC/JM	08/08/00
Q 17		4	61-71	Gr Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/08/00
Q 18		1	0-9	Dk Br Si Lo	N	MR/KS	08/10/00
Q 18		2	9-28	Mottled Yl Br/Md Br Si Lo W/Gvl	N	MR/KS	08/10/00
Q 18		3	28-61	Dk Br Si Lo	N	MR/KS	08/10/00
Q 18		4	61-102	Yl Br Si	N	MR/KS	08/10/00
Q 19		1	0-25	Dk Br Si Lo W/Gvl	N	MR/LM	08/09/00
Q 19		2	25-62	Dk Br Si Lo	N	MR/LM	08/09/00
Q 19		3	62-100	Yl Br Cl Si	N	MR/LM	08/09/00
Q 20		1	0-25	Md Br Si W/Gvl	N	DC/JM	08/09/00
Q 20		2	25-46	Md Br Si W/Gvl	H	DC/JM	08/09/00
Q 20		3	46-65	Md Br Si	N	DC/JM	08/09/00
Q 20		4	65-78	Yl Br Si; Stopped By Rock	N	DC/JM	08/09/00
Q 21		1	0-25	Md Br Si	N	DC/JM	08/09/00
Q 21		2	25-50	Md Br Si; Clay Pigeon - Disc.	H	DC/JM	08/09/00
Q 21		3	50-60	Md Br Si	N	DC/JM	08/09/00
Q 21		4	60-85	Yl Br Si	N	DC/JM	08/09/00
Q 21		5	85-100	Yl Br Si	N	DC/JM	08/09/00
Q 22		1	0-25	Md Br Si Cl; Clay Pigeon, Charcoal - Disc.	N	LO/JW	08/08/00
Q 22		2	25-35	Md Br Si Cl; Clay Pigeon, Charcoal - Disc.	N	LO/JW	08/08/00
Q 22		3	35-58	Dk Yl/Br Si Cl	N	LO/JW	08/08/00
Q 23		1	0-25	Md Br Si Cl; Coal, Slag - Disc.	N	LO/JW	08/08/00
Q 23		2	25-66	Dk Yl Br Si Cl; Coal, Slag - Disc.	N	LO/JW	08/08/00
Q 24		1	0-25	Md Br Si Cl	N	CO/JW	08/08/00
Q 24		2	25-75	Dk Yl Br Si Cl; Slag, Coal - Disc.	H	CO/JW	08/08/00
R 10		1	0-25	Dk Br Si Lo	N	MR/KS	08/08/00
R 10		2	25-40	Dk Br Si Lo	N	MR/KS	08/08/00
R 10		3	40-96	Yl Br Cl Si	N	MR/KS	08/08/00
R 11		1	0-25	Dk Br Si Lo	N	MR/KS	08/08/00
R 11		2	25-53	Dk Br Si Lo	N	MR/KS	08/08/00
R 11		3	53-97	Yl Br Compact Cl Si	N	MR/KS	08/08/00
R 12		1	0-25	Mottled Md Br/Yl Br Sa Lo W/Gvl	N	MR/KS	08/08/00
R 12		2	25-37	Mottled Md Br/Yl Br Sa Lo W/Gvl	N	MR/KS	08/08/00
R 12		3	37-95	Dk Br Cl Lo	N	MR/KS	08/08/00
R 14		1	0-25	Md Br Si Lo	N	MR/KS	08/08/00
R 14		2	25-39	Md Br Si Lo	N	MR/KS	08/08/00
R 14		3	39-65	Yl Br Cl Si; Stopped By Rock	N	MR/KS	08/08/00
R 15		1	0-27	Dk Br Si Lo	H	MR/KS	08/08/00
R 15		2	27-36	Dk Gr Br Si Lo	N	MR/KS	08/08/00
R 15		3	36-67	Mottled Yl Br/Md Br Sa Si	N	MR/KS	08/08/00
R 15		4	67-100	Yl Br Cl Si	N	MR/KS	08/08/00
R 16		1	0-25	Dk Br Si Lo; Styrofoam - Disc.	N	MR/KS	08/08/00
R 16		2	25-47	Dk Br Si Lo	N	MR/KS	08/08/00
R 16		3	47-81	Yl Br Sa Si; Stopped By Rock	N	MR/KS	08/08/00
R 17		1	0-25	Md Br Si Lo W/Some Yl Mottling	H	MO/JW	08/09/00
R 17		2	25-43	Dk Br Si Lo	H	MO/JW	08/09/00
R 17		3	43-64	Md Yl Br Si Lo	P/H	MO/JW	08/09/00
R 17		4	64-91	Yl Br Si Lo; Stopped By Rock	N	MO/JW	08/09/00
R 17	1mN	1	0-17	Dk Br Si Lo	N	MR/KS	08/10/00
R 17	1mN	2	17-26	Mottled Yl Br/Dk Br Si Lo	N	MR/KS	08/10/00
R 17	1mN	3	26-58	Dk Br Si Lo	N	MR/KS	08/10/00
R 17	1mN	4	58-81	Yl Br Si; Stopped By Rock	N	MR/KS	08/10/00
R 17	1mS	1	0-25	Md Br Si W/Some Gvl	N	DC/WG	08/10/00
R 17	1mS	2	25-50	Md Br Si W/Some Gvl	H	DC/WG	08/10/00
R 17	1mS	3	50-67	Md Br Si W/Some Gvl	N	DC/WG	08/10/00
R 17	1mS	4	67-92	Yl Br Si	N	DC/WG	08/10/00
R 17	1mS	5	92-95	Yl Br Si	N	DC/WG	08/10/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
R 17	1mW	1	0-43	Md Br Si Lo	N	DC/WG	08/10/00
R 17	1mW	2	43-64	Gr Br Si Lo	N	DC/WG	08/10/00
R 17	1mW	3	64-82	Yl Gr Br Sa Si; Stopped By Rock	N	DC/WG	08/10/00
R 17	7.5mE	1	0-25	Md Gr Br Si Lo	N	MR/KS	08/10/00
R 17	7.5mE	2	25-36	Md Gr Br Si Lo	N	MR/KS	08/10/00
R 17	7.5mE	3	36-50	Dk Gr Br Si Lo	P	MR/KS	08/10/00
R 17	7.5mE	4	50-67	Mottled Md Br & Yl Br Si	N	MR/KS	08/10/00
R 17	7.5mE	5	67-86	Yl Br Si; Stopped By Rock	N	MR/KS	08/10/00
R 17	7.5mN	1	0-25	Md Gr Br Si Lo W/Gvl	N	MR/KS	08/10/00
R 17	7.5mN	2	25-33	Md Gr Br Si Lo W/Gvl	N	MR/KS	08/10/00
R 17	7.5mN	3	33-81	Dk Gr Br Si Lo	N	MR/KS	08/10/00
R 17	7.5mN	4	81-100	Yl Br Cl Si	N	MR/KS	08/10/00
R 17	7.5mS	1	0-12	Md Br Si Lo	N	DC/WG	08/10/00
R 17	7.5mS	2	12-54	Gr Br Si	N	DC/WG	08/10/00
R 17	7.5mS	3	54-79	Yl Br Si	N	DC/WG	08/10/00
R 17	7.5mS	4	79-83	Yl Br Si W/Gvl	N	DC/WG	08/10/00
R 17	7.5mW	1	0-25	Md Br Si W/Some Gvl	N	DC/WG	08/10/00
R 17	7.5mW	2	25-50	Md Br Si W/Some Gvl	H	DC/WG	08/10/00
R 17	7.5mW	3	50-68	Md Br Si W/Some Gvl	N	DC/WG	08/10/00
R 17	7.5mW	4	68-93	Yl Br Si	N	DC/WG	08/10/00
R 17	7.5mW	5	93-100	Yl Br Si	N	DC/WG	08/10/00
R 18		1	0-9	Md Br Si Lo	N	MR/KS	08/10/00
R 18		2	9-30	Mottled Yl Br/Md Br Si Lo	N	MR/KS	08/10/00
R 18		3	30-54	Dk Gr Br Si Lo; Stopped By Rock	N	MR/KS	08/10/00
R 19		1	0-6	Md Br Si Lo	N	KS	08/09/00
R 19		2	6-37	Mottled Yl Br/Md Br Si Lo W/Rock	N	KS	08/09/00
R 19		3	37-69	Dk Br Si Lo	N	KS	08/09/00
R 19		4	69-101	Yl Br Compact Si	N	KS	08/09/00
R 20		1	0-9	Md Br Si Lo	N	KS	08/09/00
R 20		2	9-26	Mottled Md Br/Yl Br Si Lo W/Gvl + Cobbles; Stopped By Rock	N	KS	08/09/00
R 21		1	0-8	Md Br Si Lo	N	WG/KS	08/09/00
R 21		2	8-27	Mottled Md Br/Yl Br Si Lo; Stopped By Rock	N	WG/KS	08/09/00
R 22		1	0-16	Md Br Si Lo	N	WG/KS	08/09/00
R 22		2	16-29	Mottled Yl Br/Md Br Si Lo	N	WG/KS	08/09/00
R 22		3	29-51	Dk Br Si Lo	P	WG/KS	08/09/00
R 22		4	51-92	Yl Br Compact Si; Stopped By Rock	N	WG/KS	08/09/00
R 22	1mE	1	0-25	Md Gr Br Si Lo W/Gvl	N	MR/KS	08/10/00
R 22	1mE	2	25-34	Md Gr Br Si Lo W/Gvl	N	MR/KS	08/10/00
R 22	1mE	3	34-54	Dk Gr Br Si Lo; Charcoal - Disc.	N	MR/KS	08/10/00
R 22	1mE	4	54-96	Yl Br Cl Si	N	MR/KS	08/10/00
R 22	1mN	1	0-25	Dk Br Si Lo	N	MR/KS	08/10/00
R 22	1mN	2	25-51	Dk Br Si Lo	H	MR/KS	08/10/00
R 22	1mN	3	51-78	Yl Br Si	N	MR/KS	08/10/00
R 22	1mN	4	78-103	Md Br Si Lo	N	MR/KS	08/10/00
R 22	1mS	1	0-25	Md Gr Br Si Lo; Coal, Slag - Disc.	N	MR/KS	08/10/00
R 22	1mS	2	25-46	Md Gr Br Si Lo	N	MR/KS	08/10/00
R 22	1mS	3	46-55	Dk Gr Br Si Lo	N	MR/KS	08/10/00
R 22	1mS	4	55-97	Yl Br Cl Si	N	MR/KS	08/10/00
R 22	1mW	1	0-25	Md Br Si	N	DC/WG	08/10/00
R 22	1mW	2	25-50	Md Br Si	N	DC/WG	08/10/00
R 22	1mW	3	50-57	Md Br Si	N	DC/WG	08/10/00
R 22	1mW	4	57-77	Yl Br Si; Coal - Disc.	P	DC/WG	08/10/00
R 22	1mW	5	77-90	Dk Br Si Mottled W/Yl Br Si	N	DC/WG	08/10/00
R 22	1mW	6	90-107	Dk Br Si	N	DC/WG	08/10/00
R 22	7.5mE	1	0-25	Dk Br Si Lo	N	MR/KS	08/10/00
R 22	7.5mE	2	25-43	Dk Br Si Lo; Charcoal - Disc.	N	MR/KS	08/10/00
R 22	7.5mE	3	43-91	Yl Br Sa Si; Stopped By Rock	N	MR/KS	08/10/00
R 22	7.5mN	1	0-25	Md Gr Br Si Lo; Coal - Disc.	N	MR/KS	08/10/00
R 22	7.5mN	2	25-48	Md Gr Br Si Lo	N	MR/KS	08/10/00
R 22	7.5mN	3	48-67	Dk Gr Br Si Lo; Charcoal - Disc.	N	MR/KS	08/10/00
R 22	7.5mN	4	67-102	Lt Br Cl Si	N	MR/KS	08/10/00
R 22	7.5mS	1	0-26	Rd Br Si	N	DC/WG	08/10/00
R 22	7.5mS	2	26-62	Br Si	N	DC/WG	08/10/00
R 22	7.5mS	3	62-76	Yl Br Si	N	DC/WG	08/10/00
R 22	7.5mS	4	76-101	Dk Br Si	N	DC/WG	08/10/00
R 22	7.5mW	1	0-25	Md Br Si	N	DC/WG	08/10/00
R 22	7.5mW	2	25-50	Md Br Si	N	DC/WG	08/10/00
R 22	7.5mW	3	50-62	Md Br Si; Coal, Plastic - Disc.	H	DC/WG	08/10/00
R 22	7.5mW	4	62-87	Yl Br Si	N	DC/WG	08/10/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
R 22	7.5mW	5	87-100	Yl Br Si	N	DC/WG	08/10/00
R 23		1	0-25	Dk Br Si Lo; Slag, Charcoal - Disc.	H	LO/JW	08/08/00
R 23		2	25-30	Dk Br Si Lo	N	LO/JW	08/08/00
R 23		3	30-61	Md Br Si Lo	N	LO/JW	08/08/00
R 23		4	61-104	Md Yl/Br Si	N	LO/JW	08/08/00
R 24		1	0-25	Dk Br Si Lo	N	BG/MR	08/15/00
R 24		2	25-47	Dk Br Si Lo	N	BG/MR	08/15/00
R 24		3	47-62	Dk Gr Br Si Lo	N	BG/MR	08/15/00
R 24		4	62-96	Yl Br Cl Si	N	BG/MR	08/15/00
R 25		1	0-25	Md Gr Br Cl Si W/Cobbles	N	AM/TH	08/04/00
R 25		2	25-40	Md Gr Br Cl Si W/Cobbles	N	AM/TH	08/04/00
R 25		3	40-55	Md Ol Br Si	N	AM/TH	08/04/00
R 25		4	55-67	Dk Gr Br Si	N	AM/TH	08/04/00
R 25		5	67-104	Md Ol Br Si	N	AM/TH	08/04/00
R 29		1	0-25	Md Br Si Lo	N	MR/RW	11/20/00
R 29		2	25-45	Md Br Si Lo	N	MR/RW	11/20/00
R 29		3	45-65	Md Br Si Lo	N	MR/RW	11/20/00
R 29		4	65-85	Md Br Si Lo	N	MR/RW	11/20/00
R 29		5	85-96	Md Br Si Lo W/Charcoal	N	MR/RW	11/20/00
R 29		6	96-106	Dk Gr Br Si Lo	N	MR/RW	11/20/00
R 30		1	0-25	Md Br Si Lo	N	MR/RW	11/20/00
R 30		2	25-39	Md Br Si Lo	N	MR/RW	11/20/00
R 30		3	39-63	Lt Ol Br Si Lo W/Sm.Amt.Gvl	N	MR/RW	11/20/00
R 30		4	63-82	Lt Ol Br Sa Si W/Rock	N	MR/RW	11/20/00
R 31		1	0-25	Md Br Si Lo	N	MR/RW	11/20/00
R 31		2	25-30	Md Br Si Lo	N	MR/RW	11/20/00
R 31		3	30-61	Lt Ol Br Si Lo	N	MR/RW	11/20/00
R 31		4	61-77	Lt Ol Br Sa Si W/Gvl + Cobbles; Stopped By Rock	N	MR/RW	11/20/00
R 32		1	0-25	Md Gr Br Si Lo	N	MR/RW	11/20/00
R 32		2	25-56	Md Gr Br Si Lo	N	MR/RW	11/20/00
R 32		3	56-61	Yl Br Si Lo W/Gvl	N	MR/RW	11/20/00
R 32		4	61-81	Yl Br Si Lo W/Gvl	N	MR/RW	11/20/00
R 32		5	81-92	Very Dk Gr Si Lo	N	MR/RW	11/20/00
R 32		6	92-105	Yl Br Si W/Gvl	N	MR/RW	11/20/00
R 33		1	0-25	Md Br Si Lo	N	MR/RW	11/20/00
R 33		2	25-32	Md Br Si Lo	N	MR/RW	11/20/00
R 33		3	32-40	Dk Gr Br Si Lo	N	MR/RW	11/20/00
R 33		4	40-60	Lt Ol Br Si Lo	N	MR/RW	11/20/00
R 33		5	60-80	Lt Ol Br Si Lo	N	MR/RW	11/20/00
R 33		6	80-100	Lt Ol Br Si Lo	N	MR/RW	11/20/00
R 34		1	0-25	Md Br Si Lo	N	MR/RW	11/20/00
R 34		2	25-45	Md Br Si Lo	N	MR/RW	11/20/00
R 34		3	45-58	Md Br Si Lo	N	MR/RW	11/20/00
R 34		4	58-78	Lt Ol Br Si	N	MR/RW	11/20/00
R 34		5	78-98	Lt Ol Br Si	N	MR/RW	11/20/00
R 34		6	98-110	Lt Ol Br Si	N	MR/RW	11/20/00
R 35		1	0-25	Md Br Cl Si Lo	N	LM/TK	11/20/00
R 35		2	25-38	Md Br Cl Si Lo	N	LM/TK	11/20/00
R 35		3	38-55	Dk Br Cl Si	N	LM/TK	11/20/00
R 35		4	55-75	Yl Br Cl Si	N	LM/TK	11/20/00
R 35		5	75-95	Yl Br Cl Si	N	LM/TK	11/20/00
R 35		6	95-102	Yl Br Cl Si W/Sm.Amt.Gvl	N	LM/TK	11/20/00
R 36		1	0-29	Md Br Si Lo	H	MR/RW	11/20/00
R 36		2	29-49	Lt Ol Br Sa Si W/Gvl	N	MR/RW	11/20/00
R 36		3	49-62	Lt Ol Br Sa Si W/Gvl	N	MR/RW	11/20/00
R 37		1	0-25	Md Br Si Lo	N	MR/RW	11/20/00
R 37		2	25-45	Md Br Si Lo	N	MR/RW	11/20/00
R 37		3	45-61	Md Br Si Lo	N	MR/RW	11/20/00
R 37		4	61-83	Very Dk Gr Si Lo	N	MR/RW	11/20/00
R 37		5	83-103	Lt Ol Br Sa Si W/Gvl	N	MR/RW	11/20/00
R 37		6	103-112	Lt Ol Br Sa Si W/Gvl	N	MR/RW	11/20/00
S 10		1	0-25	Md Br Si	N	DC/JM	08/09/00
S 10		2	25-33	Md Br Si	N	DC/JM	08/09/00
S 10		3	33-58	Yl Br Si W/Gvl	N	DC/JM	08/09/00
S 10		4	58-83	Yl Br Si W/Gvl	N	DC/JM	08/09/00
S 10		5	83-85	Yl Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/09/00
S 11		1	0-25	Md Br Si	N	DC/JM	08/09/00
S 11		2	25-40	Md Br Si	N	DC/JM	08/09/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
S 11		3	40-64	Yl Br Si W/Gvl + Rock; Stopped By Rock	N	DC/JM	08/09/00
S 12		1	0-25	Md Br Si	N	DC/JM	08/08/00
S 12		2	25-50	Md Br Si	N	DC/JM	08/08/00
S 12		3	50-75	Yl Br Si	N	DC/JM	08/08/00
S 12		4	75-98	Yl Br Si	N	DC/JM	08/08/00
S 13		1	0-25	Md Br Si W/Gvl + Cobbles	N	DC/JM	08/08/00
S 13		2	25-48	Md Br Si W/Gvl + Cobbles	N	DC/JM	08/08/00
S 14		1	0-25	Md Br Si W/Gvl	H	DC/JM	08/08/00
S 14		2	25-44	Md Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/08/00
S 15		1	0-25	Md Br Si	H	DC/JM	08/08/00
S 15		2	25-30	Md Br Si	N	DC/JM	08/08/00
S 15		3	30-50	Yl Br Si	N	DC/JM	08/08/00
S 15		4	50-75	Yl Br Si	N	DC/JM	08/08/00
S 15		5	75-100	Yl Br Si	N	DC/JM	08/08/00
S 16		1	0-25	Md Br Si Lo W/Rock	H	MO/JW	08/09/00
S 16		2	25-40	Md Br Si Lo	N	MO/JW	08/09/00
S 16		3	40-83	Yl Br Cl Si Lo; Stopped By Rock	N	MO/JW	08/09/00
S 17		1	0-30	Mixed Rd & Gr Br Sa; Stopped By Flat Rock	N	MO/JW	08/09/00
S 18		1	0-7	Yl Rd Sa	N	MR/LM	08/09/00
S 18		2	7-33	Mottled Gr Br/Dk Br Si W/Gvl	N	MR/LM	08/09/00
S 18		3	33-41	Dk Gr Br Cl Si W/Gvl + Rock; Stopped By Rock	N	MR/LM	08/09/00
S 19		1	0-25	Md Br Si Lo W/Gvl	N	MR/LM	08/09/00
S 19		2	25-40	Md Br Si Lo W/Gvl	N	MR/LM	08/09/00
S 19		3	40-49	Md Br Si Lo	N	MR/LM	08/09/00
S 20		1	0-20	Md Br Si	N	DC/JM	08/09/00
S 20		2	20-38	Lt Br Si Mottled W/Yl Br Si W/Gvl	N	DC/JM	08/09/00
S 20		3	38-80	Lt Br Si	N	DC/JM	08/09/00
S 21		1	0-25	Lt Br Si W/Gvl	N	DC/JM	08/09/00
S 21		2	25-47	Lt Br Si Mottled W/Yl Br Si W/Gvl	N	DC/JM	08/09/00
S 21		3	47-72	Md/Dk Br Si	N	DC/JM	08/09/00
S 21		4	72-97	Md/Dk Br Si	N	DC/JM	08/09/00
S 22		1	0-25	Md Br Si W/Some Gvl	N	DC/JM	08/09/00
S 22		2	25-50	Md Br Si W/Some Gvl	H	DC/JM	08/09/00
S 22		3	50-75	Yl Br Si	N	DC/JM	08/09/00
S 22		4	75-100	Yl Br Si	N	DC/JM	08/09/00
S 23		1	0-25	Md Br Si W/Some Gvl	N	DC/JM	08/09/00
S 23		2	25-50	Md Br Si W/Some Gvl	H	DC/JM	08/09/00
S 23		3	50-60	Md Br Si W/Some Gvl	N	DC/JM	08/09/00
S 23		4	60-85	Yl Br Si	N	DC/JM	08/09/00
S 23		5	85-104	Yl Br Si	N	DC/JM	08/09/00
S 24		1	0-25	Md Br Si Lo W/Gvl	H	BG/MR	08/15/00
S 24		2	25-34	Md Br Si Lo	N	BG/MR	08/15/00
S 24		3	34-50	Dk Gr Br Si Lo	N	BG/MR	08/15/00
S 24		4	50-75	Yl Br Cl Si	N	BG/MR	08/15/00
S 24		5	75-100	Yl Br Cl Si	N	BG/MR	08/15/00
S 25		1	0-25	Md Br Si Lo W/Cobbles	N	BG/MR	08/15/00
S 25		2	25-31	Md Br Si Lo	N	BG/MR	08/15/00
S 25		3	31-50	Dk Gr Br Si Lo; Charcoal - Disc.	N	BG/MR	08/15/00
S 25		4	50-75	Yl Br Cl Si	N	BG/MR	08/15/00
S 25		5	75-100	Yl Br Cl Si	N	BG/MR	08/15/00
S 26		1	0-25	Md Gr Br Cl Si W/Cobbles	N	AM/TH	08/04/00
S 26		2	25-37	Md Gr Br Cl Si W/Cobbles	H	AM/TH	08/04/00
S 26		3	37-42	Dk Gr Br Cl Si	N	AM/TH	08/04/00
S 26		4	42-100	Md Ol Br Si	N	AM/TH	08/04/00
T 11		1	0-25	Mottled Dk Br/Yl Br Si Lo	N	MR/KS	08/08/00
T 11		2	25-56	Mottled Dk Br/Yl Br Si Lo	N	MR/KS	08/08/00
T 11		3	56-76	Yl Br Cl Si W/Rock; Stopped By Rock	N	MR/KS	08/08/00
T 12		1	0-25	Dk Br Si Lo	N	MR/KS	08/08/00
T 12		2	25-53	Dk Br Si Lo	N	MR/KS	08/08/00
T 12		3	53-95	Yl Br Compact Cl Si	N	MR/KS	08/08/00
T 13		1	0-24	Mottled Dk Br/Yl Br Sa Lo	H	MR/KS	08/08/00
T 13		2	24-50	Dk Gr Br Si Lo	N	MR/KS	08/08/00
T 13		3	50-57	Yl Br Sa Si W/Rock; Stopped By Rock	N	MR/KS	08/08/00
T 15		1	0-25	Md Br Si Lo; Coal Ash - Disc.	N	MR/LM	08/09/00
T 15		2	25-30	Md Br Si Lo	N	MR/LM	08/09/00
T 15		3	30-80	Yl Br Si	N	MR/LM	08/09/00
T 16		1	0-25	Dk Br Si Lo	N	MR/LM	08/09/00
T 16		2	25-50	Dk Br Si Lo	N	MR/LM	08/09/00
T 16		3	50-57	Yl Br Sa Si W/Gvl + Rock; Stopped By Rock	N	MR/LM	08/09/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
T 18		1	0-7	Md Br Sa (Baseball Diamond Fill)	N	MR/LM	08/09/00
T 18		2	7-25	Mottled Lt & Dk Br Si W/Gvl	N	MR/LM	08/09/00
T 18		3	25-29	Dk Br Si W/Gvl	N	MR/LM	08/09/00
T 18		4	29-50	Md Br Si W/Gvl; Stopped By Rock	N	MR/LM	08/09/00
T 19		1	0-21	Md Br Si Lo	N	KS/WG	08/09/00
T 19		2	21-37	Yl Br Si W/Gvl; Stopped By Rock	N	KS/WG	08/09/00
T 20		1	0-13	Md Br Si Lo	N	WG/KS	08/09/00
T 20		2	13-27	Mottled Yl Br Si Lo W/Cobbles + Gvl; Stopped By Rock	N	WG/KS	08/09/00
T 21		1	0-12	Md Br Si Lo	N	WG/KS	08/09/00
T 21		2	12-24	Md Br Sa Si W/Pebbles	N	WG/KS	08/09/00
T 21		3	24-36	Md Br Sa Si W/Gvl; Stopped By Rock	N	WG/KS	08/09/00
T 22		1	0-11	Md Br Si Lo	N	WG/KS	08/09/00
T 22		2	11-37	Mottled Yl Br/Md Br Si Lo	N	WG/KS	08/09/00
T 22		3	37-55	Dk Br Si Lo	N	WG/KS	08/09/00
T 22		4	55-93	Yl Br Compact Si; Stopped By Rock	N	WG/KS	08/09/00
T 23		1	0-6	Dk Br Si Lo	N	WG/KS	08/09/00
T 23		2	6-21	Mottled Yl Br/Dk Br Si Lo	N	WG/KS	08/09/00
T 23		3	21-27	Yl Br Si W/Cobbles; Stopped By Rock	N	WG/KS	08/09/00
T 24		1	0-25	Md Br Si Lo W/Gvl	N	BG/MR	08/15/00
T 24		2	25-81	Md Br Si Lo	N	BG/MR	08/15/00
T 24		3	81-101	Dk Gr Br Cl Lo	N	BG/MR	08/15/00
T 24		4	101-111	Yl Br Cl Si	N	BG/MR	08/15/00
T 25		1	0-19	Md Br Si Lo W/Gvl	H	BG/MR	08/15/00
T 25		2	19-38	Md Br Cl Si Lo	N	BG/MR	08/15/00
T 25		3	38-58	Very Dk Gr Br Si Lo; Charcoal - Disc.	N	BG/MR	08/15/00
T 25		4	58-98	Yl Br Si Lo	N	BG/MR	08/15/00
T 26		1	0-25	Md Br Si Lo W/Gvl; Brick - Disc.	H	BG/MR	08/15/00
T 26		2	25-44	Md Br Si Lo W/Gvl	N	BG/MR	08/15/00
T 26		3	44-56	Dk Gr Br Si Lo	N	BG/MR	08/15/00
T 26		4	56-98	Yl Br Cl Si	N	BG/MR	08/15/00
T 30		1	0-25	Ol Br Cl Si; Cinder, Coal, Styrofoam - Disc.	H	JD/MD	11/20/00
T 30		2	25-80	Ol Br Cl Si	N	JD/MD	11/20/00
T 30		3	80-94	Dk Br Cl Si	N	JD/MD	11/20/00
T 30		4	94-109	Yl Br Cl Si	N	JD/MD	11/20/00
T 31		1	0-25	Md Ol Br Cl Si; Charcoal - Disc.	N	JD/MD	11/20/00
T 31		2	25-29	Md Ol Br Cl Si	N	JD/MD	11/20/00
T 31		3	29-39	Dk Br Cl Si	N	JD/MD	11/20/00
T 31		4	39-81	Lt Ol Yl Cl Si	N	JD/MD	11/20/00
T 32		1	0-25	Ol Br Cl Si	N	JD/MD	11/20/00
T 32		2	25-45	Ol Br Cl Si	N	JD/MD	11/20/00
T 32		3	45-55	Dk Br Cl Si	N	JD/MD	11/20/00
T 32		4	55-87	Lt Yl Br Cl Si	N	JD/MD	11/20/00
T 33		1	0-25	Md Ol Br Cl Si	H	JD/MD	11/20/00
T 33		2	25-45	Md Ol Br Cl Si	N	JD/MD	11/20/00
T 33		3	45-58	Dk Br Cl Si	N	JD/MD	11/20/00
T 33		4	58-85	Lt Ol Yl Cl Si	N	JD/MD	11/20/00
T 34		1	0-25	Ol Br Cl Si	N	JD/MD	11/20/00
T 34		2	25-45	Ol Br Cl Si	N	JD/MD	11/20/00
T 34		3	45-55	Dk Br Cl Si	N	JD/MD	11/20/00
T 34		4	55-81	Yl Br Cl Si	N	JD/MD	11/20/00
T 35		1	0-25	Md Ol Br Cl Si; Slag - Disc.	N	JD/MD	11/20/00
T 35		2	25-41	Md Ol Br Cl Si	N	JD/MD	11/20/00
T 35		3	41-81	Lt Ol Yl Cl Si	N	JD/MD	11/20/00
T 36		1	0-25	Ol Br Cl Si; Plastic - Disc.	N	JD/MD	11/20/00
T 36		2	25-59	Ol Br Cl Si	N	JD/MD	11/20/00
T 36		3	59-75	Dk Br Cl Si	N	JD/MD	11/20/00
T 36		4	75-90	Yl Br Cl Si	N	JD/MD	11/20/00
T 37		1	0-25	Md Ol Br Cl Si; Plastic - Disc.	N	JD/MD	11/20/00
T 37		2	25-60	Md Ol Br Cl Si	N	JD/MD	11/20/00
T 37		3	60-90	Lt Ol Yl Cl Si	N	JD/MD	11/20/00
U 13		1	0-25	Md Br Si Lo	H	MO/JW	08/09/00
U 13		2	25-55	Md Br Si Lo	N	MO/JW	08/09/00
U 13		3	55-99	Yl Br Cl Si Lo	N	MO/JW	08/09/00
U 14		1	0-25	Md Br Si Lo W/Gvl	N	WG/LM	08/08/00
U 14		2	25-44	Md Br Si Lo W/Gvl	N	WG/LM	08/08/00
U 14		3	44-58	Yl Br Si Lo; Stopped By Rock	N	WG/LM	08/08/00
U 15		1	0-29	Md Br Si Lo W/Gvl	N	WG/LM	08/08/00
U 15		2	29-44	Dk Br/Gr Br Si W/Gvl	N	WG/LM	08/08/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
U 15		3	44-58	Yl Br Si	N	WG/LM	08/08/00
U 16		1	0-7	Dk Br Si Lo	N	KS/WG	08/09/00
U 16		2	7-16	Mottled Yl Br/Dk Br Si Lo	N	KS/WG	08/09/00
U 16		3	16-41	Md Br Si Lo; Coal - Disc.	H	KS/WG	08/09/00
U 16		4	41-43	Yl Br Compact Si; Stopped By Rock	N	KS/WG	08/09/00
U 17		1	0-23	Dk Gr Bk Si Lo	N	KS/WG	08/09/00
U 17		2	23-44	Md Dk Br Si Lo W/Rock	N	KS/WG	08/09/00
U 18		1	0-6	Yl Compact Si	N	KS/WG	08/09/00
U 18		2	6-24	Bluish Gr Sa	N	KS/WG	08/09/00
U 18		3	24-33	Gr Br Sa Lo W/Rock; Stopped By Rock	N	KS/WG	08/09/00
U 19		1	0-15	Md Br Si Lo	N	KS/WG	08/09/00
U 19		2	15-34	Md Br Si W/Gvl + Rock; Stopped By Rock	N	KS/WG	08/09/00
U 20		1	0-12	Dk Br Si Lo	N	KS/WG	08/09/00
U 20		2	12-23	Md Br Si W/Gvl + Rock; Stopped By Rock	N	KS/WG	08/09/00
U 21		1	0-19	Md Br Si Lo	N	KS/WG	08/09/00
U 21		2	19-32	Yl Br Si W/Gvl; Stopped By Rock	H	KS/WG	08/09/00
U 22		1	0-12	Md Br Si Lo	N	MR/KS	08/09/00
U 22		2	12-30	Yl Br Si	N	MR/KS	08/09/00
U 22		3	30-34	Md Br Si W/Gvl; Stopped By Rock	N	MR/KS	08/09/00
U 23		1	0-8	Md Br Si Lo	N	MR/KS	08/09/00
U 23		2	8-21	Md Br Si Lo W/Rock	N	MR/KS	08/09/00
U 23		3	21-48	Mottled Yl Br/Md Br Si Lo; Stopped By Rock	N	MR/KS	08/09/00
U 24		1	0-8	Dk Br Si Lo	N	DR/KS	08/14/00
U 24		2	8-40	Mottled Yl Br/Dk Br Si Lo W/Cobbles + Gvl; Stopped By Rock	N	DR/KS	08/14/00
U 25		1	0-25	Gr Br Cl Si	H	SK/JW	08/14/00
U 25		2	25-45	Gr Br Cl Si	N	SK/JW	08/14/00
U 25		3	45-60	Dk Br/Bk Cl Si W/Charcoal Flecks; Charcoal - Disc.	N	SK/JW	08/14/00
U 25		4	60-100	Yl Br Cl Si	N	SK/JW	08/14/00
U 26		1	0-25	Md Gr Br Si Lo	N	BG/MR	08/14/00
U 26		2	25-31	Md Gr Br Si Lo	N	BG/MR	08/14/00
U 26		3	31-100	Yl Br Cl Si	N	BG/MR	08/14/00
V 12		1	0-7	Md Br Si W/Gvl	N	LM/TK	08/10/00
V 12		2	7-37	Yl Br Gvl W/Si; Stopped By Rock	N	LM/TK	08/10/00
V 13		1	0-25	Md Br Si Lo	N	MO/JW	08/09/00
V 13		2	25-31	Md Br Si Lo	N	MO/JW	08/09/00
V 13		3	31-65	Yl Br Cl Si Lo; Stopped By Rock	N	MO/JW	08/09/00
V 14		1	0-22	Md Br Si Lo W/Gvl	N	MR/KS	08/10/00
V 14		2	22-38	Yl Br Very Compact Sl	N	MR/KS	08/10/00
V 14		3	38-42	Yl Br Sa Si W/Rock; Stopped By Rock	N	MR/KS	08/10/00
V 15		1	0-25	Dk Br Si Lo	N	MR/KS	08/10/00
V 15		2	25-49	Dk Br Si Lo	N	MR/KS	08/10/00
V 15		3	49-81	Yl Br Compact Si; Stopped By Rock	N	MR/KS	08/10/00
V 16		1	0-25	Dk Br Si Lo	N	MR/KS	08/10/00
V 16		2	25-32	Dk Br Si Lo	N	MR/KS	08/10/00
V 16		3	32-48	Mottled Gr Br/Yl Br Sa Si W/Rock; Stopped By Rock	N	MR/KS	08/10/00
V 17		1	0-17	Md Br Si Lo	H	MO/JW	08/09/00
V 17		2	17-38	Mottled Md Br & Yl Si Lo W/Rock	N	MO/JW	08/09/00
V 17		3	38-79	Dk Gr Br Si Lo	H	MO/JW	08/09/00
V 17		4	79-93	Yl Br Cl Si Lo; Stopped By Rock	N	MO/JW	08/09/00
V 18		1	0-18	Md Br Si Lo	N	MO/JW	08/09/00
V 18		2	18-43	Mottled Yl Br Compact Si Lo W/Rock + Gvl; Styrofoam - Disc.	N	MO/JW	08/09/00
V 19		1	0-17	Md Br Si Lo	N	MO/JW	08/09/00
V 19		2	17-40	Mottled Yl Br Compact Si Lo W/Rock + Gvl; Stopped By Rock	N	MO/JW	08/09/00
V 20		1	0-25	Lt Br Si W/Gvl	N	DC/JM	08/09/00
V 20		2	25-32	Lt Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/09/00
V 21		1	0-25	Lt Br Si W/Gvl	N	DC/JM	08/09/00
V 21		2	25-40	Lt Br Si W/Gvl	N	DC/JM	08/09/00
V 21		3	40-61	Lt Br Si Mottled W/Yl Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/09/00
V 22		1	0-25	Lt Br Si W/Gvl	N	DC/JM	08/09/00
V 22		2	25-35	Lt Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/09/00
V 23		1	0-19	Dk Br Si Lo W/Gvl	H	BG/MR	08/14/00
V 23		2	19-43	Dk Br Cl Si W/Yl Br Cl Si Mottles	N	BG/MR	08/14/00
V 23		3	43-55	Yl Br Sa Lo W/Gvl; Stopped By Rock	N	BG/MR	08/14/00
V 24		1	0-13	Dk Br Si Lo	N	DR/KS	08/14/00
V 24		2	13-41	Mottled Yl Br/Dk Br Si Lo W/Gvl + Cobbles; Stopped By Rock	N	DR/KS	08/14/00
V 25		1	0-15	Dk Br Si Lo	N	DR/KS	08/14/00
V 25		2	15-60	Mottled Yl Br/Dk Br Si Lo	N	DR/KS	08/14/00
V 25		3	60-80	Yl Br Si Lo	N	DR/KS	08/14/00
V 25		4	80-101	Yl Br Si Lo W/Sa	N	DR/KS	08/14/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
V 26		1	0-12	Dk Br Si Lo	N	DR/KS	08/14/00
V 26		2	12-42	Mottled Dk Br W/Yl Br Si Lo W/Gvl	N	DR/KS	08/14/00
V 26		3	42-90	Yl Br Si Lo; Stopped By Rock	N	DR/KS	08/14/00
V 30		1	0-25	Ol Br Cl Si	H	MD/JD	11/20/00
V 30		2	25-43	Ol Br Cl Si	N	MD/JD	11/20/00
V 30		3	43-80	Yl/Br Cl Si	N	MD/JD	11/20/00
V 31		1	0-25	Md Ol Br Cl Si	N	MD/JD	11/20/00
V 31		2	25-36	Md Ol Br Cl Si	N	MD/JD	11/20/00
V 31		3	36-82	Lt Ol Yl Cl Si	N	MD/JD	11/20/00
V 32		1	0-25	Ol Br Cl Si	N	MD/JD	11/20/00
V 32		2	25-33	Ol Br Cl Si	N	MD/JD	11/20/00
V 32		3	33-43	Dk Br Cl Si W/Gvl; Charcoal - Disc.	N	MD/JD	11/20/00
V 32		4	43-63	Yl Br Cl Si W/Gvl	N	MD/JD	11/20/00
V 33		1	0-25	Md Ol Br Cl Si; Coal - Disc.	N	MD/JD	11/20/00
V 33		2	25-39	Md Ol Br Cl Si	N	MD/JD	11/20/00
V 33		3	39-45	Md Ol Yl Sa W/Gvl + Rock; Stopped By Rock	N	MD/JD	11/20/00
V 34		1	0-25	Ol Br Cl Si	N	MD/JD	11/20/00
V 34		2	25-37	Ol Br Cl Si	N	MD/JD	11/20/00
V 34		3	37-60	Yl Br Sa W/Gvl	N	MD/JD	11/20/00
V 35		1	0-25	Md Ol Br Cl Si W/Lt Cobbles	N	MD/JD	11/20/00
V 35		2	25-33	Md Ol Br Cl Si	N	MD/JD	11/20/00
V 35		3	33-61	Lt Ol Yl Sa W/Gvl + Cobbles	N	MD/JD	11/20/00
V 36		1	0-25	Ol Br Cl Si	N	MD/JD	11/20/00
V 36		2	25-37	Ol Br Cl Si	N	MD/JD	11/20/00
V 36		3	37-53	Dk Br Cl Si	N	MD/JD	11/20/00
V 36		4	53-80	Yl Br Cl Si	N	MD/JD	11/20/00
W 10		1	0-21	Mottled Dk Br/Yl Br Sa Lo	N	MR/BG	08/14/00
W 10		2	21-39	Yl Br Sa W/Gvl + Cobbles; Stopped By Rock	N	MR/BG	08/14/00
W 11		1	0-22	Md Or Cl Lo	H	NM/KH	08/14/00
W 11		2	22-39	Lt Br Cl Lo W/Cobbles + Rock; Stopped By Rock	N	NM/KH	08/14/00
W 12		1	0-24	Md Br Sa Lo	N	MR/KS	08/09/00
W 12		2	24-32	Yl Br Sa Si W/Gvl + Rock; Stopped By Rock	N	MR/KS	08/09/00
W 13		1	0-17	Md Br Si Lo	H	MR/KS	08/09/00
W 13		2	17-21	Yl Br Si W/Rock; Stopped By Rock	N	MR/KS	08/09/00
W 14		1	0-12	Dk Br Sa Lo	N	MR/KS	08/09/00
W 14		2	12-30	Mottled Dk Br & Yl Br Sa Lo W/Gvl	N	MR/KS	08/09/00
W 14		3	30-41	Yl Br Sa Si W/Rock; Stopped By Rock	N	MR/KS	08/09/00
W 15		1	0-24	Md Br Si Lo	N	MR/KS	08/10/00
W 15		2	24-62	Yl Br Compact Si; Stopped By Compact Si Layer	N	MR/KS	08/10/00
W 16		1	0-11	Dk Br Si Lo	N	MR/KS	08/10/00
W 16		2	11-37	Mottled Yl Br/Dk Br Si Lo W/Gvl; Stopped By Rock	N	MR/KS	08/10/00
W 17		1	0-8	Dk Br Si Lo	N	LM	08/14/00
W 17		2	8-25	Md Br Si Lo W/Rock	N	LM	08/14/00
W 17		3	25-30	Md Br Si Lo W/Rock	N	LM	08/14/00
W 17		4	30-40	Yl Br Si Lo W/Rock; Stopped By Rock	N	LM	08/14/00
W 18		1	0-25	Lt Br Si W/Gvl	N	DC/JM	08/09/00
W 18		2	25-40	Lt Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/09/00
W 19		1	0-25	Md Br Si W/Gvl	N	DC/JM	08/09/00
W 19		2	25-30	Md Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/09/00
W 20		1	0-28	Lt Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/09/00
W 21		1	0-25	Lt Br Si W/Gvl	H	DC/JM	08/09/00
W 21		2	25-45	Lt Br Si W/Gvl; Stopped By Rock	N	DC/JM	08/09/00
W 22		1	0-15	Md Br Si Lo W/Gvl + Cobbles	N	BG/MR	08/15/00
W 22		2	15-32	Md Br Cl Si W/Yl Br Cl Si Mottles + Cobbles; Stopped By Rock	N	BG/MR	08/15/00
W 23		1	0-11	Md Br Si Lo	N	DR/KS	08/14/00
W 23		2	11-32	Mottled Yl Br/Md Br Si Lo W/Gvl; Stopped By Rock	N	DR/KS	08/14/00
W 24		1	0-8	Md Br Si Lo	N	DR/KS	08/14/00
W 24		2	8-35	Mottled Yl Br/Md Br Si Lo; Stopped By Rock	N	DR/KS	08/14/00
W 25		1	0-15	Dk Br Si Lo	N	DR/KS	08/14/00
W 25		2	15-77	Mottled Dk Br & Yl Br Si Lo; Coal, Slag - Disc.	N	DR/KS	08/14/00
W 25		3	77-102	Yl Br Si Lo W/Cl	N	DR/KS	08/14/00
W 26		1	0-14	Dk Br Si Lo	N	DR/KS	08/14/00
W 26		2	14-40	Mottled Yl Br/Dk Br Si Lo; Charcoal - Disc.	N	DR/KS	08/14/00
W 26		3	40-96	Yl Br Cl Si; Stopped By Rock	N	DR/KS	08/14/00
W 30		1	0-25	Md Br Si Lo	N	KH/AM	11/21/00
W 30		2	25-30	Md Br Si Lo	N	KH/AM	11/21/00
W 30		3	30-50	Yl Br Si W/Gvl; Charcoal - Disc.	N	KH/AM	11/21/00
W 30		4	50-70	Yl Br Si	N	KH/AM	11/21/00
W 30		5	70-85	Yl Br Si	N	KH/AM	11/21/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
X 9		1	0-18	Dk Br Si Lo	N	MR/BG	08/14/00
X 9		2	18-39	Yl Br Compact Sa Lo; Stopped By Gvl	N	MR/BG	08/14/00
X 11		1	0-18	Md Gr Br Cl Lo	N	NM/KH	08/14/00
X 11		2	18-21	Yl Br Cl Lo W/Rock; Stopped By Rock	N	NM/KH	08/14/00
X 12		1	0-23	Md Gr Br Cl Lo; Coal - Disc.; Stopped By Rock	N	NM/KH	08/14/00
X 13		1	0-22	Md Br Si Lo	N	DC/WG	08/10/00
X 13		2	22-38	Lt Br Sa Si	N	DC/WG	08/10/00
X 13		3	38-58	Yl Br Si	N	DC/WG	08/10/00
X 13		4	58-70	Lt Br Sa Si W/Gvl	N	DC/WG	08/10/00
X 14		1	0-24	Dk Br Si Lo	N	LM/TK	08/10/00
X 14		2	24-60	Md Br Mottled W/Yl Br Si	H	LM/TK	08/10/00
X 14		3	60-68	Yl Compact Si; Stopped By Rock	N	LM/TK	08/10/00
X 15		1	0-25	Dk Br Si Lo W/Gvl	N	LM/TK	08/10/00
X 15		2	25-30	Dk Br Si Lo W/Gvl	N	LM/TK	08/10/00
X 15		3	30-50	Dk Br Si Lo W/Less Gvl	N	LM/TK	08/10/00
X 15		4	50-52	Yl Br Si Lo W/Some Gvl; Stopped By Rock	N	LM/TK	08/10/00
X 16		1	0-17	Dk Br Si Lo W/Gvl	N	LM/TK	08/10/00
X 16		2	17-40	Md Br Mottled W/Yl Br Si Lo W/Gvl; Stopped By Rock	N	LM/TK	08/10/00
X 17		1	0-9	Dk Br Si W/Gvl	N	LM/TK	08/10/00
X 17		2	9-28	Md Br Si W/Gvl; Stopped By Rock	N	LM/TK	08/10/00
X 18		1	0-10	Dk Br Si W/Gvl	N	LM/TK	08/10/00
X 18		2	10-33	Md Br Si W/Much Gvl; Stopped By Rock	N	LM/TK	08/10/00
X 19		1	0-7	Md Br Si	N	MR/KS	08/09/00
X 19		2	7-16	Md Br Si W/Gvl + Rock; Stopped By Rock	N	MR/KS	08/09/00
X 20		1	0-15	Md Br Si Lo	N	MR/KS	08/09/00
X 20		2	15-40	Br Si Sa W/Gvl	N	MR/KS	08/09/00
X 20		3	40-49	Md Br Si W/Rock; Stopped By Rock	N	MR/KS	08/09/00
X 21		1	0-6	Md Br Si Lo	N	MR/KS	08/09/00
X 21		2	6-25	Md Br Sa Si W/Gvl + Cobbles; Stopped By Rock	N	MR/KS	08/09/00
X 22		1	0-4	Md Br Si Lo	N	DR/KS	08/14/00
X 22		2	4-13	Br Si Lo W/Gvl + Cobbles; Stopped By Rock	N	DR/KS	08/14/00
X 23		1	0-9	Lt Br Si Lo	N	DR/KS	08/14/00
X 23		2	9-33	Mottled Yl Br/Lt Br Si Lo W/Rock	N	DR/KS	08/14/00
X 23		3	33-48	Yl Br Si Lo W/Cl; Stopped By Rock	N	DR/KS	08/14/00
X 24		1	0-14	Dk Br Si Lo	N	DR/KS	08/14/00
X 24		2	14-25	Mottled Yl Br/Dk Br Si Lo W/Gvl; Stopped By Rock	N	DR/KS	08/14/00
X 25		1	0-12	Dk Br Si Lo	N	DR/KS	08/14/00
X 25		2	12-33	Mottled Yl Br/Dk Br Si Lo W/Gvl; Stopped By Rock	N	DR/KS	08/14/00
X 29		1	0-24	Br Si Lo Mottled W/Yl Br Si Lo; Modern Bottle Glass - Disc.	N	KH/AM	11/21/00
X 29		2	24-35	Md Br Si Lo	N	KH/AM	11/21/00
X 29		3	35-55	Yl Br Si; Pocket Of Lt Yl Si Lo In W 1/2 From 35-44cm	N	KH/AM	11/21/00
X 29		4	55-75	Yl Br Si	N	KH/AM	11/21/00
X 29		5	75-95	Yl Br Si	N	KH/AM	11/21/00
X 29		6	95-100	Yl Br Si	N	KH/AM	11/21/00
X 30		1	0-25	Md Br Cl Si	P	TK/LM	11/20/00
X 30		2	25-40	Md Br Cl Si	N	TK/LM	11/20/00
X 30		3	40-47	Dk Br Cl Si	N	TK/LM	11/20/00
X 30		4	47-74	Yl Br Si; Stopped By Gvl	N	TK/LM	11/20/00
X 30	1mE	1	0-25	Dk Br Si Lo; Styrofoam, Coal - Disc.	N	KH/AM	11/21/00
X 30	1mE	2	25-51	Md Br Si Lo	N	KH/AM	11/21/00
X 30	1mE	3	51-78	Yl Br Si; Styrofoam - Disc.	N	KH/AM	11/21/00
X 30	1mE	4	78-93	Yl Br Si W/Gvl; Stopped By Rock	N	KH/AM	11/21/00
X 30	1mN	1	0-25	Md Br Si Lo; Styrofoam, Coal - Disc.	N	AM/KH	11/21/00
X 30	1mN	2	25-30	Md Br Si Lo; Plastic - Disc.	N	AM/KH	11/21/00
X 30	1mN	3	30-59	Yl Br Si Lo	N	AM/KH	11/21/00
X 30	1mN	4	59-70	Yl Br Si Lo W/Rock + Gvl; Stopped By Rock	N	AM/KH	11/21/00
X 30	1mS	1	0-20	Md Br Si Lo; Styrofoam, Coal - Disc.	N	KH/AM	11/21/00
X 30	1mS	2	20-30	Md Br Si Lo; Dk Br Organic Mat'L.In S.Wall	N	KH/AM	11/21/00
X 30	1mS	3	30-48	Md Br Si Lo	N	KH/AM	11/21/00
X 30	1mS	4	48-63	Dk Gr Br Si Lo	N	KH/AM	11/21/00
X 30	1mS	5	63-95	Yl Br Si	N	KH/AM	11/21/00
X 30	7.5mE	1	0-25	Md Br Cl Si; Coal, Pull Tab - Disc.	N	LM/MD	11/21/00
X 30	7.5mE	2	25-34	Gr Br Cl Si	N	LM/MD	11/21/00
X 30	7.5mE	3	34-57	Yl Br Cl Si	N	LM/MD	11/21/00
X 30	7.5mE	4	57-72	Md Br Cl Si	N	LM/MD	11/21/00
X 30	7.5mE	5	72-77	Very Compact Yl Br Cl Si; Stopped By Gvl	N	LM/MD	11/21/00
X 30	7.5mN	1	0-19	Md Ol Br Cl Si; Coal, Charcoal - Disc.	H	LM/MD	11/21/00
X 30	7.5mN	2	19-24	Md Rd Br Cl Si; Charcoal - Disc.	N	LM/MD	11/21/00
X 30	7.5mN	3	24-32	Md Ol Br Cl Si; Charcoal - Disc.	N	LM/MD	11/21/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
X 30	7.5mN	4	32-46	Dk Br Cl Si; Charcoal - Disc.	N	LM/MD	11/21/00
X 30	7.5mN	5	46-80	Lt Or Yl Cl Si	N	LM/MD	11/21/00
X 30	7.5mS	1	0-28	Md Br Si Lo; Pocket Of Br Organic Soil At 10-17cm On W.Wall + Cloth At 12cm In NW Wall	N	KH/AM	11/21/00
X 30	7.5mS	2	28-36	Lt Br Si Lo	N	KH/AM	11/21/00
X 30	7.5mS	3	36-74	Yl Br Si Lo	N	KH/AM	11/21/00
X 30	7.5mS	4	74-95	Yl Br Si W/Gvl; Stopped By Rock	N	KH/AM	11/21/00
X 30	7.5mW	1	0-25	Md Br Si Lo	N	KH/AM	11/21/00
X 30	7.5mW	2	25-45	Md Br Si Lo; Styrofoam - Disc.	P	KH/AM	11/21/00
X 30	7.5mW	3	45-55	Dk Gr Br Si Lo	N	KH/AM	11/21/00
X 30	7.5mW	4	55-65	Md Br Si Lo Mottled W/Dk Gr Br Si Lo	N	KH/AM	11/21/00
X 30	7.5mW	5	65-75	Yl Br Si Lo Mottled W/Dk Gr Br Si Lo	N	KH/AM	11/21/00
X 30	7.5mW	6	75-95	Yl Br Si W/Rock; Stopped By Rock	N	KH/AM	11/21/00
X 31		1	0-24	Md Br Cl Si	N	TK/LM	11/20/00
X 31		2	24-48	Lt Br Cl Si	N	TK/LM	11/20/00
X 31		3	48-57	Yl Br Cl Si	N	TK/LM	11/20/00
X 31		4	57-67	Yl Br Cl Si W/Gvl; Stopped By Rock	N	TK/LM	11/20/00
X 32		1	0-26	Md Br Cl Si	H	LM/TK	11/20/00
X 32		2	26-60	Md Br/Gr Cl Si	N	LM/TK	11/20/00
X 32		3	60-80	Yl Br Si	N	LM/TK	11/20/00
X 33		1	0-32	Md Br Cl Si	H	LM/TK	11/20/00
X 33		2	32-65	Yl Br Cl Si	N	LM/TK	11/20/00
X 33		3	65-82	Yl Br Sa Cl Si W/Gvl	N	LM/TK	11/20/00
X 34		1	0-35	Md Br Cl Si	N	LM/TK	11/20/00
X 34		2	35-45	Md Br/Dk Br Cl Si	N	LM/TK	11/20/00
X 34		3	45-65	Yl Br Cl Si	N	LM/TK	11/20/00
X 34		4	65-85	Yl Br Cl Si; Stopped By Gvl	N	LM/TK	11/20/00
X 35		1	0-26	Md Br Cl Si	N	LM/TK	11/20/00
X 35		2	26-53	Md Br Cl Si W/Gvl; Stopped By Rock	N	LM/TK	11/20/00
X 36		1	0-32	Md Br Cl Si Lo	N	LM/TK	11/20/00
X 36		2	32-50	Yl Br Cl Si	N	LM/TK	11/20/00
X 36		3	50-75	Yl Br Cl Si	N	LM/TK	11/20/00
X 36		4	75-97	Yl Br Cl Si	N	LM/TK	11/20/00
Y 9		1	0-28	Dk Br Sa Lo	N	MR/BG	08/14/00
Y 9		2	28-61	Yl Br Compact Sa; Stopped By Rock	N	MR/BG	08/14/00
Y 10		1	0-20	Md Gr Br Cl Lo	N	NM/KH	08/14/00
Y 10		2	20-40	Yl Br Cl Lo W/Rock; Stopped By Rock	N	NM/KH	08/14/00
Y 11			-	Not Dug - Due To Field Track		NM/KH	08/14/00
Y 12		1	0-29	Md Gr Br Cl Lo	H	NM/KH	08/14/00
Y 12		2	29-41	Yl Br Cl Lo W/Rock	N	NM/KH	08/14/00
Y 13		1	0-34	Md Gr Br Cl Lo	H	NM/KH	08/14/00
Y 13		2	34-59	Yl Br Cl Lo; Charcoal - Disc.	N	NM/KH	08/14/00
Y 13		3	59-78	Yl Br Sa Cl W/Rock	N	NM/KH	08/14/00
Y 14		1	0-25	Md Br Si Lo W/Little Gvl	N	DC/WG	08/10/00
Y 14		2	25-44	Md Br Si Lo W/Little Gvl	N	DC/WG	08/10/00
Y 14		3	44-69	Yl Br Si	N	DC/WG	08/10/00
Y 14		4	69-82	Yl Br Si	N	DC/WG	08/10/00
Y 15		1	0-10	Md Br Si Lo	N	DC/WG	08/10/00
Y 15		2	10-56	Gr Br Si	N	DC/WG	08/10/00
Y 15		3	56-62	Yl Br Si	N	DC/WG	08/10/00
Y 16		1	0-20	Md Br Si Lo	N	DC/WG	08/10/00
Y 16		2	20-42	Yl Br Si W/Gvl; Stopped By Rock	N	DC/WG	08/10/00
Y 17		1	0-17	Md Br Si Lo	N	DC/WG	08/10/00
Y 17		2	17-30	Md Br Si Sa	N	DC/WG	08/10/00
Y 17		3	30-42	Yl Br Si; Stopped By Rock	N	DC/WG	08/10/00
Y 18		1	0-25	Md Br Si Lo Mottled W/Yl Br Si Lo W/Compact Gvl	H	LM	08/14/00
Y 18		2	25-33	Md Br Si Lo Mottled W/Yl Br Si Lo W/Compact Gvl; Stopped By Rock	N	LM	08/14/00
Y 19		1	0-12	Md Br Si Lo	N	LM	08/14/00
Y 19		2	12-25	Mottled Md Br & Yl Br Si Lo	N	LM	08/14/00
Y 19		3	25-35	Mottled Md Br & Yl Br Si Lo	P	LM	08/14/00
Y 19		4	35-65	Dk Gr Br Cl Si W/Wood; Coal, Slag - Disc.	N	LM	08/14/00
Y 19		5	65-95	Yl Br Si; Stp Appears To Be Disturbed	N	LM	08/14/00
Y 20		1	0-8	Dk Br Si Lo; Plastic - Disc.	N	DR/KS	08/14/00
Y 20		2	8-36	Mottled Yl Br/Dk Br Si Lo W/Gvl; Stopped By Rock	N	DR/KS	08/14/00
Y 21		1	0-5	Dk Br Si Lo	N	DR/KS	08/14/00
Y 21		2	5-16	Dk Br Si Lo W/Gvl + Cobbles; Stopped By Rock	N	DR/KS	08/14/00
Y 22		1	0-9	Dk Br Si Lo	N	DR/KS	08/14/00
Y 22		2	9-23	Dk Br Si Lo W/Cobbles + Gvl; Stopped By Rock	N	DR/KS	08/14/00
Y 23		1	0-11	Dk Br Si Lo W/Gvl	N	DR/KS	08/14/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
Y 23		2	11-33	Mottled Yl Br/Dk Br Si Lo W/Gvl; Stopped By Rock	N	DR/KS	08/14/00
Y 24		1	0-4	Dk Br Si Lo	N	DR/KS	08/14/00
Y 24		2	4-15	Dk Br Si Lo W/Gvl; Coal, Charcoal - Disc.; Stopped By Rock	N	DR/KS	08/14/00
Y 30		1	0-25	Lt Br Si Lo; Styrofoam - Disc.	N	KH/AM	11/21/00
Y 30		2	25-45	Lt Br Si Lo	N	KH/AM	11/21/00
Y 30		3	45-53	Lt Br Si Lo	N	KH/AM	11/21/00
Y 30		4	53-73	Dk Gr Sa Si; Charcoal - Disc.	N	KH/AM	11/21/00
Y 30		5	73-85	Dk Gr Sa Si; Charcoal - Disc.	N	KH/AM	11/21/00
Y 30		6	85-93	Yl Br Si; Stopped By Rock	N	KH/AM	11/21/00
Y 30	7.5mN	1	0-25	Lt Br Si Lo; Coal, Plastic - Disc.	N	KH/AM	11/21/00
Y 30	7.5mN	2	25-45	Lt Br Si Lo	N	KH/AM	11/21/00
Y 30	7.5mN	3	45-63	Lt Br Si Lo	N	KH/AM	11/21/00
Y 30	7.5mN	4	63-69	Rd Br Si Lo W/Charcoal; Charcoal - Disc.	N	KH/AM	11/21/00
Y 30	7.5mN	5	69-93	Dk Gr Br Si Lo	N	KH/AM	11/21/00
Y 30	7.5mN	6	93-101	Yl Br Si; Poss.Fea.Visible In N.Wall	N	KH/AM	11/21/00
Y 33		1	0-25	Md Br Si Lo; Plastic - Disc.	N	MR/RW	11/20/00
Y 33		2	25-39	Md Br Si Lo; Area Of Charcoal & FCR From 33-39cmbd In W 1/2 Of Unit - Poss.Fea.; Charcoal (From Fea.) - Disc.	P	MR/RW	11/20/00
Y 33		3	39-59	Lt Ol Br Si	N	MR/RW	11/20/00
Y 33		4	59-77	Lt Ol Br Si	N	MR/RW	11/20/00
Y 33	7.5mE	1	0-25	Md Ol Br Cl Si	N	LM/MD	11/21/00
Y 33	7.5mE	2	25-42	Md Ol Br Cl Si	N	LM/MD	11/21/00
Y 33	7.5mE	3	42-75	Lt Ol Yl Cl Si	N	LM/MD	11/21/00
Y 33	7.5mE	4	75-76	Lt Ol Yl Cl Si W/Rock; Stopped By Rock	N	LM/MD	11/21/00
Y 33	7.5mN	1	0-25	Md Ol Br Cl Si	N	LM/MD	11/21/00
Y 33	7.5mN	2	25-37	Md Ol Br Cl Si	N	LM/MD	11/21/00
Y 33	7.5mN	3	37-54	Lt Ol Yl Sa W/Gvl; Stopped By Gvl + Rock	N	LM/MD	11/21/00
Y 33	7.5mS	1	0-25	Md Br Cl Si	N	LM/MD	11/21/00
Y 33	7.5mS	2	25-57	Md Br Cl Si; Charcoal - Disc.	N	LM/MD	11/21/00
Y 33	7.5mS	3	57-77	Yl Br Cl Si	N	LM/MD	11/21/00
Y 33	7.5mS	4	77-82	Yl Br Cl Si; Stopped By Rock	N	LM/MD	11/21/00
Y 33	7.5mW	1	0-36	Md Br Cl Si	N	LM/MD	11/21/00
Y 33	7.5mW	2	36-46	Dk Br Cl Si	N	LM/MD	11/21/00
Y 33	7.5mW	3	46-66	Yl Br Cl Si	N	LM/MD	11/21/00
Y 33	7.5mW	4	66-86	Yl Br Cl Si	N	LM/MD	11/21/00
Y 34		1	0-25	Md Gr Br Si Lo	N	MR/RW	11/20/00
Y 34		2	25-37	Md Gr Br Si Lo	N	MR/RW	11/20/00
Y 34		3	37-56	Md Gr Br Si Lo	N	MR/RW	11/20/00
Y 34		4	56-76	Dk Gr Si Lo	N	MR/RW	11/20/00
Y 34		5	76-84	Yl Br Si	N	MR/RW	11/20/00
Y 34		6	84-102	Ol Si	N	MR/RW	11/20/00
Y 35		1	0-25	Md Br Si Lo	N	MR/RW	11/20/00
Y 35		2	25-36	Md Br Si Lo	N	MR/RW	11/20/00
Y 35		3	36-47	Dk Br Si Lo	N	MR/RW	11/20/00
Y 35		4	47-67	Yl Br Si Cl	N	MR/RW	11/20/00
Y 35		5	67-87	Yl Br Si Cl	N	MR/RW	11/20/00
Y 35		6	87-97	Yl Br Si Cl	N	MR/RW	11/20/00
Z 9		1	0-23	Dk Br Si Lo	N	MR/BG	08/14/00
Z 9		2	23-38	Yl Br Compact Sa Lo	N	MR/BG	08/14/00
Z 9		3	38-65	Ol Br Compact Sa Lo; Stopped By Rock	N	MR/BG	08/14/00
Z 10		1	0-25	Dk Br Si Lo	N	MR/BG	08/14/00
Z 10		2	25-38	Dk Br Si Lo	N	MR/BG	08/14/00
Z 10		3	38-58	Yl Br Sa Lo W/Gvl + Cobbles; Stopped By Rock	N	MR/BG	08/14/00
Z 12		1	0-26	Md Gr Br Cl Lo	H	NM/KH	08/14/00
Z 12		2	26-40	Yl Br Sa Cl W/Rock	N	NM/KH	08/14/00
Z 13		1	0-21	Dk Br Si Lo	N	MR/BG	08/14/00
Z 13		2	21-42	Yl Br Compact Sa Lo W/Gvl + Cobbles; Stopped By Rock	N	MR/BG	08/14/00
Z 14		1	0-25	Dk Br Si Lo; Plastic, Modern Bottle Glass, Brick, Rubber, Plastic Straws, Metal Pull Tab - Disc.	N	MR/KS	08/10/00
Z 14		2	25-38	Dk Br Si Lo; Metal Pull Tab - Disc.	N	MR/KS	08/10/00
Z 14		3	38-64	Yl Br Compact Si; Stopped By Rock	N	MR/KS	08/10/00
Z 15		1	0-25	Md Br Si Lo	H	SK/JW	08/14/00
Z 15		2	25-46	Dk Br Si Lo	N	SK/JW	08/14/00
Z 15		3	46-56	Lt Ol Cl Si	N	SK/JW	08/14/00
Z 15		4	56-66	Dk Br Cl Si	N	SK/JW	08/14/00
Z 15		5	66-86	Mottled Br Cl Si	N	SK/JW	08/14/00
Z 15		6	86-100	Dk Br Cl Si	N	SK/JW	08/14/00
Z 16		1	0-7	Dk Br Si Lo	N	KS/DR	08/14/00
Z 16		2	7-31	Mottled Yl Br/Dk Br Si Lo W/Gvl; Stopped By Rock	N	KS/DR	08/14/00

STP#	4-RND	LEV.	DEPTH	SOIL DESCRIPTION	CM	CREW	DATE
Z 17		1	0-13	Dk Br Si Lo	N	KS/DR	08/14/00
Z 17		2	13-33	Mottled Yl Br/Dk Br Si Lo W/Gvl; Stopped By Rock	N	KS/DR	08/14/00
Z 18		1	0-25	Dk Br Si Lo	N	KS/DR	08/14/00
Z 18		2	25-56	Dk Br Si Lo	H	KS/DR	08/14/00
Z 18		3	56-102	Yl Br Compact Si	N	KS/DR	08/14/00
Z 19		1	0-25	Dk Br Si Lo	N	KS/DR	08/14/00
Z 19		2	25-42	Dk Br Si Lo	N	KS/DR	08/14/00
Z 19		3	42-87	Mottled Yl Br/Dk Br Si Lo	N	KS/DR	08/14/00
Z 19		4	87-101	Yl Br Si Lo	N	KS/DR	08/14/00
Z 20		1	0-9	Dk Br Si Lo	N	KS/DR	08/14/00
Z 20		2	9-32	Mottled Yl Br/Dk Br Si Lo	H	KS/DR	08/14/00
Z 20		3	32-52	Dk Gr Br Si	N	KS/DR	08/14/00
Z 20		4	52-103	Yl Br Sa Si	N	KS/DR	08/14/00
Z 21		1	0-10	Dk Br Si Lo	N	KS/DR	08/14/00
Z 21		2	10-37	Mottled Yl Br/Dk Br Si Lo W/Gvl + Cobbles; Stopped By Rock	N	KS/DR	08/14/00
Z 22		1	0-6	Dk Br Si Lo	N	DR/KS	08/14/00
Z 22		2	6-17	Dk Br Si Lo W/Gvl + Cobbles; Stopped By Rock	N	DR/KS	08/14/00
Z 30		1	0-25	Md Br Cl Si; Coal, Plastic - Disc.	N	MD/JD	11/20/00
Z 30		2	25-32	Md Ol Br Cl Si	N	MD/JD	11/20/00
Z 30		3	32-52	Dk Bk Cl Si; Charcoal - Disc.	N	MD/JD	11/20/00
Z 30		4	52-85	Lt Ol Yl Cl Si	N	MD/JD	11/20/00
Z 31		1	0-25	Ol Br Cl Si; Mottled Yl/Br Cl Si On E. & W. Wall At 13-15cm; Styrofoam, Plastic - Disc.	N	JD/MD	11/20/00
Z 31		2	25-40	Ol Br Cl Si	N	JD/MD	11/20/00
Z 31		3	40-80	Yl/Br Cl Si	N	JD/MD	11/20/00
Z 32		1	0-25	Md Ol Br Cl Si	N	JD/MD	11/20/00
Z 32		2	25-37	Md Ol Br Cl Si; Charcoal - Disc.	N	JD/MD	11/20/00
Z 32		3	37-52	Md Ol Br Cl Si Mottled W/Lt Ol Yl Cl Si	N	JD/MD	11/20/00
Z 32		4	52-87	Lt Ol Yl Cl Si	N	JD/MD	11/20/00
Z 33		1	0-25	Ol Br Cl Si	H	JD/MD	11/20/00
Z 33		2	25-33	Ol Br Cl Si	N	JD/MD	11/20/00
Z 33		3	33-50	Dk Br Cl Si; Charcoal - Disc.	N	JD/MD	11/20/00
Z 33		4	50-84	Yl Br Cl Si	N	JD/MD	11/20/00
Z 34		1	0-25	Md Ol Br Cl Si	N	JD/MD	11/20/00
Z 34		2	25-45	Md Ol Br Cl Si	H	JD/MD	11/20/00
Z 34		3	45-66	Dk Br Cl Si	N	JD/MD	11/20/00
Z 34		4	66-91	Lt Ol Yl Cl Si	N	JD/MD	11/20/00
Z 35		1	0-25	Ol Br Cl Si	N	JD/MD	11/20/00
Z 35		2	25-43	Ol Br Cl Si	N	JD/MD	11/20/00
Z 35		3	43-50	Dk Br Cl Si	N	JD/MD	11/20/00
Z 35		4	50-80	Yl/Br Cl Si	N	JD/MD	11/20/00

D.2: TRENCH RECORD

TR	PARCEL	DEPTH (cm)	DESCRIPTION	COMMENTS	CREW	DATE
1	A	0-26	Dark Gray Brown Silt Loam w/gravel		LM/TK	8/00
1	A	26-50	Yellow Brown Silt Loam w/gravel		LM/TK	8/00
1	A	50-95	Gray Brown Silt Loam w/gravel & pea gravel		LM/TK	8/00
1	A	95-129	Gray Light Brown Silt w/gravel & pea gravel		LM/TK	8/00
1	A	129-157	Yellow Brown Silt w/gravel		LM/TK	8/00
2	A	0-30	Dark Brown Silt Loam		LM/TK	8/00
2	A	30-115	Gray Brown Silt w/lots of gravel	little soil	LM/TK	8/00
3	A	0-43	Brown Silt w/gravel mottled w/Yellow Brown Silt	disturbed	LM/TK	8/00
3	A	43-50	Yellow mottled w/Brown Silt w/gravel		LM/TK	8/00
3	A	50-60	Gray Silt mottled w/Red Brown Silt		LM/TK	8/00
3	A	60-80	Gray Silt mottled w/gravel	undecayed wood	LM/TK	8/00
3	A	80-120	Yellow Brown Silt w/gravel		LM/TK	8/00
3	A	120-155	Gray Brown Silt w/gravel	heavy gravel	LM/TK	8/00
4	B	0-37	Medium Brown Silt		LM/TK	11/27/00
4	B	37-49	Yellow Brown Clay Silt		LM/TK	11/27/00
4	B	49-105	Dark Yellow Brown Clay Silt		LM/TK	11/27/00
4	B	105-139	Dark Yellow Brown Sandy Clay Silt		LM/TK	11/27/00
4	B	139-170	Gray Brown very Sandy Silt w/gravel		LM/TK	11/27/00
5	B	0-30	Medium Brown Silt		LM/TK	11/27/00
5	B	30-49	Yellow Brown Silt		LM/TK	11/27/00
5	B	49-101	Gray Brown Silt w/gravel		LM/TK	11/27/00
6	B	0-29	Medium Brown Silt w/gravel		LM/TK	11/27/00
6	B	29-41	Yellow Brown Silt w/gravel	little soil	LM/TK	11/27/00
6	B	41-89	Gray Yellow Brown Sandy Silt w/gravel	little soil	LM/TK	11/27/00
7	B	0-29	Medium Brown Silt		LM/TK	11/27/00
7	B	29-34	Yellow Brown Silt w/gravel		LM/TK	11/27/00
7	B	34-70	Gray Brown Clay Silt w/gravel	lots of gvl; little soil	LM/TK	11/27/00

ATTACHMENT E: ARTIFACT CATALOG

BAG	STP#	4-RND	LEV.	DEPTH	DESCRIPTION	COMMENTS	CT	WT(g)	DATES	CREW	DATE
1			Surf.	-	Onondaga Chert Projectile Point Susquehanna	Broken & Unfinished	1	14.6	-	RW	11/13/00
2			Surf.	-	Onondaga Chert Debitage/Core Non-Cortical Flake	Utilized	1	1.2	-	AM/RW	11/13/00
3			Surf.	-	Onondaga Chert Debitage/Core Non-Cortical Flake		1	0.8	-	AM/RW	11/13/00
4			Surf.	-	Onondaga Chert Debitage/Core Shatter	Utilized	1	0.6	-	WG/AM	11/13/00
5			Surf.	-	Onondaga Chert Debitage/Core Bifacial Thinning Flake		1	0.6	-	AM/RW	11/13/00
6			Surf.	-	Chalcedony (possibly) Drill Broken		1	4.9	-	MD	11/14/00
7			Surf.	-	Onondaga Chert Debitage/Core Cortical Flake	Utilized	1	3.7	-	MD	11/14/00
8			Surf.	-	Onondaga Chert Debitage/Core Bifacial Thinning Flake		1	0.3	-	RW/KH	11/15/00
9			Surf.	-	Hammerstone Bi-Pitted		1	925.0	-	MD/LM	11/15/00
10			Surf.	-	Flaked Stone Bi-Pitted		1	3,475.0	-	MD/JD	11/20/00
11			Surf.	-	Rhyolite Debitage/Core Non-Cortical Flake		1	2.6	-	LM	11/27/00
12			Surf.	-	Fire Cracked Rock		1	411.5	-	RF	11/27/00
13			Surf.	-	Fire Cracked Rock		1	73.0	-	TK	11/27/00
14			Surf.	-	Onondaga Chert Debitage/Core Shatter		1	0.8	-	RF	11/27/00
15			Surf.	-	Rhyolite Debitage/Core Non-Cortical Flake		1	1.5	-	RF	11/27/00
16			Surf.	-	Onondaga Chert Debitage/Core Bifacial Thinning Flake	Utilized	1	4.7	-	TK	11/27/00
16			Surf.	-	Fire Cracked Rock		2	44.2	-	TK	11/27/00
17			Surf.	-	Fire Cracked Rock		1	75.6	-	LM	11/27/00
18			Surf.	-	Fire Cracked Rock		1	85.0	-	LM	11/27/00
18			Surf.	-	Onondaga Chert Debitage/Core Shatter	Utilized	1	3.3	-	LM	11/27/00
18			Surf.	-	Onondaga Chert Debitage/Core Shatter	Utilized	1	0.7	-	LM	11/27/00
19			Surf.	-	Onondaga Chert Debitage/Core Shatter	Utilized & Heated/Burned	1	1.4	-	TK	11/27/00
20			Surf.	-	Onondaga Chert Debitage/Core Shatter		1	0.2	-	WG	11/27/00
21			Surf.	-	Fire Cracked Rock		1	625.0	-	RF	11/27/00
22			Surf.	-	Onondaga Chert Debitage/Core Non-Cortical Flake		1	3.1	-	RF	11/27/00
23			Surf.	-	Fire Cracked Rock		1	95.1	-	TK	11/27/00
24			Surf.	-	Fire Cracked Rock		1	142.8	-	TK	11/27/00
25			Surf.	-	Onondaga Chert Debitage/Core Non-Cortical Flake		1	0.5	-	WG	11/27/00
26			Surf.	-	Onondaga Chert Debitage/Core Shatter	Utilized	1	4.7	-	RF	11/27/00
26			Surf.	-	Fire Cracked Rock		1	162.7	-	RF	11/27/00
27			Surf.	-	Fire Cracked Rock		1	203.6	-	TK	11/27/00
28			Surf.	-	Fire Cracked Rock		2	203.4	-	LM	11/27/00
29			Surf.	-	Fire Cracked Rock		1	478.0	-	LM	11/27/00
30			Surf.	-	Fire Cracked Rock		1	62.6	-	RF	11/27/00
31			Surf.	-	Onondaga Chert Debitage/Core Shatter		1	0.2	-	RF	11/27/00
32			Surf.	-	Fire Cracked Rock		1	175.2	-	RF	11/27/00
33			Surf.	-	Onondaga Chert Debitage/Core Cortical Chunk	Utilized	1	8.1	-	TK	11/27/00
34			Surf.	-	Fire Cracked Rock		1	249.5	-	RF	11/27/00
35			Surf.	-	Fire Cracked Rock		1	167.1	-	RF	11/27/00
36			Surf.	-	Fire Cracked Rock		1	61.9	-	TK	11/27/00
37			Surf.	-	Fire Cracked Rock		1	78.5	-	RF	11/27/00
38			Surf.	-	Fire Cracked Rock		1	235.2	-	RF	11/27/00
39			Surf.	-	Fire Cracked Rock		1	180.0	-	TK	11/27/00
40			Surf.	-	Fire Cracked Rock		1	40.8	-	RF	11/27/00
40			Surf.	-	Onondaga Chert Debitage/Core Bifacial Thinning Flake	Poss.Utilized	1	0.2	-	RF	11/27/00
41			Surf.	-	Fire Cracked Rock		2	116.1	-	RF	11/27/00
42			Surf.	-	Fire Cracked Rock		1	35.1	-	TK	11/27/00
43			Surf.	-	Onondaga Chert Debitage/Core Shatter		1	2.5	-	RF	11/27/00
44			Surf.	-	Onondaga Chert Debitage/Core Shatter	Utilized	1	3.9	-	TK	11/27/00
45			Surf.	-	Fire Cracked Rock		1	33.3	-	RF	11/27/00
46			Surf.	-	Onondaga Chert Debitage/Core Bifacial Core		1	15.7	-	TK	11/27/00
47			Surf.	-	Fire Cracked Rock		1	177.1	-	RF	11/27/00
48			Surf.	-	Fire Cracked Rock		1	432.4	-	TK	11/27/00
49			Surf.	-	Rhyolite Biface Fragment		1	3.4	-	RF	11/27/00

BAG	STP#	4-RND	LEV.	DEPTH	DESCRIPTION	COMMENTS	CT	WT(g)	DATES	CREW	DATE
49			Surf.	-	Onondaga Chert Debitage/Core Shatter	Heat Treated/Burned	1	0.7	-	RF	11/27/00
50			Surf.	-	Fire Cracked Rock		1	37.9	-	TK	11/27/00
51			Surf.	-	Onondaga Chert Core Fragment	Heat Treated/Burned	1	10.7	-	RF	11/27/00
51			Surf.	-	Rhyolite Debitage/Core Shatter		1	0.8	-	RF	11/27/00
52			Surf.	-	Onondaga Chert Debitage/Core Bifacial Thinning Flake	Utilized	1	1.5	-	TK	11/27/00
53			Surf.	-	Onondaga Chert Debitage/Core Bifacial Core		1	24.9	-	RF	11/27/00
54			Surf.	-	Rhyolite Debitage/Core Shatter		3	2.8	-	RF	11/27/00
55			Surf.	-	Fire Cracked Rock		2	1,100.0	-	TK	11/27/00
56			Surf.	-	Fire Cracked Rock		1	139.5	-	TK	11/27/00
57			Surf.	-	Fire Cracked Rock		1	185.0	-	TK	11/27/00
58			Surf.	-	Rhyolite Debitage/Core Shatter		1	0.6	-	RF	11/27/00
59			Surf.	-	Onondaga Chert Debitage/Core Cortical Chunk	Utilized	1	1.1	-	RF	11/27/00
60			Surf.	-	Rhyolite Debitage/Core Shatter		1	1.1	-	TK	11/27/00
61			Surf.	-	Fire Cracked Rock		1	424.6	-	RF	11/27/00
62			Surf.	-	Onondaga Chert Projectile Point Brewerton	Reworked; Brewerton-Like	1	13.7	-	RF	11/27/00
63			Surf.	-	Fire Cracked Rock		1	96.2	-	TK	11/27/00
64			Surf.	-	Fire Cracked Rock		1	246.0	-	TK	11/27/00
65			Surf.	-	Fire Cracked Rock		1	207.6	-	RF	11/27/00
65			Surf.	-	Fire Cracked Rock		1	26.2	-	TK/LM	11/28/00
66			Surf.	-	Rhyolite Debitage/Core Shatter		1	0.8	-	TK	11/27/00
67			Surf.	-	Onondaga Chert Debitage/Core Shatter	Utilized	1	3.0	-	RF	11/27/00
68			Surf.	-	Fire Cracked Rock		1	135.6	-	TK	11/27/00
69			Surf.	-	Fire Cracked Rock		1	245.0	-	RF	11/27/00
70			Surf.	-	Fire Cracked Rock		1	36.0	-	TK	11/27/00
71			Surf.	-	Fire Cracked Rock		1	112.2	-	RF	11/27/00
72			Surf.	-	Fire Cracked Rock		1	120.9	-	TK	11/27/00
74			Surf.	-	Onondaga Chert Biface Fragment		1	9.4	-	RF	11/27/00
75			Surf.	-	Fire Cracked Rock		1	148.6	-	RF	11/27/00
76			Surf.	-	Fire Cracked Rock		1	112.4	-	TK/LM	11/28/00
77			Surf.	-	Fire Cracked Rock		1	71.3	-	TK/LM	11/28/00
78			Surf.	-	Fire Cracked Rock		1	13.5	-	TK/LM	11/28/00
79			Surf.	-	Fire Cracked Rock		1	6.7	-	TK/LM	11/28/00
80			Surf.	-	Fire Cracked Rock		1	93.1	-	TK/LM	11/28/00
81			Surf.	-	Fire Cracked Rock		1	875.0	-	TK/LM	11/28/00
82			Surf.	-	Fire Cracked Rock		1	12.6	-	TK/LM	11/28/00
83			Surf.	-	Fire Cracked Rock		1	45.7	-	TK/LM	11/28/00
84			Surf.	-	Fire Cracked Rock		4	811.5	-	TK/LM	11/28/00
85			Surf.	-	Rhyolite Biface Fragment		1	9.8	-	TK/LM	11/28/00
86			Surf.	-	Fire Cracked Rock		1	135.0	-	LM/TK	11/28/00
87			Surf.	-	Fire Cracked Rock		1	175.0	-	TK/LM	11/28/00
88			Surf.	-	Fire Cracked Rock		1	161.0	-	TK/LM	11/28/00
89			Surf.	-	Fire Cracked Rock		1	56.6	-	TK/LM	11/28/00
90			Surf.	-	Fire Cracked Rock		1	358.1	-	TK/LM	11/28/00
91			Surf.	-	Fire Cracked Rock		1	154.1	-	LM/TK	11/28/00
92			Surf.	-	Fire Cracked Rock		1	133.2	-	TK/LM	11/28/00
93			Surf.	-	Fire Cracked Rock		1	88.1	-	TK/LM	11/28/00
94			Surf.	-	Fire Cracked Rock		1	106.4	-	LM/TK	11/28/00
95			Surf.	-	Fire Cracked Rock		1	325.3	-	LM/TK	11/28/00
96			Surf.	-	Fire Cracked Rock		1	267.2	-	TK/LM	11/28/00
97			Surf.	-	Fire Cracked Rock		1	139.8	-	TK/LM	11/28/00
98			Surf.	-	Fire Cracked Rock		1	107.2	-	LM/TK	11/28/00
99			Surf.	-	Fire Cracked Rock		1	104.5	-	TK/LM	11/28/00
100			Surf.	-	Fire Cracked Rock		1	533.3	-	TK/LM	11/28/00
101			Surf.	-	Fire Cracked Rock		1	39.4	-	LM/TK	11/28/00
102			Surf.	-	Fire Cracked Rock		1	13.3	-	LM/TK	11/28/00
103			Surf.	-	Fire Cracked Rock		1	68.7	-	LM/TK	11/28/00
104			Surf.	-	Fire Cracked Rock		1	1,200.0	-	TK/LM	11/28/00
106			Surf.	-	Fire Cracked Rock		1	92.7	-	TK/LM	11/28/00
107			Surf.	-	Fire Cracked Rock		1	89.6	-	TK/LM	11/28/00
108			Surf.	-	Fire Cracked Rock		1	128.2	-	TK/LM	11/28/00
109			Surf.	-	Hammerstone Pitted		1	1,625.0	-	TK/LM	11/28/00
110			Surf.	-	Fire Cracked Rock		1	361.4	-	TK/LM	11/28/00

BAG	STP#	4-RND	LEV.	DEPTH	DESCRIPTION	COMMENTS	CT	WT(g)	DATES	CREW	DATE
	AA 12		1	0-18	Whiteware Undiff. Ceramic		1		1830-2000	MR/BG	08/14/00
	AA 14		1	0-22	Glass Clear Bottle-Unid.		1		-	SK/JW	08/14/00
	AA 14		1	0-22	Glass Aqua Melted Glass		1		-	SK/JW	08/14/00
	AA 14		1	0-22	Whiteware Undiff. Ceramic		5		1830-2000	SK/JW	08/14/00
	AA 15		1	0-23	Stoneware Undiff. Ceramic	Glaze Missing	1		-	SK/JW	08/14/00
	AA 15		1	0-23	Whiteware Undiff. Ceramic		1		1830-2000	SK/JW	08/14/00
	AA 18		2	25-38	Bone Avian		8		-	BG/MR	08/14/00
	AA 19		2	18-50	Whiteware Undiff. Ceramic		1		1830-2000	BG/MR	08/14/00
	AA 30		2	28-48	Ferrous Alloy Undiag. Nail Frag.		2		-	MR/RW	11/20/00
	AA 32		2	25-45	Whiteware Annular Banded Undiff. Ceramic		1		1830-1900	MR/RW	11/20/00
	AA 34		1	0-25	Undiff Metal Metal Ring		1		-	MR/RW	11/20/00
	AB 33		2	25-50	Glass Clear Window		1		-	JD/MD	11/20/00
	AC 14		1	0-25	Yellowware Undiff. Ceramic	Sm.Amt.Of Glazing	1		1830-1900	SK/JW	08/14/00
	AC 14		1	0-25	Ferrous Alloy Undiag. Nail Frag.		1		-	SK/JW	08/14/00
	AC 15		1	0-18	Glass Amber Bottle-Unid.		1		-	SK/JW	08/14/00
	AD 12		1	0-30	Redware Unglazed Undiff. Ceramic		1		-	NM/KH	08/14/00
	AD 13		1	0-50	Ferrous Alloy Undiag. Nail Frag.		1		-	NM/KH	08/14/00
	AD 13		1	0-50	Glass Clear Bottle-Unid.		3		-	NM/KH	08/14/00
	AD 13		1	0-50	Glass Embossed Green Bottle-Unid.	"...Erl..."	3		-	NM/KH	08/14/00
	AD 13		1	0-50	Milk Glass Undiff. Glass		1		-	NM/KH	08/14/00
	AD 30		1	0-25	Undiff Metal Undiag. Metal		2		-	JD/NM	11/21/00
	AE 10		1	0-74	Glass Clear Bottle-Unid.		1		-	NM/KH	08/14/00
	AE 10		1	0-74	Ferrous Alloy Undiag. Nail		1		-	NM/KH	08/14/00
	B 36		1	0-25	Whiteware Undiff. Ceramic		2		1830-2000	ED/MD	11/22/00
	B 36		1	0-25	Glass Clear Window		1		-	ED/MD	11/22/00
	B 36		1	0-25	Glass Green Bottle-Unid.		1		-	ED/MD	11/22/00
	B 37		1	0-25	Unknown Undiff. Ceramic		1		-	ED/MD	11/22/00
	B 37		1	0-25	Glass Clear Unident.		1		-	ED/MD	11/22/00
	B 38		1	0-25	Whiteware Undiff. Ceramic		1		1830-2000	ED/MD	11/22/00
	B 41		2	25-40	Ferrous Alloy Undiag. Nail Frag.		1		-	MD/ED	11/22/00
	B 43		1	0-25	Glass Etched Clear Unident.		1		-	NM/RW	11/22/00
	C 37		1	0-25	Whiteware Undiff. Ceramic		1		1830-2000	ED/MD	11/22/00
	C 37		1	0-25	Glass Clear Window		1		-	ED/MD	11/22/00
	C 38		2	25-30	Whiteware Undiff. Ceramic		1		1830-2000	MD/ED	11/22/00
	C 39		1	0-25	Glass Clear Bottle-Unid.		1		-	MD/ED	11/22/00
	D 11		1	0-9	Glass Clear Bottle-Unid.		1		-	KS/DR	08/07/00
	D 13		1-2	0-55	Bone Mammal		2		-	DR/KS	08/07/00
	D 13		1-2	0-55	Whiteware Undiff. Ceramic		1		1830-2000	DR/KS	08/07/00
	D 13		1-2	0-55	Ferrous Alloy Undiag. Nail		1		-	DR/KS	08/07/00
	D 16		1	0-21	Glass Clear Bottle-Unid.		1		-	KS/DR	08/07/00
	D 19		1	0-25	Whiteware Transfer Blue Tableware/Teaware		1		1830-1870	KH/RW	11/14/00
	D 19		1	0-25	Glass Olive Bottle-Unid.		1		-	KH/RW	11/14/00
	D 20		1	0-25	Whiteware Transfer Blue Tableware/Teaware		1		1830-1870	KH/RW	11/14/00
	D 25		1	0-25	Stoneware Salt Glaze/Alb. Slip Food Prep/Storage		1		1800-1900	KH/RW	11/14/00
	D 26		1	0-25	Glass Aqua Bottle-Unid.		1		-	KH/RW	11/14/00
	D 30		1	0-25	Ferrous Alloy Undiag. Nail Frag.		1		-	KH/RW	11/14/00
	D 36		1	0-25	Whiteware Undiff. Ceramic		1		1830-2000	RW/NM	11/22/00
	E 11		2	23-43	Ferrous Alloy Cut Nail Frag		1		-	MR/KH	08/07/00
	E 12		1	0-29	Ferrous Alloy Wire Nail Frag		1		-	MR/KH	08/07/00
	E 14		1	0-25	Glass Amber Bottle-Unid.		2		-	MR/KH	08/07/00
	E 14		1	0-25	Whiteware/Ironstone Undiff. Ceramic		1		1830-2000	MR/KH	08/07/00
	E 14		1	0-25	Semi-Porcelain Tableware/Teaware		1		1890-2000	MR/KH	08/07/00
	E 15		2	25-49	Bone Mammal		25		-	MR/KH	08/07/00
	E 37		1	0-31	Undiff Metal Undiag. Metal		1		-	WG/LM	11/22/00
	E 42		1	0-25	Whiteware Undiff. Ceramic		1		1830-2000	WG/LM	11/22/00
	F 10		1	0-20	Ferrous Alloy Undiag. Nail Frag.		1		-	KS/DR	08/07/00
	F 11		2	22-46	Bone Mammal		1		-	KS/DR	08/07/00
	F 12		2	12-31	Ferrous Alloy Wire Nail Frag		1		-	KS/DR	08/07/00
	F 15		2	23-45	Glass Amber Bottle-Unid.		1		-	KS/DR	08/07/00
	F 16		2	10-23	Ferrous Alloy Cut Nail Frag		1		-	KS/DR	08/07/00
	F 37		1	0-25	Glass Clear Window		1		-	MM/RW	11/21/00
	F 40		2	25-32	Glass Clear Bottle-Unid.		1		-	AM/KH	11/21/00
	F 41		2	25-70	Ferrous Alloy Undiag. Nail Frag.		1		-	JD/NM	11/21/00

BAG	STP#	4-RND	LEV.	DEPTH	DESCRIPTION	COMMENTS	CT	WT(g)	DATES	CREW	DATE
	G 15		2	14-39	Ferrous Alloy Wire Nail Frag		1		-	DC/JM	08/07/00
	G 33		1	0-27	Glass Aqua Bottle-Unid.		1		-	WG/RF	11/27/00
	G 40		1	0-23	Whiteware Undiff. Ceramic		1		1830-2000	MD/LM	11/21/00
	H 13		1	0-25	Onondaga Chert Debitage/Core Non-Cortical Flake		1		-	MR/KH	08/07/00
	H 13	1mE	1	0-24	Ferrous Alloy Wire Nail		1		-	MR/KS	08/08/00
	H 13	7.5mS	1	0-25	Glass Clear Bottle-Unid.		3		-	MR/KS	08/08/00
	H 25		1	0-25	Whiteware Undiff. Ceramic		1		1830-2000	AM/WG	11/15/00
	H 40		2	25-43	Bone Indeterminate		1	0.8	-	JD/NM	11/21/00
	I 13		1	0-25	Ironstone Undiff. Ceramic		1		1850-2000	LM/SK	08/04/00
	I 13		1	0-25	Glass Window		1		-	LM/SK	08/04/00
	I 15		1	0-25	Refined Earthenware Clay Pigeon		1		-	LM/SK	08/04/00
	I 18		1	0-25	Bone Indeterminate		1		-	LM/SK	08/04/00
	I 19		1	0-25	Glass Clear Bottle-Unid.		1		-	LM/SK	08/04/00
	I 19		1	0-25	Refined Earthenware Clay Pigeon	Embossed: "U.S.A./...lte"	3		-	LM/SK	08/04/00
	I 19		1	0-25	Ferrous Alloy Undiag. Metal		1		-	LM/SK	08/04/00
	I 19		1	0-25	Tooth Odocoileus Virginianus (Deer)		1		-	LM/SK	08/04/00
	I 28		1	0-25	Ferrous Alloy Undiag. Nail Frag.		1		-	WG/RF	11/27/00
	I 31		1	0-25	Onondaga Chert Debitage/Core Shatter	Heated/Burned	1	0.1	-	NM/RW	11/22/00
	I 31		1	0-25	Onondaga Chert Debitage/Core Bifacial Thinning Flake		1	0.1	-	NM/RW	11/22/00
	I 33		2	25-39	Onondaga Chert Debitage/Core Cortical Chunk		1	0.2	-	TK/LM	11/27/00
	J 14		2	25-36	Ferrous Alloy Wire Nail Frag		1		-	AM/TH	08/04/00
	J 14		2	25-36	Whiteware Flow Transfer Blue Undiff. Ceramic		1		1844-1870	AM/TH	08/04/00
	J 18		1	0-24	Glass Window		1		-	AM/TH	08/04/00
	J 19		2	25-50	Ferrous Alloy Cut Nail		1		-	AM/TH	08/04/00
	J 24		1	0-24	Glass Green Bottle-Unid.		1		-	KH/RW	11/15/00
	J 29		1	0-25	Glass Aqua Bottle-Unid.		1		-	KH/RW	11/15/00
	J 29		1	0-25	Ferrous Alloy Undiag. Nail Frag.		1		-	KH/RW	11/15/00
	J 39		2	25-43	Cuprous Metal Coin	Buffalo Nickel; No Date	1		1913-1938	KH/RW	11/16/00
	J 40		1	0-25	Undiff Metal Undiag. Metal		1		-	MD/LM	11/21/00
	J 41		1	0-24	Undiff Metal Undiag. Metal		1		-	LM/MD	11/21/00
	K 15		1	0-25	Whiteware Hand Painted Red Tableware/Teaware		1		1830-1860	NM/GD	08/04/00
	K 17		2	25-62	Ferrous Alloy Wire Nail Frag		2		-	NM/GD	08/04/00
	K 28		1	0-25	Glass Clear Bottle-Unid.		1		-	WG/RF	11/27/00
	K 28		1	0-25	Glass Brown Bottle-Unid.		1		-	WG/RF	11/27/00
	K 29		1	0-25	Whiteware Undiff. Ceramic		1		1830-2000	WG/RF	11/27/00
	K 32		1	0-25	Glass Aqua Bottle-Unid.		1		-	WG/RF	11/27/00
	K 33		2	25-43	Glass Clear Bottle-Unid.		1		-	JD/NM	11/21/00
	L 13		1	0-45	Plastic White Unident.		1		-	SK/LM	08/03/00
	L 14		1	0-40	Onondaga Chert Debitage/Core Non-Cortical Flake		1		-	SK/LM	08/03/00
	L 14	1mN	1	0-25	Glass Pressed Clear Undiff. Glass		1		-	JM/DC	08/07/00
	L 14	1mN	2	25-42	Glass Window		1		-	JM/DC	08/07/00
	L 14	1mS	1	0-25	Bone Mammal		1		-	JW/CO	08/07/00
	L 14	1mW	2	25-38	Ferrous Alloy Cut Nail Frag		1		-	JM/DC	08/07/00
	L 14	7.5mS	2	25-47	Glass Window		2		-	JW/CO	08/07/00
	L 14	7.5mS	2	25-47	Cuprous Metal Wire		1		-	JW/CO	08/07/00
	L 19		2	25-40	Ferrous Alloy Cut Nail		1		-	LM/SK	08/04/00
	L 24		1	0-20	Glass Clear Bottle-Unid.		1		-	MD/LM	11/15/00
	L 25		1	0-25	Glass Clear Bottle-Unid.		1		-	MD/LM	11/15/00
	L 28		1	0-25	Glass Clear Bottle-Unid.		1		-	MD/LM	11/15/00
	L 33		6	75-82	Onondaga Chert Debitage/Core Shatter	Wt.>0.0	1		-	MD/LM	11/15/00
	M 15		3	65-100	Ferrous Alloy Cut Nail Frag		1		-	GD/NM	08/03/00
	M 16		1	0-60	Onondaga Chert Debitage/Core Non-Cortical Flake	Retouched	1		-	NM/GD	08/03/00
	M 16	1mE	3	30-56	Glass Window		1		-	WG/LM	08/07/00
	M 16	1mS	2	27-59	Glass Clear Bottle-Unid.		1		-	WG/LM	08/07/00
	M 16	1mS	2	27-59	Glass Clear Lamp Chimney		1		-	WG/LM	08/07/00
	M 16	1mW	2	22-36	Fire Cracked Rock		1		-	WG/LM	08/07/00
	M 20		1	0-27	Ferrous Alloy Cut Spike		1		-	NM/GD	08/03/00
	M 22		1	0-27	Stoneware Salt Glaze/Alb. Slip Food Prep/Storage		1		1800-1900	NM/GD	08/03/00
	M 33		1	0-28	Glass Clear Window		1		-	MM/RW	11/21/00

BAG	STP#	4-RND	LEV.	DEPTH	DESCRIPTION	COMMENTS	CT	WT(g)	DATES	CREW	DATE
	M 33		1	0-28	Glass Green Bottle-Unid.		1		-	MM/RW	11/21/00
	N 10		1	0-25	Glass Window		1		-	BG/CO	08/04/00
	N 17		1	0-32	Ferrous Alloy Cut Nail		1		-	BG/CO	08/03/00
	N 18		1	0-62	Undiff Metal Undiag.	Perforated Aluminum?	1		-	BG/CO	08/03/00
	N 18		1	0-62	Refined Earthenware Clay Pigeon		7		-	BG/CO	08/03/00
	N 19		1	0-30	Refined Earthenware Clay Pigeon		3		-	BG/CO	08/03/00
	N 19		1	0-30	Glass Aqua Bottle-Unid.		1		-	BG/CO	08/03/00
	N 20		2	48-69	Refined Earthenware Clay Pigeon		7		-	BG/CO	08/03/00
	N 20		2	48-69	Ferrous Alloy Undiag. Nail Frag.		1		-	BG/CO	08/03/00
	N 21		2	34-46	Refined Earthenware Clay Pigeon		3		-	BG/CO	08/03/00
	N 22		2	18-84	Refined Earthenware Clay Pigeon		2		-	BG/CO	08/03/00
	N 22		2	18-84	Ferrous Alloy Undiag. Metal		6		-	BG/CO	08/03/00
	N 26		1	0-25	Glass Clear Bottle-Unid.		1		-	KH/RW	11/16/00
	N 27		1	0-25	Glass Molded Pink Unident.		1		-	KH/RW	11/16/00
	N 27		1	0-25	Glass Clear Window		1		-	KH/RW	11/16/00
	N 27		1	0-25	Glass Green Bottle-Unid.		1		-	KH/RW	11/16/00
	N 27		1	0-25	Whiteware Undiff. Ceramic		1		1830-2000	KH/RW	11/16/00
	N 28		Surf.	-	Glass Brown Bottle-Unid.		1		-	KH/RW	11/16/00
	N 28		Surf.	-	Glass Brown Bottle-Unid.		1		-	KH/RW	11/16/00
	N 28		Surf.	-	Porcelain Dish	Doll China	1		-	KH/RW	11/16/00
	N 35		1	0-25	Whiteware Undiff. Ceramic		1		1830-2000	KH/RW	11/16/00
	N 38		3	35-45	Ferrous Alloy Undiag. Nail Frag.		1		-	KH/RW	11/16/00
	O 20		2	25-64	Ferrous Alloy Cut Nail Frag		1		-	AM/TH	08/04/00
	O 21		1-2	0-32	Whiteware Undiff. Ceramic		1		1830-2000	JW/CO	08/07/00
	O 21		1-2	0-32	Refined Earthenware Clay Pigeon		10		-	JW/CO	08/07/00
	O 22		1	0-25	Refined Earthenware Embossed Clay Pigeon	1 Pc.Embossed: "...N..."	4		-	JW/CO	08/07/00
	O 22		1	0-25	Glass Clear Bottle-Unid.		1		-	JW/CO	08/07/00
	O 22		1	0-25	Ferrous Alloy Undiag. Nail		1		-	JW/CO	08/07/00
	P 10		1	0-22	Ferrous Alloy Undiag. Nail		1		-	KS/DR	08/07/00
	P 15		1	0-25	Ferrous Alloy Buckle		1		-	WG/LM	08/08/00
	P 17		1	0-25	Ferrous Alloy Undiag. Nail		1		-	WG/LM	08/08/00
	P 21		2	25-60	Ferrous Alloy Cut Nail Frag		2		-	CO/JW	08/08/00
	P 21		2	25-60	Glass Window		1		-	CO/JW	08/08/00
	P 22		2	25-45	Ferrous Alloy Cut Nail		1		-	CO/JW	08/08/00
	P 22		2	25-45	Cuprous Metal Tubing		2		-	CO/JW	08/08/00
	P 22		2	25-45	Bone Mammal		2		-	CO/JW	08/08/00
	P 23		2	25-56	Glass Window		2		-	CO/JW	08/08/00
	P 23		2	25-56	Bone Indeterminate		1		-	CO/JW	08/08/00
	P 24		1	0-25	Ironstone Undiff. Ceramic		1		1850-2000	BG/CO	08/03/00
	P 27		1	0-25	Glass Clear Bottle-Unid.		1		-	AM/MD	11/16/00
	Q 20		2	25-46	Glass Window		1		-	DC/JM	08/09/00
	Q 21		2	25-50	Glass Window		2		-	DC/JM	08/09/00
	Q 24		2	25-75	Ferrous Alloy Wire Nail		2		-	CO/JW	08/08/00
	Q 24		2	25-75	Ferrous Alloy Undiag. Metal		1		-	CO/JW	08/08/00
	R 15		1	0-27	Glass Sun Purpled Bottle-Unid.		1		1880-1918	MR/KS	08/08/00
	R 15		1	0-27	Glass Window		1		-	MR/KS	08/08/00
	R 15		1	0-27	Whiteware Tableware/Teaware		3		1830-2000	MR/KS	08/08/00
	R 17		1	0-25	Whiteware Undiff. Ceramic		1		1830-2000	MD/JW	08/09/00
	R 17		2	25-43	Brick Frag.		1		-	MD/JW	08/09/00
	R 17		3	43-64	Onondaga Chert Debitage/Core Non-Cortical Flake	1 Utilized	2		-	MD/JW	08/09/00
	R 17		3	43-64	Glass Amber Undiff. Glass		1		-	MD/JW	08/09/00
	R 17		3	43-64	Glass Clear Undiff. Glass		1		-	MD/JW	08/09/00
	R 17	1mS	2	25-50	Glass Aqua Bottle-Unid.		1		-	DC/WG	08/10/00
	R 17	7.5mE	3	36-50	Onondaga Chert Debitage/Core Non-Cortical Flake		1		-	MR/KS	08/10/00
	R 17	7.5mW	2	25-50	Glass Aqua Bottle-Unid.		1		-	DC/WG	08/10/00
	R 22		3	29-51	Onondaga Chert Debitage/Core Non-Cortical Flake		1		-	WG/KS	08/09/00
	R 22	1mN	2	25-51	Glass Window		1		-	MR/KS	08/10/00
	R 22	1mW	4	57-77	Onondaga Chert Debitage/Core Non-Cortical Flake		2		-	DC/WG	08/10/00
	R 22	7.5mW	3	50-62	Glass Clear Undiff. Glass		1		-	DC/WG	08/10/00
	R 23		1	0-25	Brass Gun Cartridge	"Western Xpert No.12 Made In USA"	1		-	CO/JW	08/08/00
	R 36		1	0-29	Pearlware Undiff. Ceramic		1		1780-1830	MR/RW	11/20/00

BAG	STP#	4-RND	LEV.	DEPTH	DESCRIPTION	COMMENTS	CT	WT(g)	DATES	CREW	DATE
	S 14		1	0-25	Glass Sun Purpled Bottle-Unid.		1		1880-1918	DC/JM	08/08/00
	S 15		1	0-25	Stoneware Glazed Brown Food Prep/Storage Handle	Globs Of Glaze On Ext., Albany Slip Int.	1		1800-1900	DC/JM	08/08/00
	S 16		1	0-25	Whiteware Feather Edge Blue Undiff. Ceramic	Rim	1		1830-1860	MD/JW	08/09/00
	S 22		2	25-50	Glass Clear Melted Glass		1		-	DC/JM	08/09/00
	S 23		2	25-50	Ferrous Alloy Undiag. Nail Frag.		1		-	DC/JM	08/09/00
	S 24		1	0-25	Ferrous Alloy Cut Nail Frag		1		-	BG/MR	08/15/00
	S 26		2	25-37	Ferrous Alloy Cut Nail		1		-	AM/TH	08/04/00
	T 13		1	0-24	Whiteware Hand Painted Tableware/Teaware	Blue/Green/Red /Black; Floral	1		1830-1860	MR/KS	08/08/00
	T 25		1	0-19	Tooth Bos Taurus (Cow)		1		-	BG/MR	08/15/00
	T 26		1	0-25	Tooth Bos Taurus (Cow)		1		-	BG/MR	08/15/00
	T 30		1	0-25	Porcelain Elec. Insulator		1		-	JD/MD	11/20/00
	T 33		1	0-25	Glass	Artifact Missing	1		-	JD/MD	11/20/00
	U 13		1	0-25	Brick Frag.		2		-	MD/JW	08/09/00
	U 16		3	16-41	Glass Clear Bottle-Unid.		2		-	KS/WG	08/09/00
	U 21		2	19-32	Glass Green Bottle-Unid.		1		-	KS/WG	08/09/00
	U 25		1	0-25	Ferrous Alloy Unding. Nail		1		-	SK/JW	08/14/00
	V 17		1	0-17	Brick Frag.		1		-	MD/JW	08/09/00
	V 17		1	0-17	Tooth Odocoileus Virginianus (Deer)		1		-	MD/JW	08/09/00
	V 17		3	38-79	Ferrous Alloy Undiag. Nail Frag.		1		-	MD/JW	08/09/00
	V 23		1	0-19	Porcelain Decal Green Undiff. Ceramic		1		1890-2000	BG/MR	08/14/00
	V 30		1	0-25	Whiteware Decorated Blue Undiff. Ceramic		1		1830-2000	MD/JD	11/20/00
	W 11		1	0-22	Yellowware Undiff. Ceramic	Partial Glazing On One Side	1		1830-1900	NM/KH	08/14/00
	W 13		1	0-17	Glass Window		1		-	MR/KS	08/09/00
	W 13		1	0-17	Whiteware Transfer Blue Undiff. Ceramic		1		1830-1870	MR/KS	08/09/00
	W 21		1	0-25	Ferrous Alloy Cut Nail Frag		1		-	DC/JM	08/09/00
	X 14		2	24-60	Porcelain Undiff. Ceramic		1		-	LM/TK	08/10/00
	X 30		1	0-25	Onondaga Chert Debitage/Core Cortical Chunk	Utilized	1	0.9	-	TK/LM	11/20/00
	X 30	7.5mN	1	0-19	Glass Clear Bottle-Unid.		1		-	LM/MD	11/21/00
	X 30	7.5mW	2	25-45	Onondaga Chert Debitage/Core Bifacial Thinning Flake	Utilized	1	0.9	-	KH/AM	11/21/00
	X 32		1	0-26	Whiteware Undiff. Ceramic		1		1830-2000	LM/TK	11/20/00
	X 33		1	0-32	Glass Clear Window		1		-	LM/TK	11/20/00
	Y 12		1	0-29	Ironstone Undiff. Ceramic		2		1850-2000	NM/KH	08/14/00
	Y 12		1	0-29	Glass Window		1		-	NM/KH	08/14/00
	Y 12		1	0-29	Ferrous Alloy Undiag. Nail Frag.		1		-	NM/KH	08/14/00
	Y 13		1	0-34	Yellowware Undiff. Ceramic	Partial Glazing On Both Sides	1		1830-1900	NM/KH	08/14/00
	Y 13		1	0-34	Ferrous Alloy Undiag. Nail Frag.		1		-	NM/KH	08/14/00
	Y 18		1	0-25	Glass Window		1		-	LM	08/14/00
	Y 19		3	25-35	Onondaga Chert Debitage/Core Non-Cortical Flake		2		-	LM	08/14/00
	Y 33		2	25-39	Fire Cracked Rock		15	369.8	-	MR/RW	11/20/00
	Z 12		1	0-26	Whiteware Undiff. Ceramic		1		1830-2000	NM/KH	08/14/00
	Z 12		1	0-26	Whiteware Undiff. Ceramic	Rim	1		1830-2000	NM/KH	08/14/00
	Z 15		1	0-25	Glass Window		2		-	SK/JW	08/14/00
	Z 15		1	0-25	Glass Clear Bottle-Unid.		1		-	SK/JW	08/14/00
	Z 18		2	25-56	Ferrous Alloy Undiag. Nail Frag.		1		-	KS/DR	08/14/00
	Z 20		2	9-32	Ferrous Alloy Undiag. Nail Frag.		1		-	KS/DR	08/14/00
	Z 20		2	9-32	Ferrous Alloy Undiag. Metal		1		-	KS/DR	08/14/00
	Z 33		1	0-25	Glass Clear Bottle-Unid.		1		-	JD/MD	11/20/00
	Z 33		1	0-25	Semi-Porcelain Molded Undiff. Ceramic		1		-	JD/MD	11/20/00
	Z 34		2	25-45	Ferrous Alloy Undiag. Nail Frag.		2		-	JD/MD	11/20/00

ATTACHMENT F: PROJECT AREA PHOTOGRAPHS

Photo 1. Project area, Parcel A, facing east, just south of Owego Free Academy.

Photo 2. Project area, Parcel A, facing northeast.

Photo 3. Project area, Parcel A, facing south, from northwest corner of parcel.

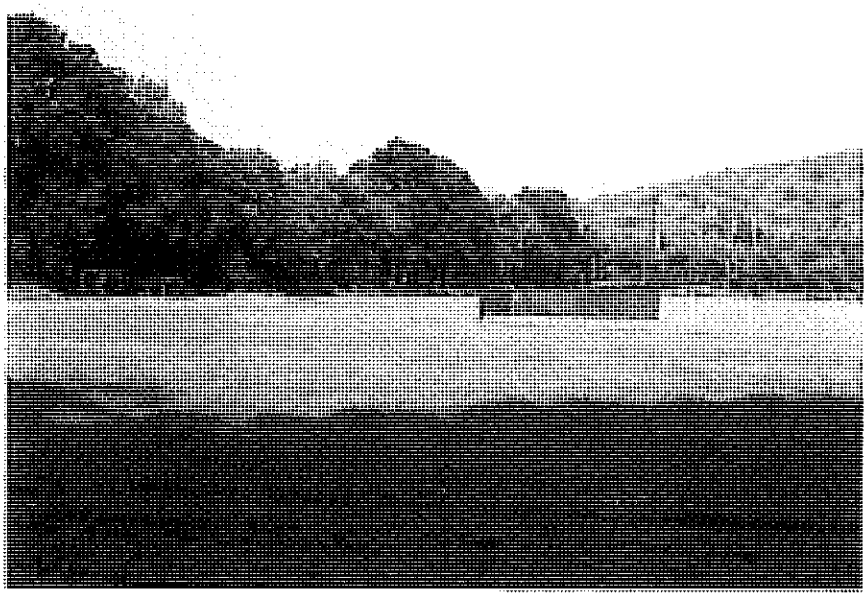


Photo 4. Project area, Parcel A, facing east from northwest corner of parcel.

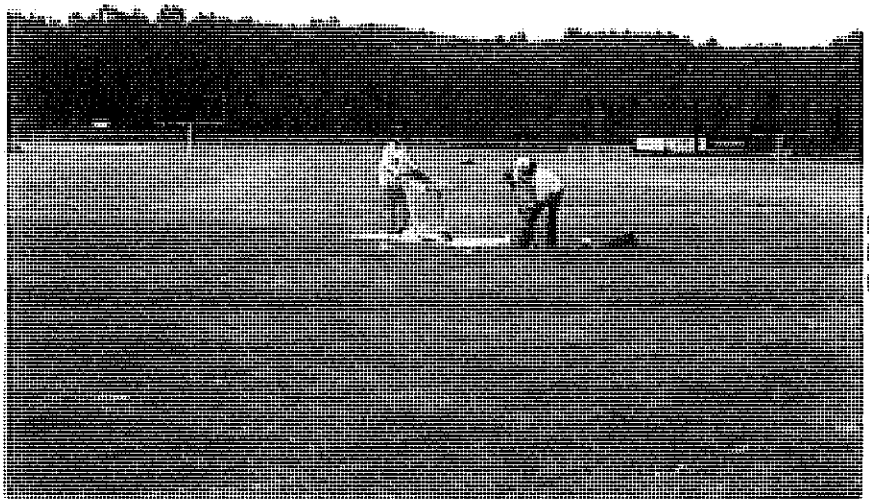


Photo 5. Project area, Parcel A, facing west toward football fields.

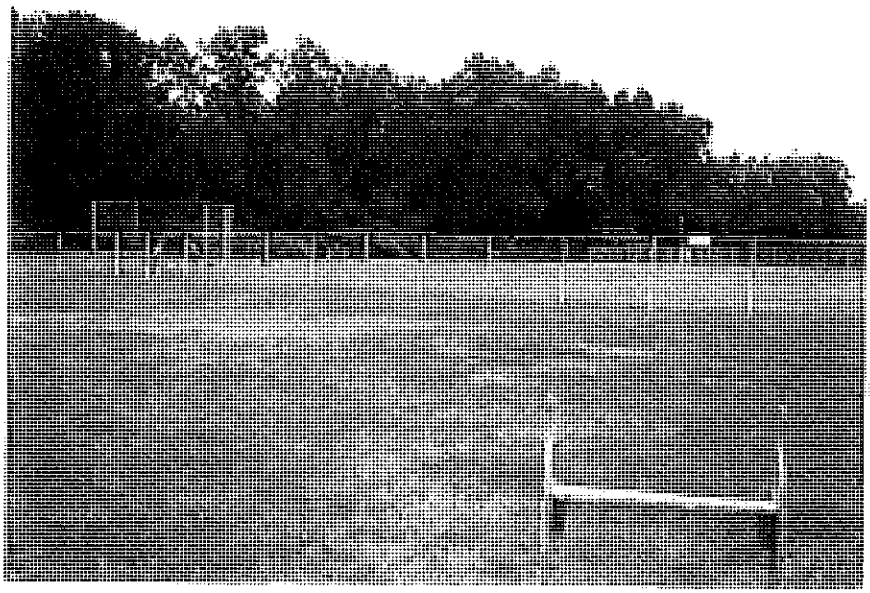


Photo 6. Project area, Parcel A, facing northwest from within fence around running track.

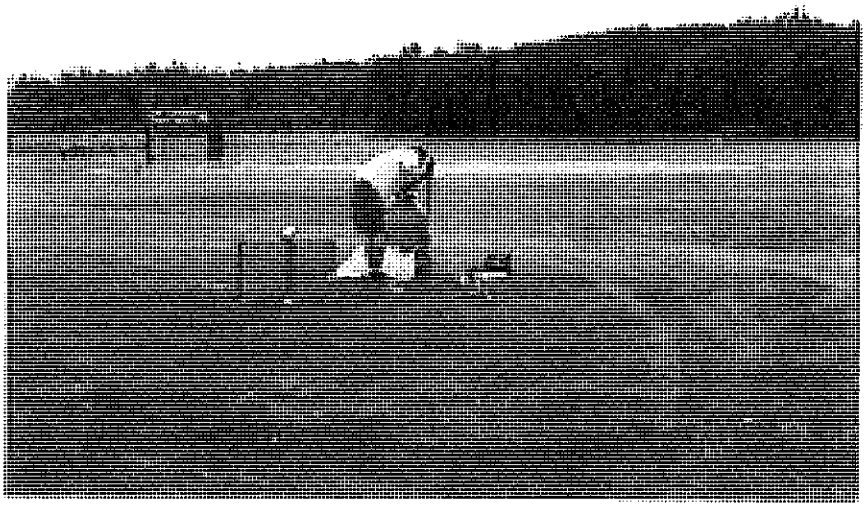


Photo 7. Project area, Parcel A, facing southwest. Photo depicts crew tamping soil in STP during backfilling.

Photo 8. Project area, Parcel A, facing northwest. Photo depicts crew watering STPs after backfilling.

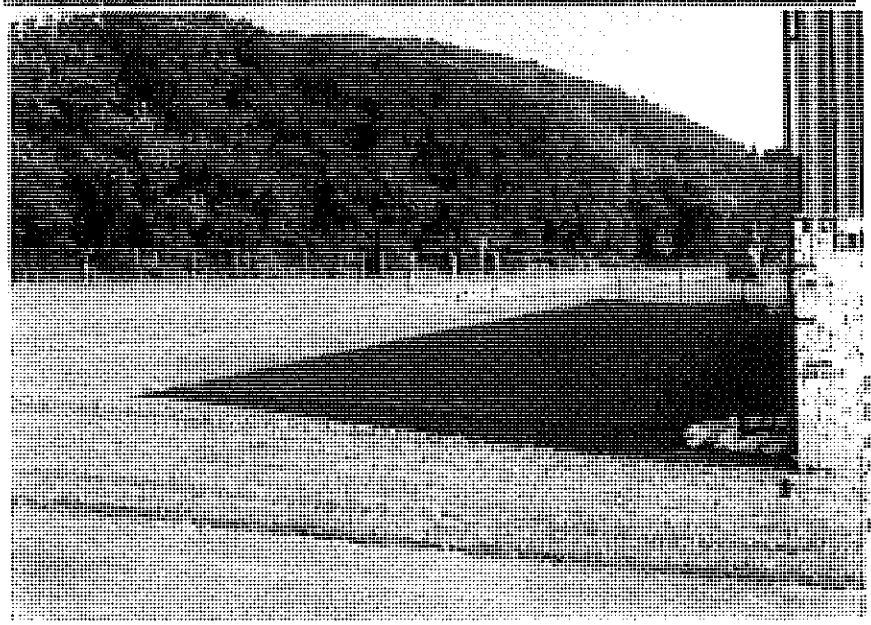


Photo 9. Project area, Parcel A, facing south adjacent to Owego Free Academy, untestable area due to prior construction activities.

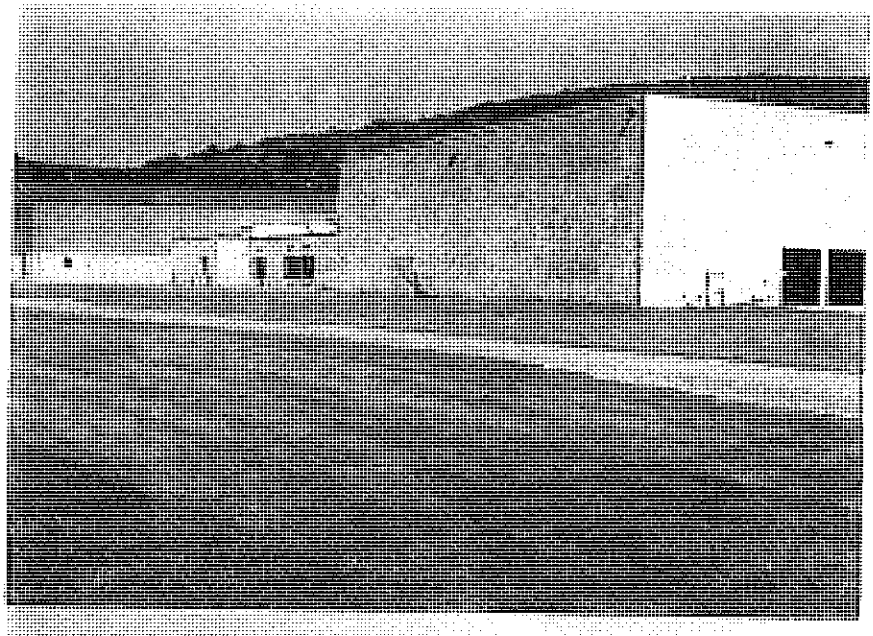


Photo 10. Project area, Parcel A, facing southeast toward Owego Free Academy, untestable area due to prior construction activities.

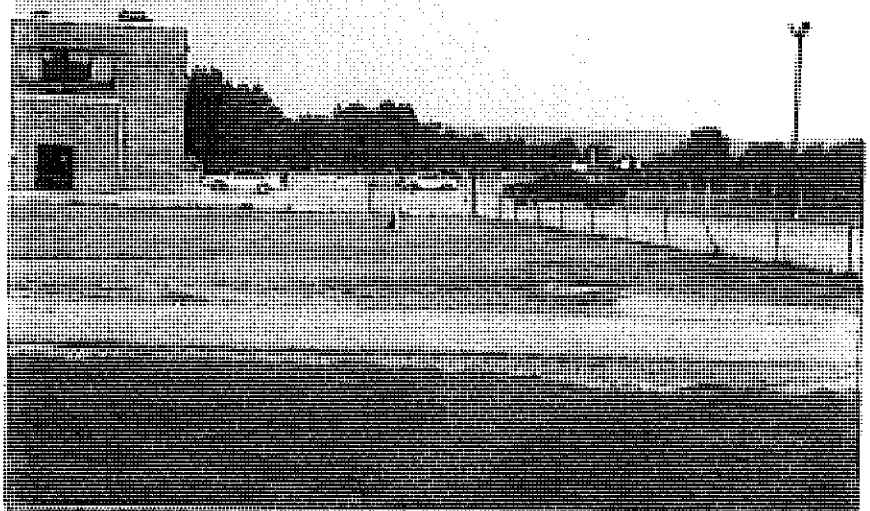


Photo 11. Project area, Parcel A, facing south toward Owego Free Academy, untestable area due to prior construction activities.

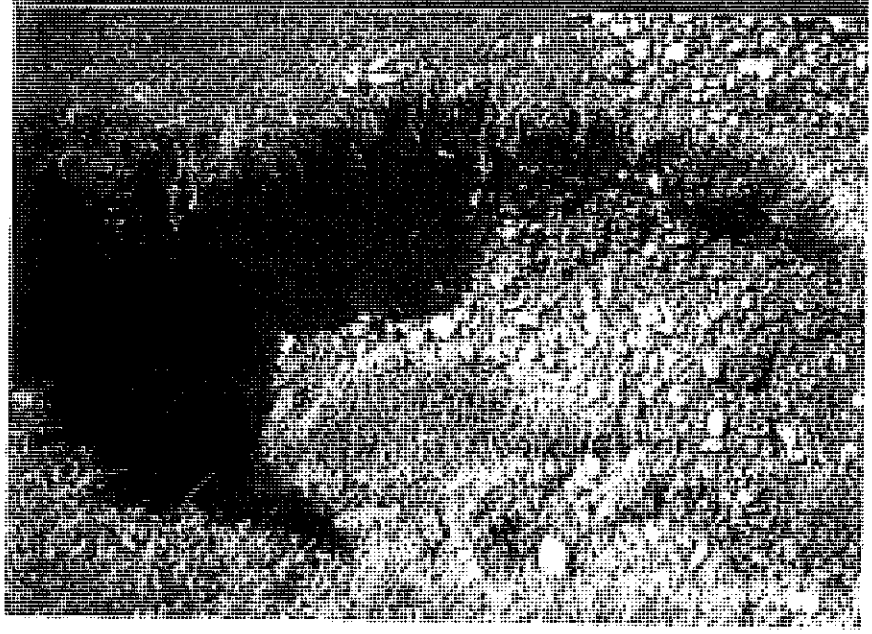


Photo 12. Project area. Parcel A, west wall profile of Trench 2.

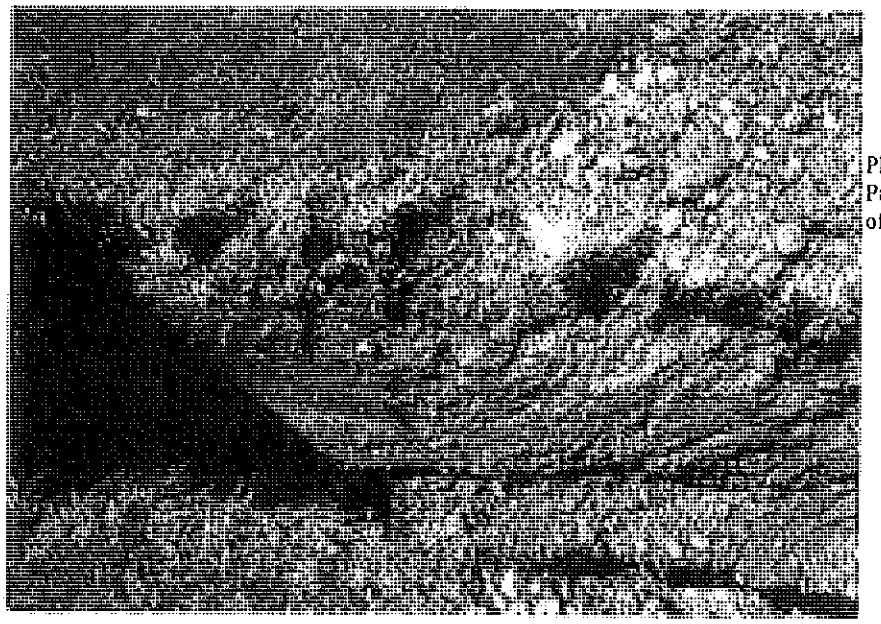


Photo 13. Project area, Parcel A, west wall profile of Trench 3.

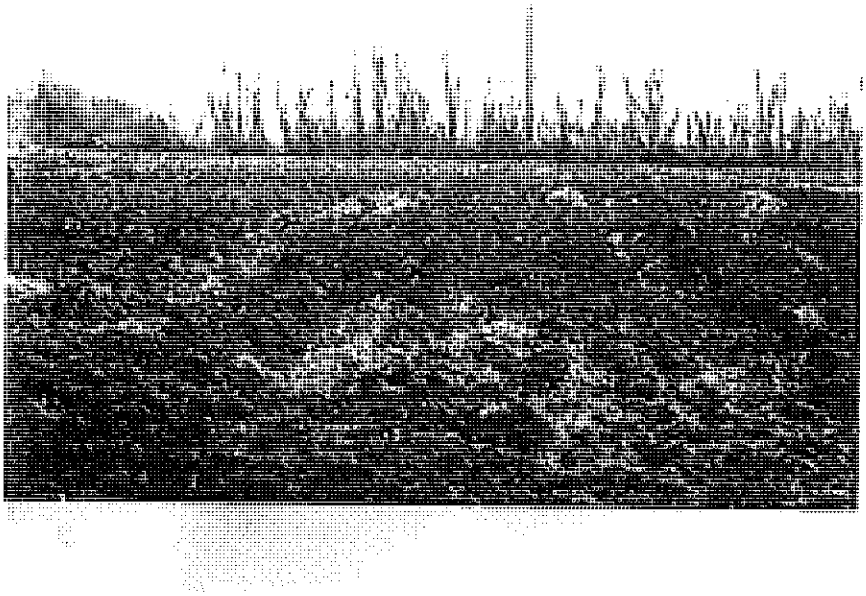


Photo 14. Project area, Parcel B, facing south, plowed area.

Photo 15. Project area, Parcel B, facing southeast, disked area.

Photo 16. Project area, Parcel B, facing north, [illegible] area. Surface survey in progress.

Photo 17. Project area, Parcel B, facing east, [illegible] area north of [illegible].

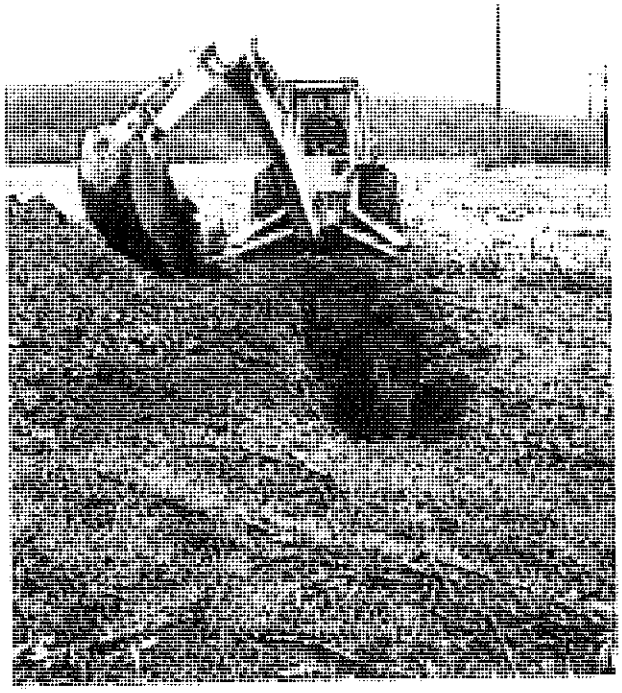


Photo 18. Project area, Parcel B, facing east, backhoe trenching.

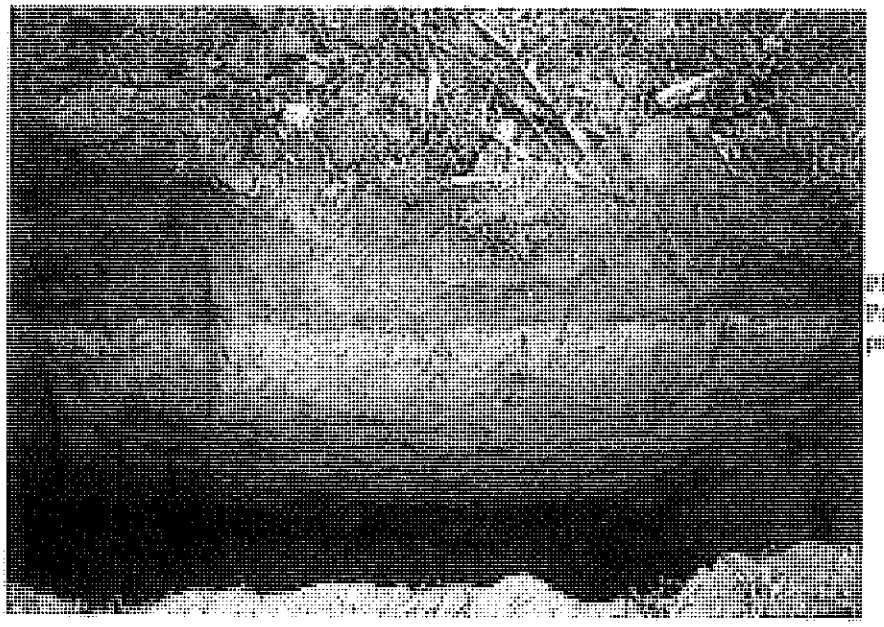


Photo 19. Project area, Parcel B, south wall profile of Trench 4.

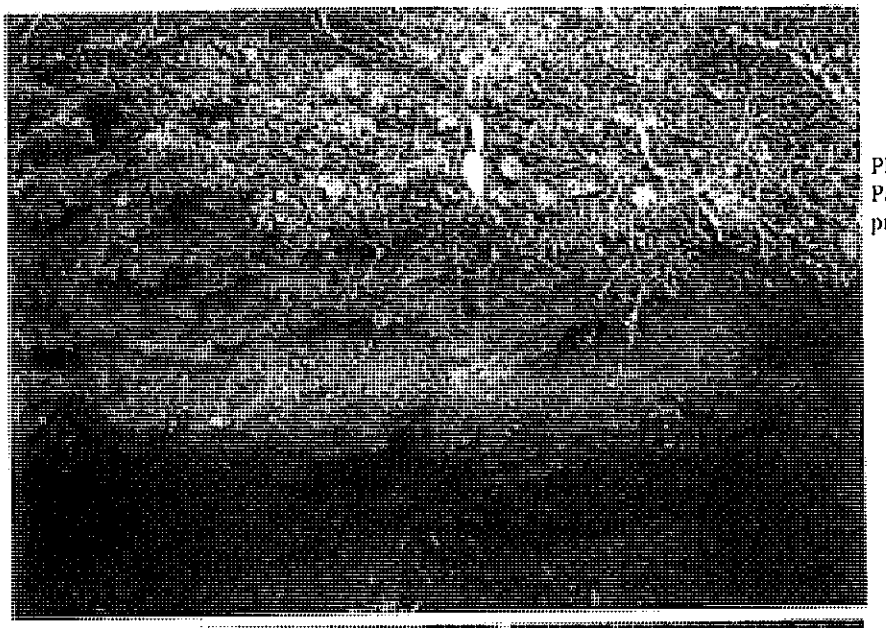


Photo 20. Project area, Parcel B, south wall profile of Trench 5.

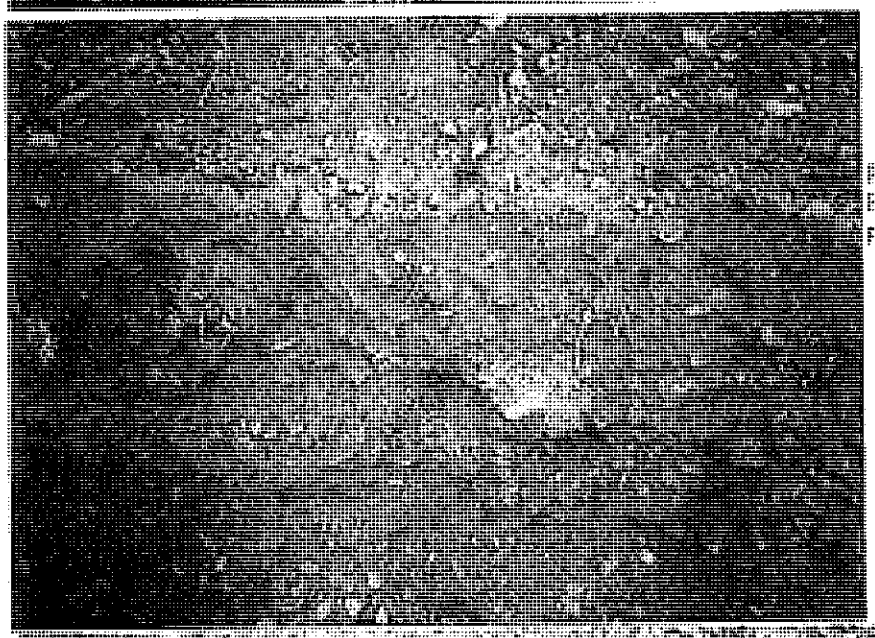


Photo 21. Project area, Parcel B, south wall profile of Trench 6.

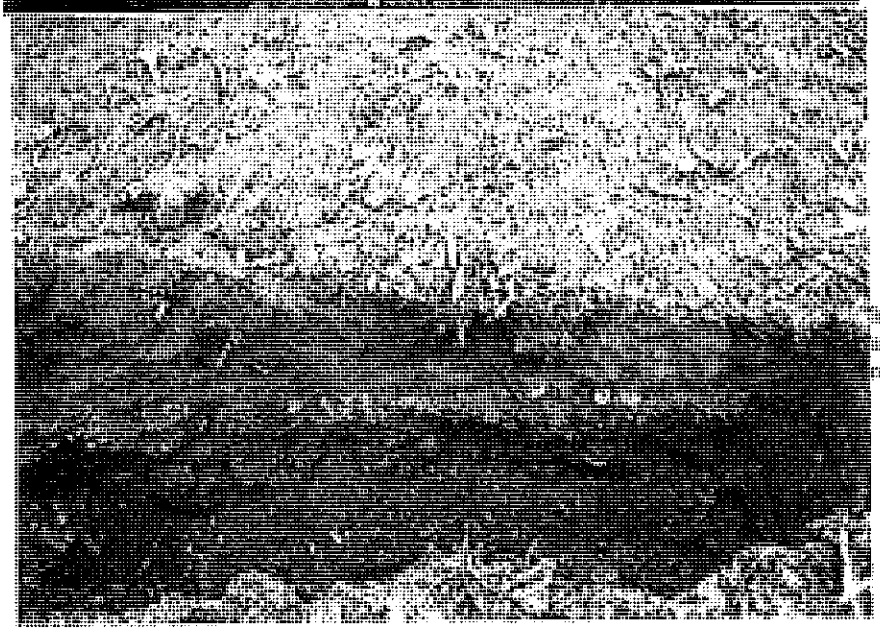


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Photo 23. Facing northwest, Huntington Creek site (SUBi-2088).

Photo 24. Facing southwest, Owego Free Academy site (SUBi-2089).

Photo 25. Facing north, Owego Creek site (SUBI-2090).

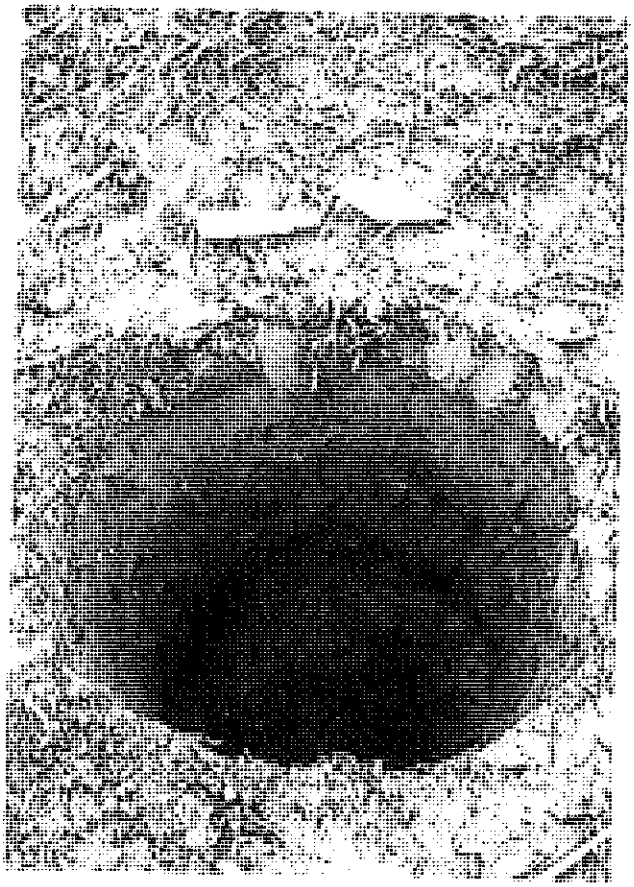
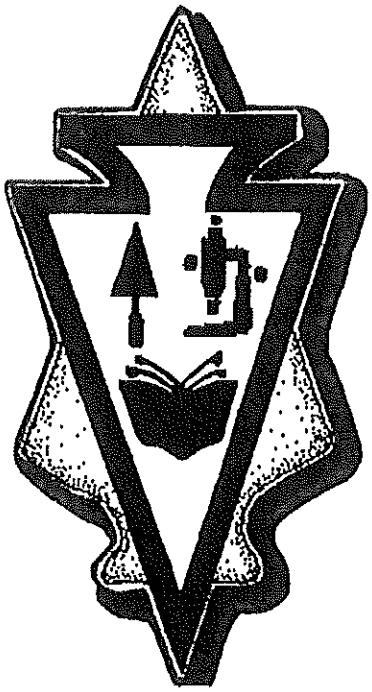


Photo 26. Project area, Parcel B, facing west, possible feature in STP Y33, Owego Creek site (SUBI-2090).



Public Archaeology Facility Report

Binghamton University
State University of New York
Binghamton, New York 13902-6000

CULTURAL RESOURCE MANAGEMENT REPORT

ADDENDUM RECONNAISSANCE SURVEY AND
PHASE 2 SITE EXAMINATION
THE OWEGO CREEK SITE (SUBI-2090)

OWEGO/APALACHIN CENTRAL SCHOOL DISTRICT PROJECT
TOWN OF OWEGO
TIOGA COUNTY, NEW YORK
MCD 10706
00PR0756

PREPARED BY:

LAURIE E. MIROFF
PUBLIC ARCHAEOLOGY FACILITY
BINGHAMTON UNIVERSITY
BINGHAMTON, NY 13902

PREPARED FOR:

HAWK ENGINEERING
222 WATER STREET
SUITE 201
BINGHAMTON, NEW YORK 13901

June 20, 2002

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I. INTRODUCTION

This report presents the results of an addendum reconnaissance survey and a Phase 2 Site Examination of the prehistoric Owego Creek site (SUBi-2090) located west of NY 96/38, north of the Village of Owego's center, in the Town of Owego, Tioga County, New York. Staff from the Public Archaeology Facility (PAF) completed the original reconnaissance survey for the Owego Central School District Project in November 2000 (Miroff 2000). During reconnaissance, PAF archaeologists identified the Owego Creek (SUBi-2090) and Owego Free Academy (SUBi-2089) sites. Following the reconnaissance and review of the findings, PAF recommended Site Examinations at both the Owego Creek and Owego Free Academy sites if construction activity could not avoid impacting the sites. The Office of Parks, Recreation, and Historic Preservation (OPR&HP) agreed and, in addition, they recommended that replowed areas be re-examined to insure that site boundaries were completely identified and that no additional sites exist within the project boundaries (Appendix III). The addendum reconnaissance survey, consisting of a surface survey of the Owego/Apalachin Central School District project area, Parcel B, was completed in May 2002. The Site Examination for the Owego Creek site was also conducted in May 2002.

The fieldwork summarized in this report was performed under the supervision of Dr. Nina M. Versaggi, Director of PAF. Laurie Miroff served as Project Director and is the author of this report. Rich Santos acted as Crew Chief. Crew consisted of Felix Acuto, Thomas Besom, David Breitkreutz, Christopher Dragich, Bretton Giles, Rebecca Hearn, James Macaluso, Nasser Malit, Micah Mones, Alexander Nevgloski, Christine Ostrander, Michael Rudler, Rebecca Stollman, and Waldo Tomoski. The artifacts were catalogued by Janna Rudler. Databases were constructed by Patricia McClure. Mary Lou Supa and the author produced the project maps. Maria Pezzuti and Annie Pisani performed all related administrative duties.

In compliance with the guidelines of the New York Archaeological Council (1994) and the National Park Service's Criteria and Procedures for the Identification of Historic Properties (1978), the area within and adjacent to the Owego Creek site is considered within the area of impact for the purposes of conducting the Site Examination. The results of the research performed for this report do not apply to any area outside the site and project areas.

1.1 Project Description and Site Location

The Owego/Apalachin Central School District Project and the Owego Creek site are situated in the Town of Owego, Tioga County, New York. Figure 1 places the project within Tioga County and New York State and Figure 2 shows the project area on the 15 minute Owego USGS quadrangle (Photos 1-2). The Owego Creek site is located in an area that will be impacted by the proposed work for the project, which includes the construction of a temporary sediment trap and diversion berm. The Owego Creek and Owego Free Academy sites were identified during the 2000 reconnaissance survey (Miroff 2000). Both were recommended for Site Examinations if construction activity could not avoid impacting the sites. Construction plans could not be designed to avoid the Owego Creek site, but plans were modified to avoid impacting the Owego Free Academy site.

The Owego Creek site (SUBi-2090) is located in an agricultural field north of Huntington Creek (Photos 1-2). The project area is situated approximately 2.4 km (1.5 mi) north of the Susquehanna River. Elevation within the project area is approximately 247 m (810 ft) ASL. The Owego Creek site (SUBi-2090) measures 80 x 78.5 m (262 x 257 ft) and encompasses 3957 m^2 (42,593 ft^2) or .4 ha (.9 ac) within the project limits (Photos 1-2). Individual loci range in size from 225 m^2 (2421 ft^2) to 1,518 m^2 (16,334 ft^2). Artifacts are unevenly distributed within this area. Three loci of activity were defined. This parcel also includes the Owego Free Academy site (SUBi-2089). The site measures 220 x 230 m (722 x 807 ft) and encompasses 29,182 m^2 (314,112 ft^2) or 2.9 ha (7.2 ac) within the project limits. Artifacts mainly concentrate in the northernmost portion of the field, just south of the existing driveway. Since the parcel north of Huntington Creek was not completely plowed during the initial reconnaissance, a second reconnaissance was recommended to determine if the sites in this parcel, particularly the Owego Free Academy site, were larger than originally estimated or if additional sites were present within the project boundaries.

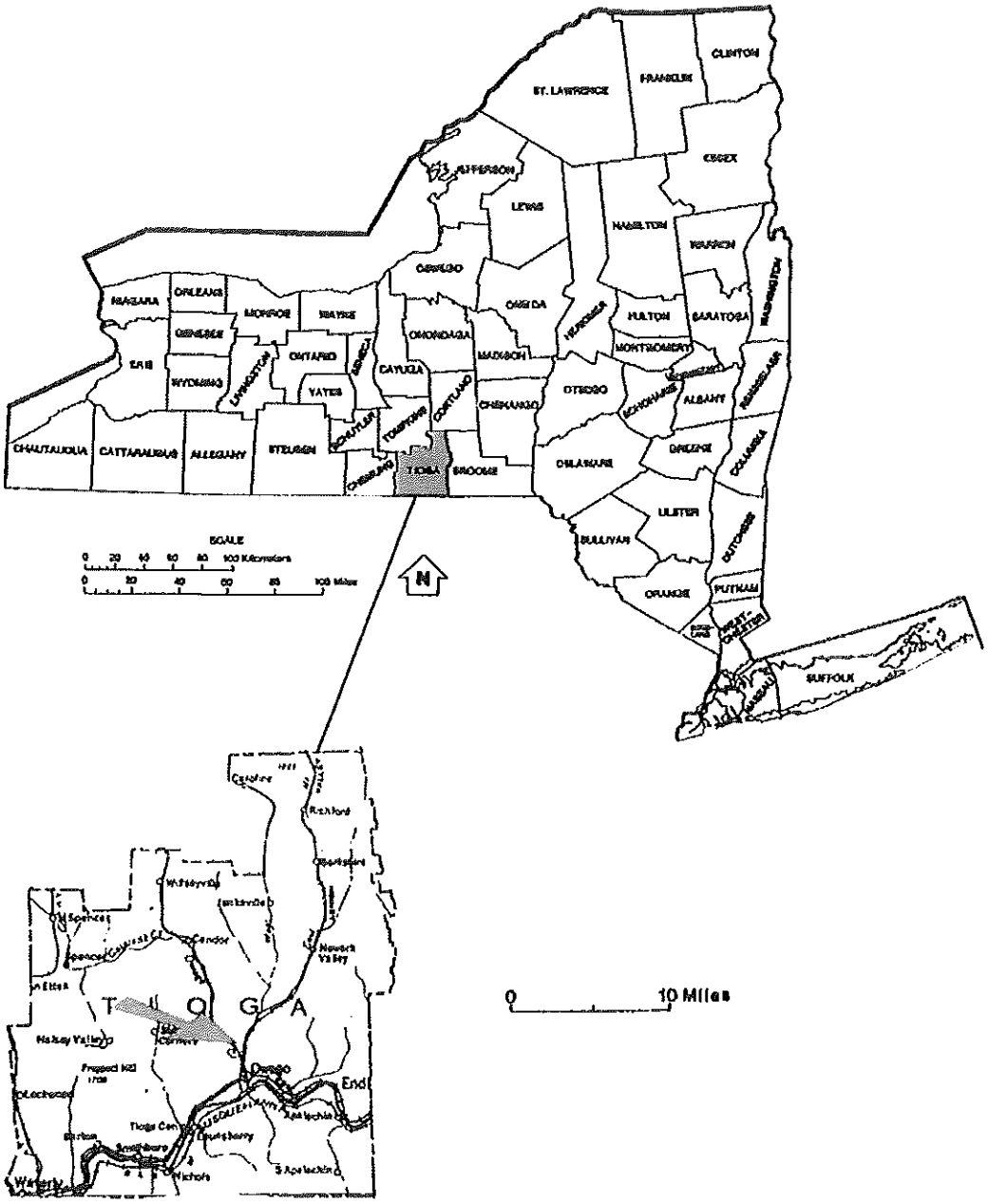

Figure 1. Location of the Owego Creek (SUBi-2090) site in New York State and Tioga County.

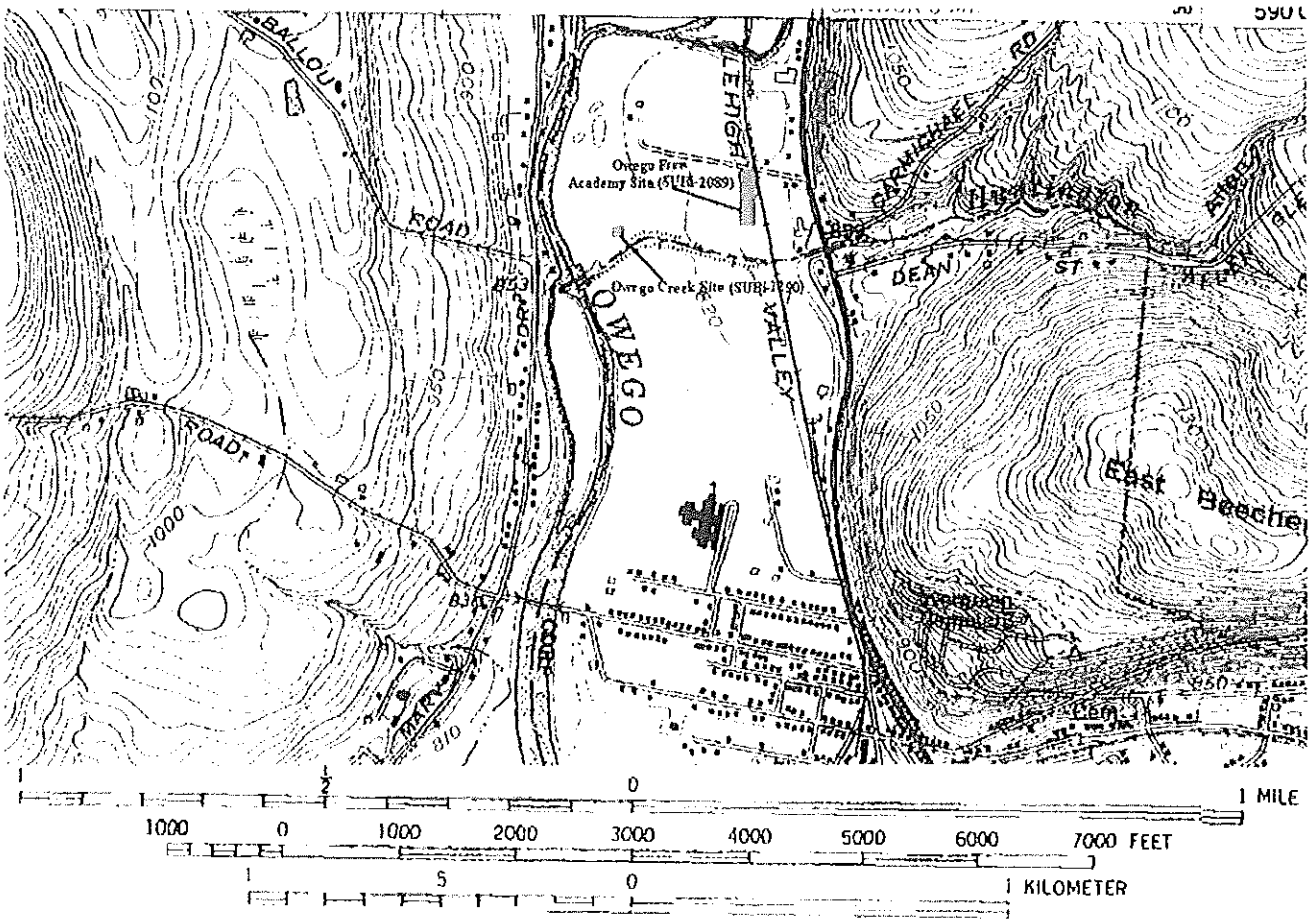

Figure 2. Topographic setting of the Owego Creek (SUBi-2090) and Owego Free Academy (SUBi-2089) sites on the 1969 15 minute, Owego, NY quadrangle.

II. BACKGROUND RESEARCH

2.1 Environmental Setting

The Phase 1A literature review for the proposed project was conducted by Pratt & Pratt Archaeological Consultants, Inc. (Pratt and Pratt 2000). The results of their findings are included in the brief summary below.

Tioga County is situated in south-central New York, bordering Pennsylvania. It is located within the Glaciated Allegheny Plateau section of the Appalachian Plateau province. The elevation of the project area varies between 247 and 253 m (810 and 830 ft) ASL. Owego Creek lies just west and north of the project area. The project area is approximately 2.4 km (1.5 mi) north of where Owego Creek meets the Susquehanna River. Huntington Creek flows through the project area. Huntington Creek meets Owego Creek just west of the project area.

According to Pratt and Pratt (2000:11-12), site area soils are Unadilla silt loam (Unn) (Figure 3). In general, the soils begin with a grayish-brown or yellow-brown silt loam or gravelly loam, followed by a yellow-brown subsoil of silt loam or silt loam with gravel and a gray-brown silt, sand and gravel (generally this parent material is glacial outwash or recent alluvium).

Recent research by the Public Archaeology Facility has shown that the Upper Susquehanna and its tributaries, such as Owego Creek, are characterized by ancient braided streams (Cremeens 1998). Unadilla soils tend to fill in these ancient channels between gravel bars. Today, linear pockets of Unadilla soils are found interspersed with the ancient gravel bars. The lower Owego Creek Valley may be an example of this characterization. The project area is currently an agricultural field (Photos 1-2).

2.2 Prehistoric Context

Pratt and Pratt's site files search and the files of the Public Archaeology Facility (PAF), New York State Museum (NYSM) and Office of Parks Recreation and Historic Preservation (OPR&HP) along with interviews with local officials and property owners recorded 30 prehistoric/protohistoric sites within a 3.2 km (2 mi) radius of the project area (Pratt and Pratt 2000:18-20). These include the Tioga County Courthouse site (SUBi-1002, NYSM #10783), a multicomponent camp site with evidence for occupation from the Late Archaic to Early Woodland; SUBi-672 (OPR&HP A107.40.0028), a multicomponent site with evidence for occupation from the Transitional to Early Woodland and Late Woodland periods; the Lackawanna Avenue site (SUBi-675, OPR&HP A107.40.0012), a low density site of unknown temporal affiliation; SUBi-677 (OPR&HP A107.40.0011), a large, multicomponent village in the western part of the Village of Owego, with evidence for occupation dating from the Late Archaic to Contact period, possibly the village of Ah-we-ga described by early European travelers and destroyed by the Clinton-Sullivan campaign of 1779; and SUBi-679, a Late Archaic (probably) site from which a Lamoka-like projectile point was recovered.

Existing information suggests that a settlement pattern model including villages for Late Woodland occupations and base camps for Late Archaic and Transitional occupations along with temporary camps and resource procurement/processing stations associated with residential sites characterizes the Susquehanna Valley. The Susquehanna Valley provided a variety of habitats and physiographic situations that would have allowed for many uses and provided many resources for prehistoric populations. The location of the project area on a glacial terrace set back from the flood plain places the project in an area of high probability for residential sites and temporary camps or resource/processing stations. Therefore, a high prehistoric sensitivity was assigned to this project area. Occupation from any time period is possible in the project area as evidenced by the site files and the Phase 1A report (Pratt and Pratt 2000). Diagnostics recovered from the initial and addendum reconnaissances as well as the Site Examination suggest that sites in the project area date from the Late Archaic, especially the Brewerton phase, through the Middle and/or Late Woodland periods.

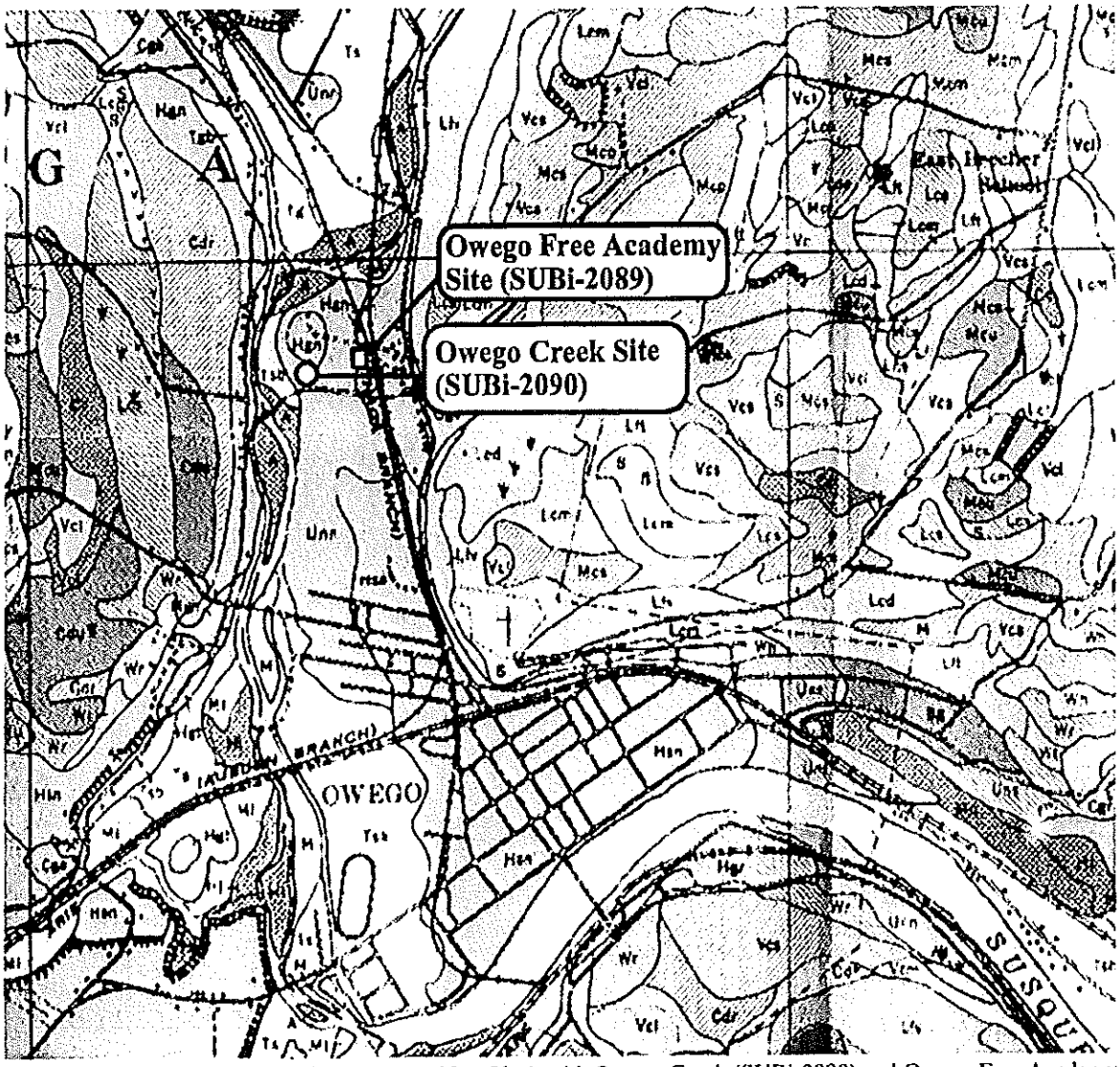

Figure 3. 1953 Soil Survey of Tioga County, New York with Owego Creek (SUBi-2090) and Owego Free Academy (SUBi-2089) sites highlighted. Key: Unn=Unadilla silt loam.

Late Archaic (3500-1500 B.C.) sites are generally located near major waterways and subsistence included hunting, gathering, and fishing. Fission and fusion of groups occurred and occupants inhabited seasonal bases, single and multiple task camps in the valleys, and small resource processing locations in the uplands. Small groups would leave daily to hunt and forage. Groups would also occasionally leave for chert quarries. In the early spring, small groups or the entire camp would leave for areas of anadromous fish runs. In the summer and fall, berries were collected; in spring, migratory birds were hunted. Hunting and fishing continued through the summer. Collecting and processing nuts and acorns occurred in the fall. In the winter, groups stayed on the valley floors or moved into the uplands to hunt, returning to the valley floor in the spring.

The following Transitional period (1500-200 B.C.) is characterized by a subsistence practice focused on hunting, gathering, and fishing. Small, temporary camps, often oriented toward river or coastal areas, typify settlement patterns during this period (Ritchie and Funk 1973:71-73). Toward the end of the period, ceramic vessels were manufactured and co-occurred with steatite (Versaggi and Knapp 2000).

During the Early Woodland period (200-0 B.C.), long-distance contact with cultural groups in the Midwest region developed, evidenced by the presence of non-local raw materials. This contact continued into the subsequent Middle Woodland period (0 B.C.-A.D. 900). During the Early and Middle Woodland periods, subsistence was distinguished by hunting and gathering and a greater reliance on native plant species such as chenopodium, sunflower, and tobacco (Funk 1993:31; Ritchie 1980:241). Settlement types for these periods included large and small camps with associated special purpose sites. In the Upper Susquehanna Valley, subsistence and settlement patterns began to be characterized by seasonal base camps located in optimal settings for long periods, possibly for multiple seasons (Versaggi 1987:305, 2000). Pottery occurred frequently and steatite vessels are virtually gone by this time.

It was not until the Late Woodland period (A.D. 900-1300) and continuing into the Iroquois period (A.D. 1300-1550) that permanent villages became the dominant settlement pattern. Maize, beans and squash horticulture, supplemented by native cultigens, was added to the previous subsistence practices of hunting, fishing and gathering. Camps, similar in type to those of earlier periods, were still used for collecting and processing resources that could not be obtained within the daily foraging radius (Ritchie and Funk 1973; Versaggi 1987, 1996a). Lithic scatters may be associated with large and small hunting, fishing, and gathering camps where seasonally available food resources such as nuts, fish, or fowl, were obtained by work parties who would often temporarily camp at the location of the resource. In the fall and winter, work groups left to obtain acorns at oak tree stands or hunt for deer. In the spring, summer, or fall community members may have traveled to productive fishing or fowling locations (Funk 1993).

2.3 Results of Reconnaissance Survey

The initial reconnaissance survey identified two prehistoric sites within the project area, the Owego Creek site (SUBi-2090) and the Owego Free Academy Site (SUBi-2089). The Phase 1B reconnaissance survey defined the Owego Creek site based on 17 prehistoric artifacts from 15 shovel test pits (STPs) clustered into three loci (Miroff 2000). Artifacts are summarized in Table 1. All chipped stone artifacts were made from Onondaga chert. Prehistoric cultural material was recovered from within the upper 40 cm (16 in) of the plow zone (Ap horizon). One surface find (Locus 1), a bi-pitted and flaked stone, was also recovered on the site. In addition, two possible hearths were identified by charcoal and reddened soil in two STPs. The observation of fire-cracked rock further suggested the potential for sub-plow zone features. At its maximum, the site measured 80 x 78.5 m (262 x 257 ft) and encompassed 3957 m^2 (42,593 ft^2) or .4 ha (.9 ac) within the project limits. Individual loci ranged in size from 225 m^2 (2421 ft^2) to 1,518 m^2 (16,334 ft^2). Each locus may represent a small camp or processing station or they may be part of one site. The cultural material recovered during the reconnaissance survey suggested that the site contained sufficient data potential to warrant a Site Examination to determine potential National Register eligibility.

Table 1. Artifacts from the Owego Creek Site, Initial Reconnaissance

Locus	Horizon	Bifacial Thinning Flake	FCR	RoughSt	Other lithics	Total
1	Surface			1		1
2	Ap		15			15
3	Ap	1 (ut=1)			1 (ut=1)	2
Total (%)		1 (5.6)	15 (83.3)	1 (5.6)	1 (5.6)	18

Key: ut=utilized flake; FCR=fire-cracked rock; RoughSt=rough stone tool; Other lithics=chunks.

In addition, crews identified the Owego Free Academy site (SUBi-2089) based on surface and subsurface artifacts (Miroff 2000). At its maximum, the site measured 220 x 230 m (722 x 807 ft) and encompassed 29,182 m^2 (314,112 ft^2) or 2.9 ha (7.2 ac) within the project limits. Artifacts mainly concentrated in the northernmost portion of the field, just south of the existing driveway. The site was artificially bounded on the north by a driveway, on the east by the project boundary, and on the south and west by the absence of artifacts. Archaeologists recovered 127 artifacts from the Owego Free Academy site; 123 from the surface and four from three STPs (Table 2). Two projectile points, one Brewerton-like Side-Notched and one Susquehanna Broad, suggested a Late Archaic (3500-1500 B.C.) and a Transitional (1500-200 B.C.) temporal affiliation. Chipped stone artifacts were made from Onondaga chert, rhyolite, and, possibly, chalcedony. No features were identified at the Owego Free Academy site. The presence of rhyolite flakes further supports a Transitional period component.

Table 2. Artifacts from the Owego Free Academy Site, Initial Reconnaissance

Horizon	Non-Cortical Flake	Cortical Flake	Bifacial Thinning Flake	Fire-Cracked Rock	Rough Stone	Biface Fragment	Projectile Point	Drill	Core	Other lithics	Total
Surface	4 Onon (ut=1); 2 Rhy	1 Onon (ut=1)	5 Onon (ut=3)	80	2 (pitted hammerstone; bi-pitted hammerstone)	1 Onon; 2 Rhy	2 Onon	1 Chal (possibly)	3 Onon (ht/b=1)	13 Onon (ut=7; ht/b=1; ut & ht/b=1); 7 Rhy	123
Ap			1 Onon							1 Onon (ht/b=1)	2
A1										1 Onon	1
B										1 Onon	1
Total (%)	6 (4.7)	1 (.8)	6 (4.7)	80 (63)	2 (1.6)	3 (2.4)	2 (1.6)	1 (.8)	3 (2.4)	23 (18)	127

Key: Onon=Onondaga chert; Rhy=Rhyolite; Chal=Chalcedony; ut=utilized flake; ht/b=heat treated/burned; Other lithics=chunks, shatter.

Following reconnaissance, a Phase 2 Site Examination was recommended by PAF and authorized by OPR&HP for all three loci of the Owego Creek site to collect sufficient information to determine their National Register eligibility. In addition OPR&HP recommended that the entire parcel north of Huntington Creek be completely replowed and that a second surface survey occur. In compliance with these recommendations, the parcel was plowed in May 2002 and a surface survey was conducted at that time to collect exposed artifacts from the project area north of Huntington Creek (Parcel B). Section III presents the field and laboratory methods used; Section IV summarizes the results of the addendum reconnaissance, including an updated description of the Owego Free Academy site; and Section V presents the results of the Phase 2 Site Examination of the Owego Creek site.

III. FIELD METHODOLOGY

The specific methods used for the addendum reconnaissance and the Site Examination were chosen to meet the needs for accurate data collection and assessment of site significance. The methods included systematic surface survey and artifact mapping, excavation of shovel test pits, unit excavation, and lithic analysis. Data generated was integrated into an interpretation of the Owego Creek site. The field in which the site is located was recently plowed. Since a portion of the Owego Creek site was unplowed during the initial reconnaissance survey and since the Owego Free Academy site was defined in a plowed area as well as an area that was only disked, the entire parcel was surface surveyed again in May 2002 after complete replowing.

3.1 Field Methodology

Addendum Survey

Archaeologists conducted a surface survey of the entire parcel north of Huntington Creek. A few days after a soaking rain, archaeologists spaced 3 m (10 ft) apart walked over the plowed field and examined the ground surface for artifacts from both the prehistoric and historic periods. When artifacts were located, they were collected and the position of the artifact was marked for mapping. Mapping was accomplished by recording the location of each artifact using a SOKKIA Set5A Total Station.

Site Examination

The Site Examination of the Owego Creek site used a standard grid coordinate system (north, south, east and west) established during the reconnaissance survey. An arbitrary datum was used. The grid and all excavations were mapped with a SOKKIA Set5A Total Station and the data downloaded into AutoSketch and PARADOX.

The testing strategy at the Owego Creek site involved the excavation of 10 shovel test pits (STPs) and eight 1 x 1 m (3.3 x 3.3 ft) units placed on the basis of data from STPs excavated during reconnaissance survey (Miroff 2000). Archaeologists excavated ten STPs in Locus 1. The STPs were dug with hand tools and were generally 40 cm (16 in) in diameter. All STPs extended 15 cm (6 in) into culturally sterile B horizon soils, unless excavation was prevented by rock, root, or standing water. All soil was sifted through 7 mm (.25 in) hardware cloth and artifacts from each recognizable soil horizon were bagged separately. Notation was made of coal ash, brick fragments, and any post-1945 materials such as plastic and roadside debris, and these items were discarded in the field. Written descriptions of soil color and texture, artifact content, and digging conditions were made at the time of excavation. The 10 STPs ranged in depth from 100 cm (39 in) to 107 cm (42 in) and averaged 103 cm (41 in) below ground surface. The STP soil records are presented in Appendix II, 2.1 and 2.2. No artifacts were recovered from these STPs.

Archaeologists also excavated three 1 x 1 m (3.3 x 3.3 ft) units in Locus 2 and five in Locus 3 at the Owego Creek site. Each unit was excavated with shovels and trowels. The top 25 cm (10 in) in the plow zone was excavated as one level. Following removal of the plow zone, crews excavated in arbitrary 5 cm (2 in) levels within natural layers of soil. Units were excavated at least 10 cm (4 in) into the sterile B horizon. Verification of sterile soils involved the excavation of an additional one or two levels below the last artifact-bearing level. STPs were excavated in the bottom of several units at each site to further verify that deeply buried components were not present. All soil was screened through 7 mm (1/4 inch) mesh onto plastic sheeting to standardize recovery of artifacts. All artifacts were noted and bagged by level. The vital information for each unit was recorded level by level on standardized forms. At least one wall profile was photographed (black and white and color print and slide) for each block excavation and/or unit when excavation was terminated at sterile soils. Additional photographs were taken if significant artifacts or features were discovered in specific levels. A STP was excavated in the bottom of all but one unit (Unit 8) to test for buried cultural horizons. No STP was placed in the bottom of Unit 8 as excavation terminated in sterile gravel and cobbles (C horizon). STPs in Loci 2 and 3 extended up to 135 cm (53 in) below ground surface. Soil descriptions for each unit are presented in Appendix 2.2. Artifacts recovered from the units are listed in Appendix 2.4.

3.2 General Laboratory Methods

Following fieldwork, all artifacts were processed and analyzed in the labs of the Public Archaeology Facility at Binghamton University. Processing included washing and dry-brushing fragile materials and checking and re-tagging of the artifact bags for proper conservation.

Historic artifacts were classified according to a non-hierarchical catalogue system developed at PAF. The system, in part, uses a modification of South's artifact classification (South 1976), which identifies broad artifact patterning through the use of functional groups. Following South, each artifact was classified as to general group (e.g., food-related, food, architectural, etc.) and then according to specific categories, forms, and patterns (e.g., blue transfer print cup, sun-purpled bottle glass, cut nail, animal bone, etc.). Information on ceramic decoration and form were also recorded when present along with time ranges for the manufacture of these artifacts and other diagnostic pieces. The resulting artifact catalogs were entered into a relational data base management program (Paradox) to facilitate subsequent analysis.

Prehistoric artifacts were initially cataloged using a general classification system developed by Melody Pope (1998) that separates the artifacts into ceramics, chipped lithics, ground lithics, and steatite. Stone artifacts are then cataloged as to formal tool type (i.e., drill, gouge, graver, etc.), debitage/core, fire-cracked rock, or ground stone. Formal tools (drills, gravers, hoes, projectile points, etc.) are then further described by specific characteristics (i.e., a projectile point may be catalogued as fluted, bifurcated based, or Brewerton, etc.). Bifacial tools are categorized as Stage 1 (flake blank with bifacial edges), Stage 2 (preform, early thinning has begun) or Stage 3 (unfinished point, thinned, and roughly shaped) (Whittaker 1994:157-158).

All chipped stone debitage is categorized by specific characteristics. These include: cortical flake, non-cortical flake, bifacial edge flake, core flake, blade flake, non-cortical chunk, cortical chunk, shatter, flake core, core fragment, bifacial thinning flake, non-cortical flake fragment (distal, medial, proximal), bipolar core, bifacial core, blade core, and discoidal core. Artifact raw material and color is also recorded. The term debitage is used to include flakes, chunks, and shatter. Cores and debitage are used to refer to flakes and stone masses defined as the by-products of chipped stone tool manufacture and maintenance. Cores, flakes, and chunk/shatter are considered to be indicators of chipped stone production. Cores are defined as culturally modified stone from which one or more flakes have been removed for further modification or use, but in which the piece itself is generally not intended for further use. Flakes are pieces of stone removed from a core by a single blow. Flakes can also be created by natural causes such as heat fracture, trampling, weathering and extreme changes in temperature. While it is not always possible to distinguish between natural and cultural flakes, there are a number of attributes related to fracture mechanics of cryptocrystalline stone that, when occurring together on a single flake, can be used to distinguish between intentionally and naturally-produced flakes. These attributes include presence of a striking platform, bulb of percussion, and ripple marks on the ventral face of the flake. Flakes, with the exception of blades, tend to have irregular edges. In addition, flakes were often used as *ad hoc* tools, particularly when raw materials were locally abundant.

Cortical flakes are a subset of flakes defined by the presence of cortex remnants from the parent stone mass on the dorsal flake surface. An attempt is made to differentiate dorsal cortex from internal bedding planes. Two related attributes are coded to monitor the amount and type of cortex. Marginal cortex refers to flakes with cortex that covers approximately 50% or less of the dorsal surface and tends to occur along the flake margins. Surficial cortex covers between 50% and 100% of the dorsal surface. A smooth surface suggests that the raw material was stone nodules originating from secondary sources, such as rivers or glacial features; a rough surface suggests that the raw material was from an in-situ, primary geological source. Non-cortical flakes are the largest subset of flakes including all pieces that lack cortex and are not placed in one of the other flake types. Bifacial thinning flakes have an angle 45° or less between the platform and the dorsal surface, lipping, and a multifaceted platform. Bifacial edge flakes are pieces with normal flake characteristics on the ventral surface but a part of the proximal margin (or flake platform) consists of a bifacially retouched edge. Biface edge flakes may indicate mistakes during the thinning stage of biface production or flakes generated from maintenance (resharpening) of tools with bifacial working edges. Chunks and shatter is a catch-

all category for pieces of stone that lack flake attributes (i.e., debris). In general, pieces in this group have an ambiguous ventral surface and striking platform. A chunk is a blocky fragment of material; a cortical chunk is a chunk with exterior surface (cortex) present. Shatter, generally small in size, is defined by the lack of diagnostic flake attributes (platforms or easily differentiated dorsal and ventral surfaces) (Sullivan and Rozen 1985). There is some experimental evidence that shatter is generated in greater quantities during the reduction of cores (Sullivan and Rozen 1985:758-760). Large chunks, particularly cortical ones, may be indicative of early stages in the production process (initial core preparation) or cobble testing. Smaller chunks and shatter tend to occur throughout all stages of stone working (cf., Pope 1998:20-28).

A lithics catalog is generated and includes all chipped stone artifacts. The chipped stone artifacts are described by size (>2", 1"-2", 1/2"-1", 1/4"-1/2", <1/4"), subtype (non-cortical, bifacial edge, bipolar core, blade, etc.), and whether the flake has been subjected to heat. All flakes greater than 1/4" in diameter are described by raw material, condition (broken, whole, fragment), utilization (defined as a flake in which one edge has at least 4 small negative flake scars in a uniform pattern and/or polish), heat treatment (i.e., color change, or pot lid flakes), dorsal scars (0-2, >2), the presence or absence of cortex, and cortex type (surficial smooth, surficial rough, marginal smooth, marginal rough, and no cortex) (Pope 1998; Sullivan and Rozen 1985). All flakes greater than 1/4" that are in a whole or broken condition are also described by platform cortex, platform type (cortex, flat, faceted, point, and collapsed) and platform angle (obtuse, 90°, acute≤ 45°, acute 45°-90°, and indeterminate).

The purpose of this lithics catalog system is to describe lithic assemblages using uniform criteria that can be replicated. The system lends itself to both individual flake analysis and flake aggregate analysis. The focus in individual flake analysis is on the characteristics of the individual flake. Flakes can be classified by some typology or by key attributes. As an alternative to individual flake analysis, some archaeologists propose flake aggregate analysis techniques in which attention shifts from the individual object to a batch of artifacts from a single context (Ahler 1989:87). Stone tool technology is a reductive technology in which flakes removed can never be larger than the parent core. This then places predictable and repetitive size constraints on the by-products produced. Variations in the method of removing a flake produces variations in flake size and flake shape. Mass analysis of flakes, including count and weight, can be used to help interpret the stages of stone tool manufacture conducted at a site.

All of the artifacts, notes and other documentation of the reconnaissance testing are curated according to federal (36 CFR Part 79) and state guidelines (NYAC 1994) in the facilities of the Department of Anthropology at Binghamton University.

IV. ADDENDUM RECONNAISSANCE RESULTS

Archaeologists conducted a surface survey of the entire parcel north of Huntington Creek (Photo 3). No new surface artifacts were recovered from within the Owego Creek site during addendum reconnaissance. However, 1 Onondaga biface fragment, 3 Onondaga non-cortical flakes, and 1 fire-cracked rock (FCR) were identified adjacent to the site's western boundary and may be associated with the site (Appendix IV/Figure 12). Crews collected 128 prehistoric artifacts from the surface. Artifacts were located mainly on and adjacent to the Owego Free Academy site. The summary below presents a complete site description based on this updated information.

Owego Free Academy Site (SUBi-2089)

Context. The Owego Free Academy site was identified during reconnaissance survey in November 2000 (Miroff 2000). The site consists of prehistoric lithics, rough stone tools, and fire-cracked rock. Three diagnostic artifacts were recovered from the plowed surface, a Brewerton-like Side-Notched projectile point (3500-1500 B.C.), a Susquehanna Broad projectile point (1500-200 B.C.), and a Meadwood point (1000-500 B.C.). These projectile points date to the Late Archaic, Transitional, and Early Woodland periods (Ritchie 1989). The presence of rhyolite flakes supports a Transitional period component.

Site Size. Based on the initial reconnaissance, at its maximum, the site measured 220 x 230 m (722 x 807 ft) and encompassed 29,182 m^2 (314,112 ft^2) or 2.9 ha (7.2 ac) within the project limits. Artifacts mainly concentrated in the northernmost portion of the field, just south of the existing driveway. Based on the addendum reconnaissance data, these boundaries have been modified to include the addendum artifacts (Figure 4). In addition, the southern site boundary, near Huntington Creek, was pulled north since only a few pieces of FCR were recovered during the initial reconnaissance and no additional artifacts were recovered during the addendum reconnaissance. These artifacts were likely dragged south by plowing activities. The revised site plan contains two loci: a western locus, Locus 1, measuring, at its maximum, 141.5 x 119.5 m (464 x 392 ft), approximately 12,909 m^2 (138951 ft^2) or 1.1 ha (2.7 ac), and an eastern locus, Locus 2, measuring 161 x 78 m (528 x 256 ft) at is maximum, approximately 11, 039 m^2 (118823 ft^2) or 1.3 ha (3.2 ac). The site, as a whole, is approximately 219 m (718.5 ft) long and 160 m (524.9 ft) wide, at the maximum. It encompasses approximately 23,948 m^2 (257,774 ft^2) or 2.4 ha (5.9 ac) within the project boundaries.

Site Location. The Owego Free Academy site is located west of NY 96/38, north of the Village of Owego's center, in the Town of Owego, Tioga County, New York. The site is situated approximately 2.4 km (1.5 mi) north of the Susquehanna River. The Owego Free Academy site is located north of Huntington Creek and east of Owego Creek, north of the Owego Free Academy High School. The setting within the surrounding area is an agricultural field (Photo 3). The site limits were determined by the presence/absence of artifacts.

Characteristics. The site contains a high density of prehistoric cultural material identified on the surface and below the ground surface. Archaeologists recovered 255 artifacts from the Owego Free Academy site during initial and addendum reconnaissances from the surface and from three STPs.

Summary of Artifacts. Archaeologists identified 255 prehistoric artifacts from the Owego Free Academy site during the original and addendum reconnaissances (Table 3; Appendix 2.3). Artifacts were made from Onondaga chert, rhyolite, chalcedony, pebble chert, and unidentified material. Diagnostic artifacts included 1 Onondaga chert Brewerton-like Side-Notched point (3500-1500 B.C.), 1 Onondaga chert Susquehanna Broad point (1500-200 B.C.), and 1 Onondaga chert Meadowood point (1000-500 B.C.; ground base). In addition, archaeologists recovered one unidentifiable side-notched projectile point of unidentified chert (ground base; reworked; utilized, possibly as a spokeshave).

Table 3. Artifacts from the Owego Free Academy Site, Original and Addendum Reconnaissances, Owego/Apalachin Central School District Project

Projectile Point	NCF	CF	Bifacial Thinning Flake	Bipolar Flake	Biface	Drill	Biface Fragment	Core	FCR	RoughSt	Chunk/ Shatter	Animal Bone	Total
4 (3 Onon, 1 Unid)	91 (79 Onon [20 ut, 1 poss. ut, 4 ht/b], 3 Rhy, 9 Unid [1 ut])	7 (4 Onon [1 ut, 1 ret--possible early preform], 1 pebble chert, 2 Unid)	6 Onon (3 ut)	1 (Onon)	1 (Onon)	1 (Chal)	6 (4 Onon [1=possible knife; 1=possible point], 2 Rhy)	3 (Onon; 1 ht/b)	108	3 (1 net weight, 1 pitted hammerstone, 1 bi-pitted hammerstone)	23 (6 Onon [7 ut, 2 ht/b, 1 ut&ht/b], 7 Rhy)	1 (sheep/ goat/ deer)	255
1.6%	35.7%	2.7%	2.4%	.4%	.4%	.4%	2.4%	1.2%	42.4%	1.2%	9.0%	.4%	100%

Key: Onon=Onondaga chert; Rhy=Rhyolite; Chal=Chalcedony; Unid=Unidentified; NCF=non-cortical flake; CF=cortical flake; ut=utilized flake; ht/b=heat treated/burned; ret=retouched; FCR=fire-cracked rock; RoughSt=roughstone tool.

Artifacts recovered during the addendum reconnaissance are similar to those from the initial reconnaissance. However, while points from the initial reconnaissance included one Susquehanna Broad projectile point dating to the Transitional period (1500-200 B.C.) and one Brewerton-like Side-Notched projectile point dating from the Late Archaic (3500-1500 B.C.), one Meadowood point was recovered from the addendum reconnaissance. Meadowood points date to the Early Woodland period (1000-500 B.C.). Two clusters of artifacts are present, one locus to the east and one locus to the west.

Artifact Distribution. In addition to artifacts recovered during the initial reconnaissance, prehistoric cultural material was recovered from the surface during an addendum reconnaissance. Artifacts cluster in two loci: one to the east and one to the west. The eastern cluster contains a Brewerton-like Side-Notched projectile point. Diagnostic artifacts in the western cluster include a Susquehanna Broad point and a Meadowood point. An unidentifiable side-notched point was also recovered.

Features. No features were identified at the Owego Free Academy site. However, 108 pieces of fire-cracked rock were identified on the plowed surface during initial and addendum reconnaissances. Fire-cracked rock strongly suggests the presence of a hearth or hearths nearby.

Integrity. The site has excellent integrity as demonstrated by the tight artifact cluster "peaks" and clear trailing of artifacts outside the peak areas. Also, different diagnostic artifacts are present within each "peak" area or locus. The eastern locus contains a diagnostic dating to the Late Archaic and the western locus contains diagnostics from the Transitional and Early Woodland periods.

Research Potential. The lithics have the potential to yield information on reduction sequences, which could assist in a functional interpretation of the site. The recovery of bifacial, presumably curated, tools and more expedient utilized flakes presents an ideal condition for documenting lithic management strategies. Usewear analysis of stone tools would aid in documenting activities occurring on this large glacial terrace. The presence of an exotic raw material (rhyolite) presents the potential to examine interregional trade between groups.

The diversity of artifact types identified at the site, including chipped stone (debitage, curated tools–points, bifaces, a drill–and expedient tools), cores, rough stone tools (pitted hammerstone, bi-pitted hammerstone, net weight), and fire-cracked rock suggests that site occupants were conducting diverse activities at the site. Understanding activities associated with this site will provide a better understanding of settlement and subsistence practices in this portion of the Susquehanna Valley. The presence of a net weight suggests fishing activities were conducted in the nearby creeks. A pitted hammerstone and a bi-pitted hammerstone may have been used to crack nuts or for stone tool manufacture.

The observation of fire-cracked rock and heat treated/burned flakes strongly suggests the presence of features. The recovery of features would provide charred plant remains that could be analyzed to provide data on prehistoric subsistence and aid in the reconstruction of the paleo-landscape of the Susquehanna Valley. Carbon from features would also provide material for radiometric dating useful in establishing the site's chronology.

The presence of Late Archaic, Transitional, and Early Woodland components presents a unique opportunity to explore poorly defined periods of New York's prehistoric past. Current research has questioned the accepted temporal divisions of these three periods in the Susquehanna Valley (Versaggi and Knapp 2000) and this site would be critical to examining these issues. More intensive investigations may provide more diagnostic artifacts and tools indicative of the use of this site during other time periods.

The location of the site in the vicinity of numerous other sites suggests that this portion of the Susquehanna River was an important focus for groups during prehistoric times. Little is actually known of the prehistoric use of these elevated glacial terraces along the Susquehanna River. Examination of the Owego Free Academy site may provide important subsistence, settlement and functional data for addressing critical topics associated with the prehistory of the Susquehanna River Valley.

Potential Impacts. At present, the Owego Free Academy site is within an area that will be adversely impacted by proposed construction of a varsity softball field, field hockey fields, a football practice field, and a temporary diversion berm. Discussions are in progress on ways to avoid/mitigate the impacts for this site. These avoidance measures include using a geotextile fabric and fill without any excavation below ground surface.

Recommendations. We recommend that the site within the project limits is potentially eligible for the National Register of Historic Places. We recommend that impacts to the site be avoided. If impacts to the site can not be avoided, we recommend a Phase 2/3 Data Recovery, which would involve the preparation and review of a Data Recovery Plan and execution of the research presented in that plan.

Photo 3. Addendum Reconnaissance, Owego Free Academy Site (SUBi-2089), Owego/Apalachin Central School District Project.

V. THE OWEGO CREEK SITE (SUBi-2090)

The Owego Creek site is located in an agricultural field north of Huntington Creek and east of Owego Creek, north of the Owego Free Academy High School (Photos 4-6). The Susquehanna River lies approximately 2.4 km (1.5 mi) to the south. During the reconnaissance survey archaeologists recovered 17 artifacts from 15 STPs and one artifact from the surface on the Owego Creek site. The cultural material was grouped into three discrete loci. Within STPs, prehistoric cultural material was recovered from either the surface or within the upper 40 cm (16 in) in the plow zone (Ap horizon). Artifacts included 15 fire-cracked rock, 1 bifacial thinning flake (utilized), 1 bi-pitted and flaked stone, and 1 cortical chunk (utilized). All chipped stone artifacts were made from Onondaga chert. Two possible features were also identified at the Owego Creek site. In STP Y33, Locus 2, 15 pieces of fire-cracked rock were identified associated with reddened soil and charcoal approximately 25-39 cm (9.8-15 in) below surface in the plow zone (Ap horizon). In STP Y30/7.5mW, Locus 3, charcoal and fire-reddened soil were identified approximately 63-69 cm (25-27 in) below surface in either the plow zone or the transition between the plow zone and the A1 horizon.

Following reconnaissance, archaeologists recommended the excavation of approximately three to four 1 x 1 m (3.3 x 3.3 ft) units in Loci 2 and 3 (those with more than one artifact) for a total of six to eight units and 10 STPs in Locus 1 (in which only one artifact was recovered). Figures 5-8 (Photos 4-6) show the location of all STPs and units excavated during the Site Examination in addition to the reconnaissance STPs (Appendix IV/Figure 12). Crews excavated 10 STPs and 8 1 x 1 m (3.3 x 3.3 ft) units at the site during the Site Examination (Table 4). Three units were excavated in Locus 2 (Units 1, 2, and 3) and five were excavated in Locus 3 (Units 5, 6, 7, 8, and 9). Since artifacts were not identified in Locus 2 units, one unit from Locus 2 was reallocated to Locus 3 to explore a buried A horizon bearing cultural material.

Table 4. Summary of Phase 2 Site Examination Excavations, Owego Creek Site

Locus	STPs	Units	Locus Size	Square Meters Investigated	Percentage Investigated
1	10	0	56 m^2 (603 ft^2)		
2	0	3	225 m^2 (2,421 ft^2)	3	1.3
3	0	5	675 m^2 (7,266 ft^2)	5	0.7
Total	10	8	956 m^2 (10,290 ft^2)	8	2.0

5.1 Site Boundaries

The site area from the reconnaissance survey was estimated to be approximately 80 x 78.5 m (262 x 257 ft) and encompasses 3957 m^2 (42,593 ft^2) or .4 ha (.9 ac) within the project limits over three loci (Miroff 2000). The site is bounded by the absence of artifacts and the project area boundary. Prehistoric artifacts identified during the Site Examination were recovered from the B1 or A2 components of units in Locus 3. Eleven historic artifacts also were identified in the Ap or B1 horizons or in excavation levels that overlapped the Ap & B1 or B1 & A2 horizons of Units 5, 6, and 7.

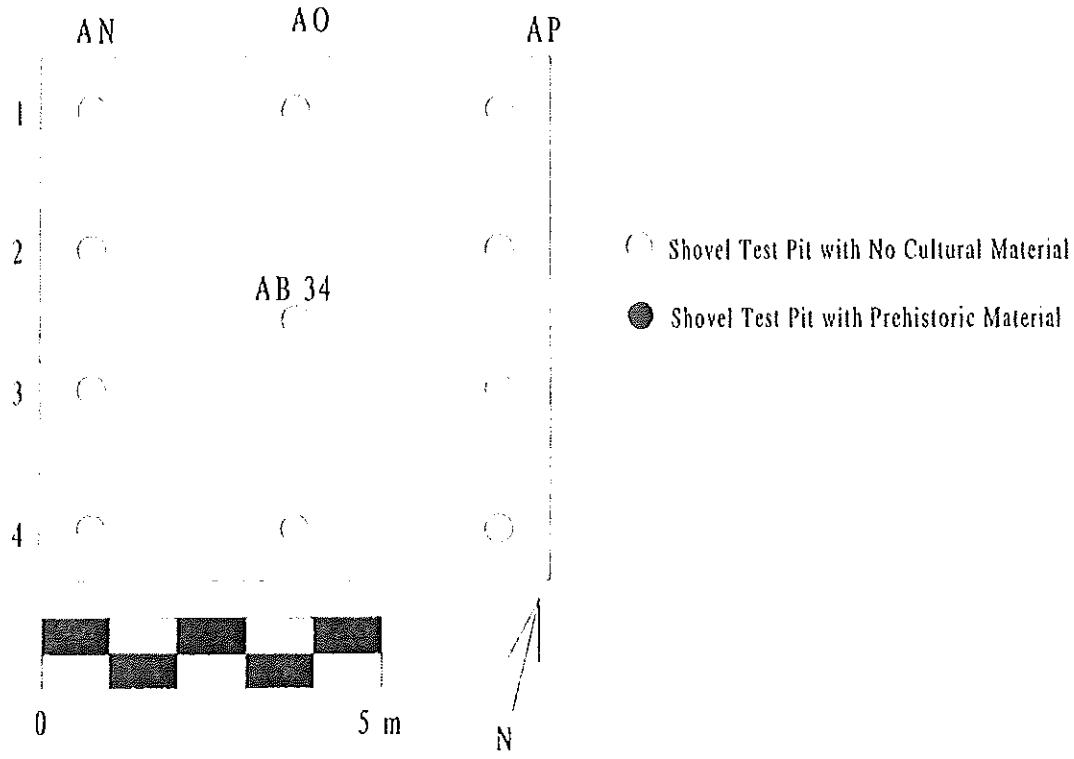

Figure 6. Locus 1, Location of STPs.

Photo 4. Locus 1, facing northwest.

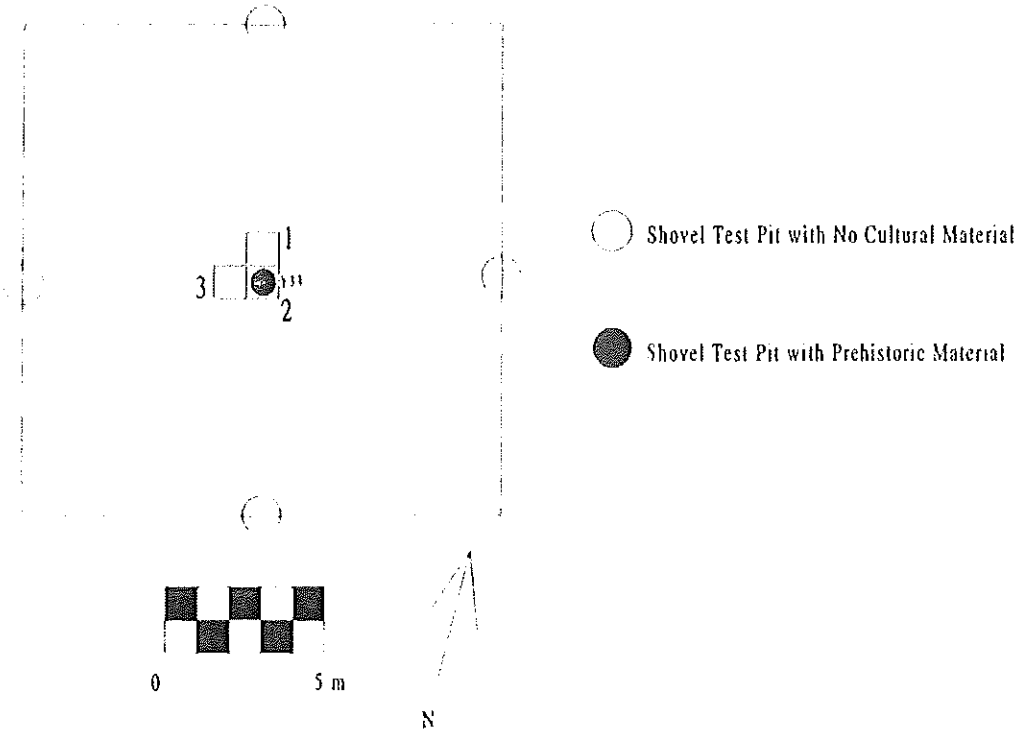

Figure 7. Locus 2, Location of Units.

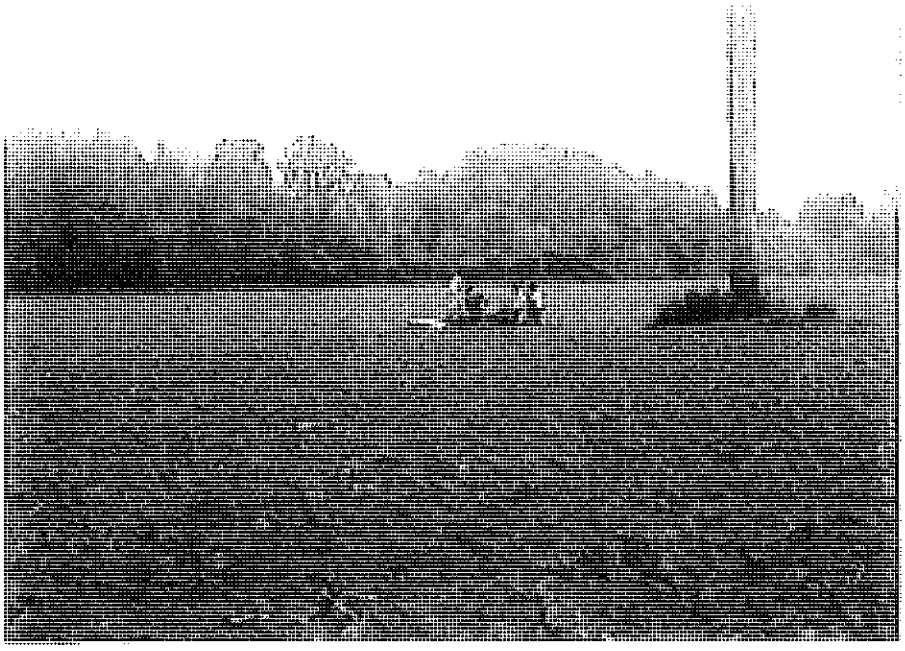

Photo 5. Locus 2, facing northwest.

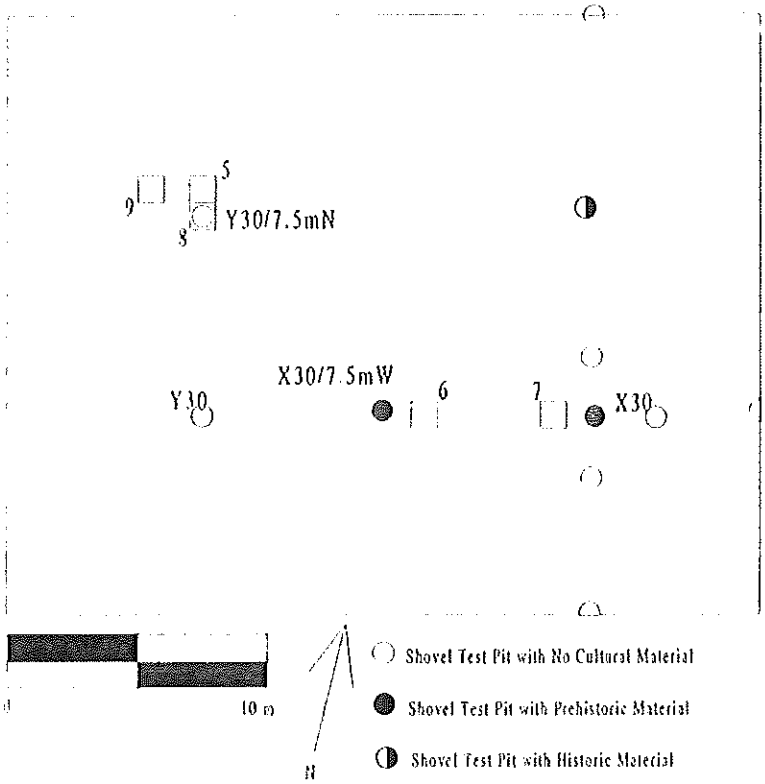

Figure 8. Locus 3, Location of Units.

Photo 6. Locus 3, facing south.

5.2 Stratigraphy and Chronology

The soils of the project area consist of Unadilla silt loam (Unn) and Howard gravelly loam (Hgn, Nearly level phase) (USDA 1953; see also Pratt and Pratt 2000:11-12). STPs in Locus 1 consisted of a medium brown or medium gray brown silt loam plow zone (Ap horizon), with an average depth of 26 cm (10 in). In most STPs this was followed by a medium gray brown B horizon to 71 cm (28 in). A dark brown or very dark brown silt loam A2 horizon followed from between 55 and 69 cm (22 and 27 in) bd to as deep as 93 cm (37 in) bd. The final horizon was a yellow brown silt or silt loam beginning as high as 68 cm (27 in) below ground surface. Final depths for STPs ranged from 100 to 107 cm (39 to 42 in) and averaged 103 cm (41 in) below ground surface.

Unit profiles in Locus 2 (Units 1, 2, and 3) began with a plow zone (Ap horizon) consisting of a very dark grayish brown (10YR3/2) silt extending to 35 cm (22 in) below ground surface. The interface was generally a very distinct and flat transition, characteristic of plowed areas. The underlying B horizon (B1) was a yellow or olive (2.5Y4/3) silt to approximately 35 cm (14 in) which was followed by a yellowish brown or olive brown (2.5Y4/4) sandy silt (B2). Unit excavation was terminated in this horizon. STPs were excavated in the bottom of each unit. STP soils were a yellow brown sandy silt to gray brown sandy silt with gravel. STPs excavated in the bottom of units ranged from 122 to 135 cm bd (48 to 53 in). Figure 9 and Photo 7 show a representative soil profile from Unit 3. Soil descriptions for each unit are presented in Appendix 2.2.

Unit profiles in Locus 3 began with a plow zone (Ap horizon) consisting of a dark brown or dark grayish brown (10YR3/3 or 10YR4/2) silt extending to approximately 25 cm (10 in) below ground surface. Below this was a B1 horizon of olive brown (2.5Y4/4) or brown (10YR4/3) silt. A buried cultural horizon followed beginning approximately 40 to 70 cm (16 to 28 in) bd. This A2 horizon was a very dark gray (10YR3/1) silt. In Unit 9, this A2 horizon slopes upward to the west. The final horizon (B2) was an olive brown (2.5Y4/4) or light olive brown (2.5Y5/6) silt or sandy silt. STPs excavated in the bottom of units ranged from 104 to 135 cm (41 to 53 in) bd. Soil was a yellow brown silt with cobbles and gravel. Figures 10 and 11 and Photos 8 and 9 show representative soil profiles from Units 6 and 8. Soil descriptions for each unit are presented in Appendix 2.2.

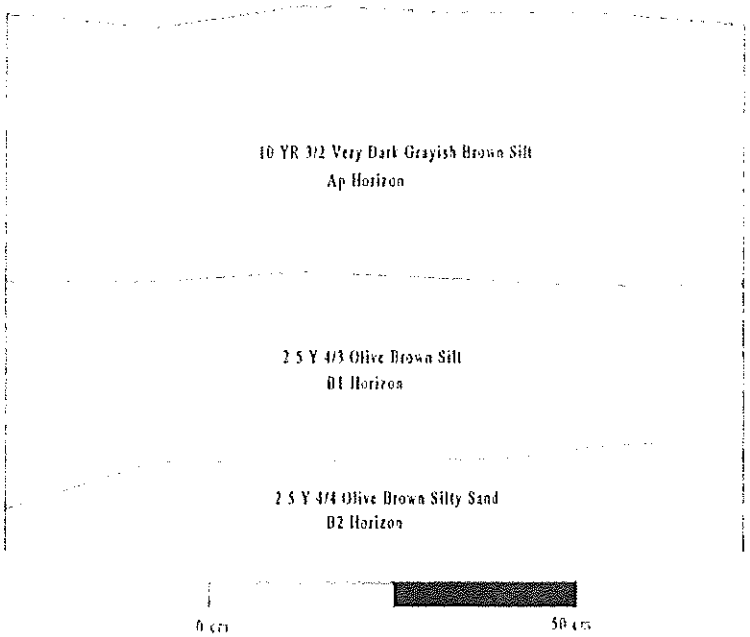

Figure 9. Unit 3, Locus 2, West Wall profile.

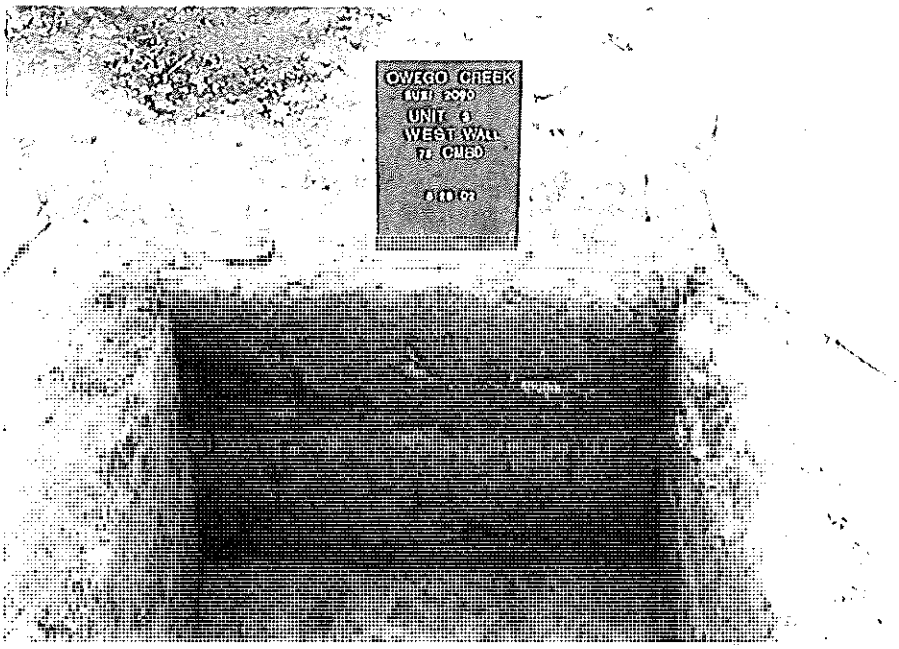

Photo 7. Unit 3, Locus 2, West Wall profile.

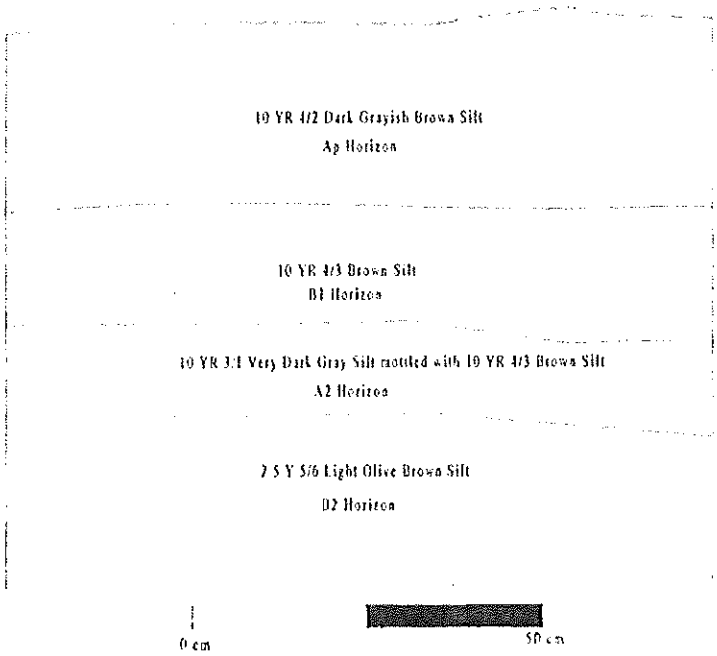

Figure 10. Unit 6, Locus 3, North Wall profile.

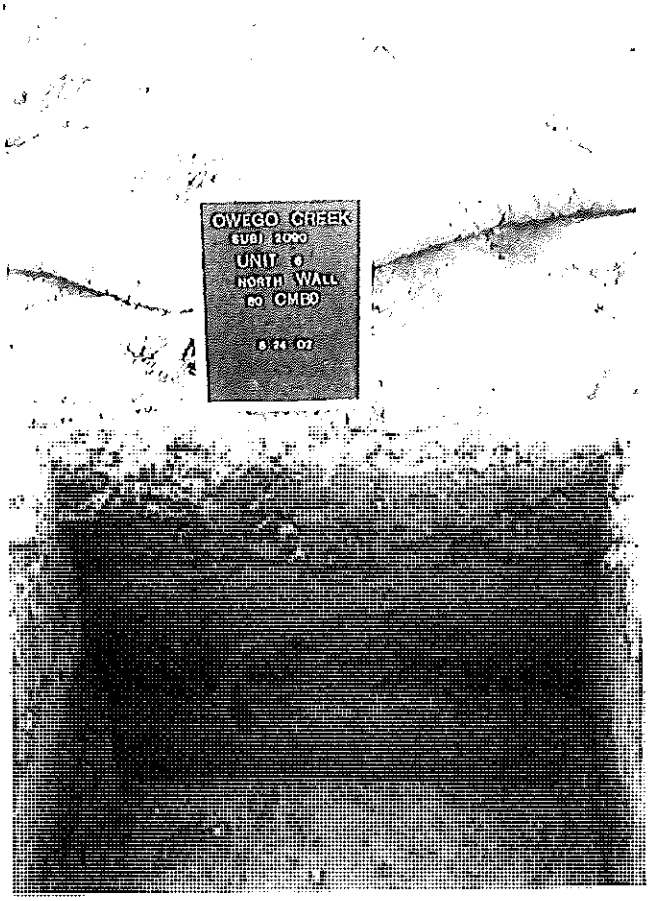

Photo 8. Unit 6, Locus 3, North Wall profile.

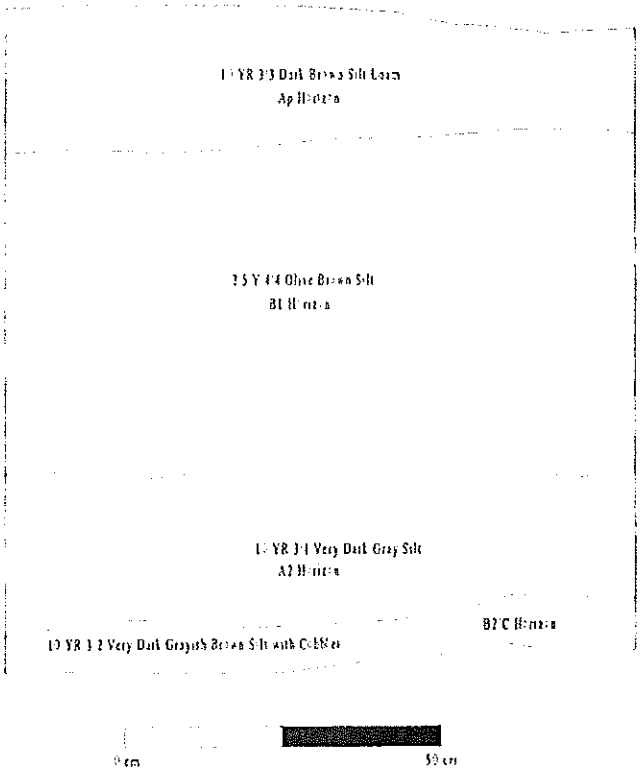

Figure 11. Unit 8, Locus 3, East Wall profile.

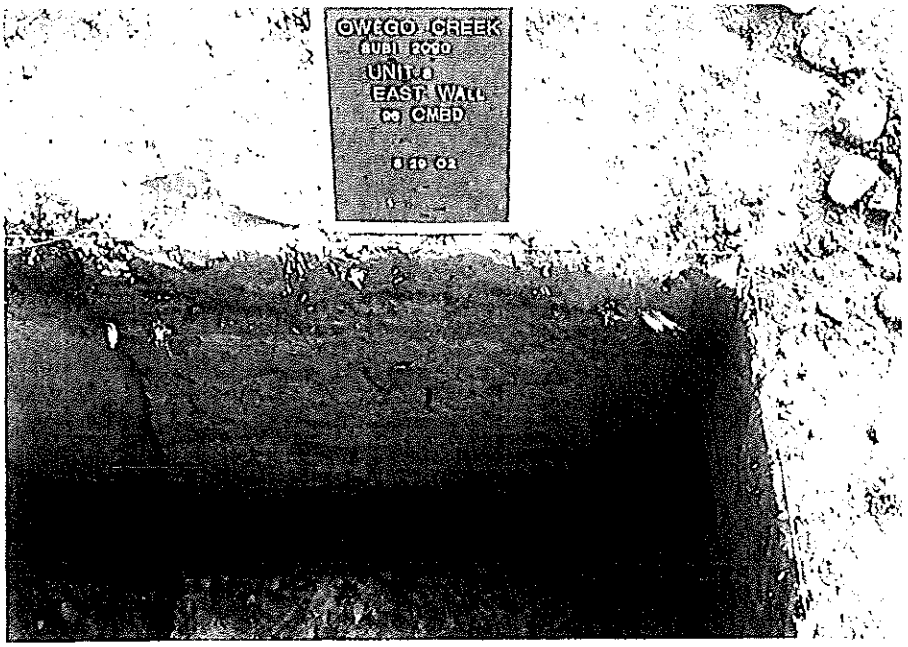

Photo 9. Unit 8, Locus 3, East Wall profile.

5.3 Artifact Analysis

Crews recovered 32 prehistoric artifacts from the Owego Creek site: 18 during reconnaissance (Ap horizon or surface) and 15 in the B1 or A2 components during the Site Examination. Given that no diagnostic artifacts were identified, temporal comparisons of the lithic assemblages are not possible. During reconnaissance, archaeologists identified 1 bi-pitted and flaked stone in Locus 1 and 15 fire-cracked rock (FCR) in Locus 2. No additional artifacts were recovered from these loci during Site Examination. Reconnaissance investigations of Locus 3 recovered 1 utilized bifacial thinning flake and 1 utilized cortical chunk from the Ap horizon. Site Examination artifacts from Locus 3 consisted of 1 biface fragment, 1 core, 2 bifacial thinning flakes (1 utilized), 2 cortical flakes, 1 cortical chunk, 7 non-diagnostic ceramics, and 1 possible fire-cracked rock. Chipped stone artifacts were made from Onondaga chert, limestone, or an unidentified material. Since no additional artifacts were recovered from Loci 1 or 2 during Site Examination, analysis will focus on Locus 3. Analysts performed a complete attribute analysis on lithics recovered from the Site Examination (Appendix 2.5).

B1 Component, Locus 3

Two units (5 and 7) contained artifacts in the B1 horizon or in excavation levels that overlapped the Ap & B1 horizons. These artifacts were analyzed together as the B1 component. Artifacts were recovered from approximately 25 to 45 cm (10 to 18 in) bd. The B1 component produced 1 grit-tempered, eroded body sherd (Unit 7; 0.3 gm), 1 biface fragment of unidentified material (Unit 5; 3.1 g), and 1 Onondaga chert bifacial thinning flake (Unit 7; 0.2 gm) with more than two dorsal scars. Given the paucity of cultural material associated with this component, little can be said regarding the occupation. The presence of a ceramic sherd suggests that occupants used the site at least between 1000 B.C. and A.D. 1550. The biface suggests curation of tools. A bifacial thinning flake indicates that occupants sharpened bifacial tools while at the site. The absence of early stage reduction flakes may indicate that the early stages of tool manufacture did not occur. Alternatively, their absence could be the result of the small sample size.

A2 Component, Locus 3

Three units (5, 6, and 8) contained artifacts in excavation levels that overlapped the B1 & A2 horizons, the A2 horizon, or in levels that overlapped the A2 & B2 horizons. The greatest percentage of artifacts were identified in Unit 5 (Table 5). Artifacts were recovered from approximately 55 to 85 cm (22 to 33 in) bd. These artifacts were analyzed together as the A2 component. The A2 component produced 6 grit tempered ceramic body sherds (1 eroded [0.1 g] and 5 smoothed-over cord-marked [2 mend; 3.2 g]) and 5 chipped stone artifacts. Chipped stone artifacts were made from either limestone or Onondaga chert (Table 6). One possible FCR was noted from Unit 9 which may have been from the A2 component, but was lost in the field.

Table 5. Artifacts by Unit, A2 Component

Unit	Artifact Count	Percentage of Artifacts	Artifact Types
5	7	58.3	Pottery, Cortical Flake
6	1	8.3	Bifacial Thinning Flake
8	3	25.0	Core Fragment, Cortical Flake, Cortical Chunk
9	1 possible	8.3	FCR
Total	12	100	

Table 6. Chipped Stone Artifacts, Locus 3, A2 Component

Description	Size	Dorsal Scar Count	Cortex Type	Platform Type	Platform Angle	Utilized	Heat Treated or Burned	Count	Weight (g)
Limestone Cortical Flake	1/4-1/2"	0-2	Surficial, Smooth	Flat	≤45°			1	0.1
Onondaga Chert Bifacial Thinning Flake	1/2-1"	>2	Marginal, Smooth	Faceted	≤45°	1		1	0.5
Onondaga Chert Cortical Flake	1/4-1/2"	>2	Surficial, Smooth	Cortical	45°-90°			1	0.2
Onondaga Chert Cortical Chunk	1/4-1/2"							1	0.3
Onondaga Chert Core Fragment	1"							1	32.1

The amount of cortex has been used to infer reduction stages in debitage (Andrefsky 1998). Two of the three flakes are cortical, suggesting early stage reduction. The presence of a non-cortical bifacial thinning flake indicates late stage reduction or tool maintenance.

Flake size may indicate early stage reduction. Two of the three flakes measured between 1/4" and 1/2". If occupants were using locally available glacially redeposited cobble chert, flakes in this size grade may indicate early stage reduction. The absence of flakes measuring less than 1/4" is not surprising given that soil matrix during excavation was screened through 1/4" mesh, making the retrieval of flakes smaller than 1/4" incomplete. The presence of one flake measuring 1/2" to 1" does not necessarily mean early stage reduction as the flake is a bifacial thinning flake and was likely the result of thinning a relatively large bifacial tool. Relatively large bifacial thinning flakes could be associated with some of the "broad points" time periods, such as the Transitional phase Susquehanna Broad Tradition.

Dorsal scar count can indicate stage of reduction. That two of the three flakes had more than two dorsal scars suggests later stage reduction.

The three flakes all have smooth cortex. The category "smooth" indicates that cortex formed from mechanical weathering (e.g., rolled in a river, abraded by sand), as opposed to chemical weathering, which generally produces rough surfaces. Smooth cortex may indicate use of locally obtained cobble chert and not chert imported from an outcrop source.

Platform type and angle can vary depending on the reduction stage, percussion type, and the type of flake to be removed. Generally, faceted platforms with ≤45° angles and two or more dorsal scars indicate bifacial thinning flakes or other late stage reduction flakes. Platforms with cortex or flat platforms with angles between 45° and 90° are more characteristic of early stage reduction (Andrefsky 1998:88-94). The three flakes each had a different platform type, flat, cortical, or faceted. Flat and cortical platforms indicate early stage reduction, while a faceted platform indicates late stage reduction and/or biface maintenance. Platforms measuring 45° to 90° suggest early stage reduction while those measuring ≤45° indicate late stage reduction. The bifacial thinning flake has all the attributes characteristic of a late stage flake, namely a faceted platform measuring ≤45° and two or more dorsal scars. The other two flakes, however, combine attributes of early and late stage reduction. The limestone cortical flake has early characteristics in the form of a flat platform and 0 to two dorsal scars, but the platform measures ≤45°. The Onondaga chert cortical flake has early attributes, including a cortical platform measuring 45°-90°, but there are more than two dorsal scars, characteristic of late stage reduction.

One flake, the bifacial thinning flake, was utilized. The presence of a utilized flake suggests that activities other than tool manufacturing and maintenance may have taken place at the site. These expedient tools indicate the processing of raw materials, such as food resources and plant and/or animal materials (Versaggi 1996b).

Flake attributes suggest that both early and late stage/bifacial reduction occurred at the Owego Creek site. The presence of a core and a cortical chunk supports early stage reduction, possibly using locally available cobbles, while a bifacial thinning flake indicates late stage reduction/biface maintenance. Individuals visiting the parcel were sharpening bifacial tools. They were also picking up natural chert cobbles and striking these pieces, possibly to produce sharp-edged flakes for use as expedient tools. Sample size is, however, low for the A2 component making these interpretations tenuous.

5.4 Features

Although two possible hearths were identified by charcoal and reddened soil in two STPs during the initial reconnaissance (one in Locus 2 and one in Locus 3), no features were identified during Site Examination investigations. Locus 3 (A2 component) contained one possible FCR recovered during the Site Examination. This could indicate the presence of a hearth somewhere on the site.

5.5 Intrasite Patterning

The Owego Creek site contains three separate loci. Excavations yielded a light scatter of prehistoric cultural material over the three loci. During the Site Examination of Loci 1, 2, and 3, no additional material was recovered from Loci 1 or 2. Archaeologists recovered 15 artifacts, including 1 biface fragment, 1 core, 2 bifacial thinning flakes (1 utilized), 2 cortical flakes, 1 cortical chunk, 7 non-diagnostic ceramics, and 1 possible fire-cracked rock from Locus 3.

Within Locus 3, artifacts were vertically stratified into two components, an upper B1 component and a lower A2 component. Artifacts in the B1 component were recovered from two units, one located in the southern portion of the locus (Unit 7) and one in the northern portion (Unit 5). Both pottery and lithics (1 biface) were recovered from this component. Pottery was confined to Unit 7 in the southern portion of the locus. Artifacts recovered from the lower A2 component were also located in the northern and southern portions of the site. However, artifacts were more abundant in the northern units. Only one flake was recovered from the A2 component in the southern portion of the locus (Unit 6). The remaining artifacts were identified in units to the north (Units 5, 8, and 9). Of these, Unit 5 contained the largest number of artifacts and was the only one of the three to contain pottery in the A2 component. Thus, during both occupations individuals used a large area of Locus 3. However, artifacts associated with the A2 component were more numerous and were clustered in the northern portion of the locus.

Activities associated with this site include procuring and processing resources. The low density of artifacts across the site indicates a very light use of this section of the Owego Creek valley prehistorically. Stratified cultural components in Locus 3 suggest that the area was reused over time. Flake attributes from Locus 3 indicate early and late stage reduction suggesting that people using the landform were both manufacturing and sharpening tools. One resource which may have been procured and processed is fish. Although no net weights were identified, the location of the site along a major creek indicates that this is a plausible assumption. One flaked and bi-pitted stone was identified on the surface of Locus 1. This multi-functional tool may have been used to crack nuts. Ceramics may have been used as containers for collected resources or for food processing. No features were defined during subsurface testing. However, the presence of fire-cracked rock, particularly in Locus 2 (Ap horizon), suggests the possibility that features do exist at the site.

5.6 Interpretation

The current data from the reconnaissance and Site Examination indicate that each loci at the Owego Creek site may represent a separate processing station associated with an individual or small group of hunter-gatherers.

Occupants may have been involved in encounter hunting and resource processing using expedient flake tools and, possibly, curated tools which were not left at the site (Versaggi 1987, 1996a). Also, with two known clusters in the Owego Free Academy site to the east, these could be foragers attached to these sites or spatially distinct activity areas attached to that site. Processing locations are produced by foragers who range out daily from residential bases. Some models of hunter-gatherer settlement propose that large bases split apart during dispersed resource seasons, producing multi-task foraging camps, subsets of the residential base (Versaggi 1987, 1996a). No diagnostic artifacts were recovered and, thus, a temporal affiliation for the site based on artifacts can not be determined. However, the presence of ceramics in the A2 component indicates that this occupation ranged from between 1000 B.C. and A.D. 1550 and the large bifacial thinning flake could suggest a broad point tradition, such as Susquehanna (1500-200 B.C.). Some of the earliest Northeastern pottery has been recorded for this time period.

The artifact analysis conducted on the site suggests that both early and late stage lithic reduction occurred at the site. Expedient tools, evidenced by a utilized flake, indicate the procuring and processing of resources. The lack of features at the site suggests that no loci represent overnight camps, however, the presence of FCR may suggest otherwise (Versaggi 1996a:133-135). The low overall density, diversity, and dispersed nature of artifacts indicates that this portion of the landform was not used intensively in prehistoric times. However, the documentation of a number of distinct loci and at least two vertically stratified components supports an interpretation that this landform was used repeatedly through time.

With this information, we interpret the Owego Creek site as a series of resource processing locations or activity areas in the Susquehanna River Valley geared towards procuring and processing food and other resources.

5.7 Assessment of Research Potential

The Owego Creek site is represented by a low density of prehistoric lithic and ceramic artifacts distributed over three discrete loci (Loci 1, 2, and 3), all three of which were investigated in this Site Examination. Due to the uncertainty of temporal affiliation, low diversity and density of prehistoric cultural material, and the lack of identified features, the Owego Creek site has limited research potential.

5.8 Impacts and Recommendations

The Owego Creek site is located within an area that will be adversely impacted by construction of a temporary sediment trap and diversion berm. Given the low artifact density and lack of features, we recommend that the Owego Creek site is not eligible for the National Register of Historic Places. We recommend that the proposed construction will not impact a significant cultural resource and no further work is warranted.

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APPENDIX II. SUPPLEMENTAL DATA

Appendix 2.1 STP Soil Records, Owego Creek Site, Locus 1

LT=LIGHT MD=MEDIUM DK=DARK
BR=BROWN GR=GRAY YL=YELLOW OL=OLIVE TN=TAN RD=RED BK=BLACK
SI=SILT SA=SAND CL=CLAY LO=LOAM GVL=GRAVEL
P=PREHISTORIC H=HISTORIC N=NO CULTURAL MATERIAL
DISC.=DISCARDED

STP	Level	Depth (cm bd)	Description	CM	Crew	Date
AN 1	1	0-30	DK GR BR SI LO	N	AN/PM	05/22/2002
AN 1	2	30-59	GR BR SI LO	N	AN/PM	05/22/2002
AN 1	3	59-68	VERY DK BR SI LO	N	AN/PM	05/22/2002
AN 1	4	68-104	YL BR SI LO	N	AN/PM	05/22/2002
AN 2	1	0-27	MD BR SI LO	N	AN/PM	05/22/2002
AN 2	2	27-60	YL BR SI	N	AN/PM	05/22/2002
AN 2	3	60-80	MD BR SI LO	N	AN/PM	05/22/2002
AN 2	4	80-100	YL BR SI	N	AN/PM	05/22/2002
AN 3	1	0-23	MD BR SI LO	N	AN/PM	05/22/2002
AN 3	2	23-63	MD GR BR SI LO	N	AN/PM	05/22/2002
AN 3	3	63-86	VERY DK BR SI LO	N	AN/PM	05/22/2002
AN 3	4	86-106	YL BR SI	N	AN/PM	05/22/2002
AN 4	1	0-34	MD BR SI LO	N	AN/PM	05/22/2002
AN 4	2	34-69	MD GR BR SI	N	AN/PM	05/22/2002
AN 4	3	69-93	DK BR SI LO	N	AN/PM	05/22/2002
AN 4	4	93-106	YL BR SI	N	AN/PM	05/22/2002
AO 4	1	0-25	MD BR SI LO	N	AN/PM	05/22/2002
AO 4	2	25-46	MD BR SI LO	N	AN/PM	05/22/2002
AO 4	3	46-66	MD GR BR SI LO	N	AN/PM	05/22/2002
AO 4	4	66-86	DK BR SI LO	N	AN/PM	05/22/2002
AO 4	5	86-107	YL BR SI	N	AN/PM	05/22/2002
AP 2	1	0-25	MD BR SI LO	N	AN/PM	05/22/2002
AP 2	2	25-72	MD BR SI LO	N	AN/PM	05/22/2002
AP 2	3	72-100	YL BR SI LO	N	AN/PM	05/22/2002
AP 1	1	0-25	MD GR BR SI LO	N	AN/PM	05/22/2002
AP 1	2	25-60	MD GR BR SI LO	N	AN/PM	05/22/2002
AP 1	3	60-78	DK BR SI LO	N	AN/PM	05/22/2002
AP 1	4	78-100	YL BR SI LO	N	AN/PM	05/22/2002

STP	Level	Depth (cm bd)	Description	CM	Crew	Date
AO 1	1	0-25	MD GR BR SI LO	N	AN/PM	05/22/2002
AO 1	2	25-71	MD GR BR SI LO	N	AN/PM	05/22/2002
AO 1	3	71-102	YL BR SI LO	N	AN/PM	05/22/2002
AP 3	1	0-25	MD GR BR SI LO	N	AN/PM	05/22/2002
AP 3	2	25-55	MD GR BR SI LO	N	AN/PM	05/22/2002
AP 3	3	55-82	DK BR SI CL	N	AN/PM	05/22/2002
AP 3	4	82-100	YL BR SI CL	N	AN/PM	05/22/2002
AP 4	1	0-25	GR BR SI LO	N	AN/PM	05/22/2002
AP 4	2	25-83	GR BR SI LO	N	AN/PM	05/22/2002
AP 4	3	83-102	YL BR SI LO	N	AN/PM	05/22/2002

Appendix 2.2 Unit Soil Records, Owego Creek Site, Loci 2 and 3

LT=LIGHT MD=MEDIUM DK=DARK
BR=BROWN GR=GRAY YL=YELLOW OL=OLIVE TN=TAN RD=RED BK=BLACK
SI=SILT SA=SAND CL=CLAY LO=LOAM GVL=GRAVEL
P=PREHISTORIC H=HISTORIC N=NO CULTURAL MATERIAL
DISC.=DISCARDED

Unit	North	East	Locus	Feature	Level	Depth (cm bd)	Horizon	Soil	Comments	CM	Crew	Date
1	876.5	245.5	2		1	0.-25.	Ap	DK BR SI LO		N	RS/MM	05/22/2002
1	876.5	245.5	2		2	25.-30.	Ap	DK BR SI LO		N	RS/MM	05/22/2002
1	876.5	245.5	2		3	30.-35.	Ap & B	DK BR SI LO MOTTLED W/YL BR SI LO		N	RS/MM	05/22/2002
1	876.5	245.5	2		4	35.-36.	B	DK BR SI LO MOTTLED W/YL BR SI		N	RS/MM	05/23/2002
1	876.5	245.5	2		5	36.-40.	B	YL BR SI	Stain in S. Floor; Poss. Fea.	N	RS/MM	05/23/2002
1	876.5	245.5	2		6	40.-43.	B	YL BR SI		N	RS/MM	05/23/2002
1	876.5	245.5	2		7	43.-51.	B	YL BR SI		N	RS/MM	05/24/2002
1	876.5	245.5	2		8	51.-56.	B	YL BR SI	Changing to Rd Br Si	N	RS/MM	05/24/2002
1	876.5	245.5	2		9	56.-63.	B	YL BR SI		N	RS/MM	05/24/2002
1	876.5	245.5	2		10	63.-68.	B	YL BR SA SI		N	RS/NM	05/28/2002
1	876.5	245.5	2		11	68.-73.	B	YL BR SA SI	Becoming More Br Sa	N	RS/NM	05/28/2002
1	876.5	245.5	2		12	73.-79.	B	YL BR SA SI		N	RS/NM	05/28/2002
1	876.5	245.5	2		STP	79.-109.		YL BR SA SI W/GVL		N	RS/NM	05/28/2002
1	876.5	245.5	2		STP	109.-129.		DK BR SA SI MOTTLED W/YL BR SA W/RD IRON STAINS		N	RS/NM	05/28/2002
2	875.5	245.5	2		1	0.-25.	Ap	DK BR SI LO W/ORGANICS		N	RS/MM	05/23/2002
2	875.5	245.5	2		2	25.-31.	Ap	DK BR SI LO W/ORGANICS		N	RS/MM	05/23/2002
2	875.5	245.5	2		3	31.-35.	Ap & B	DK BR SI LO MOTTLED W/YL BR SI		N	RS/MM	05/23/2002
2	875.5	245.5	2		4	35.-40.	B	NW CNR-MD BR SI LO; REST-YL BR SI LO MOTTLED W/MD BR SI LO		N	RS/MM	05/23/2002
2	875.5	245.5	2		5	40.-45.	B	YL BR SI	Stains Bisected	N	RS/MM	05/23/2002

Unit	North	East	Locus	Feature	Level	Depth (cm bd)	Horizon	Soil	Comments	CM	Crew	Date
2	875.5	245.5	2		6	45.-50.	B	YL BR SI		N	RS/MM	05/23/2002
2	875.5	245.5	2		7	50.-55.	B	YL BR SI; SE CNR-RD BR SI LO		N	RS/MM	05/24/2002
2	875.5	245.5	2		8	55.-60.	B	YL BR SA SI		N	RS/NM	05/28/2002
2	875.5	245.5	2		9	60.-65.	B	YL BR SA SI		N	RS/NM	05/28/2002
2	875.5	245.5	2		10	65.-70.	B	YL BR SA SI		N	RS/NM	05/28/2002
2	875.5	245.5	2		STP	70.-106.		YL BR SA SI		N	RS/NM	05/28/2002
2	875.5	245.5	2		STP	106.-122.		YL BR SA SI MOTTLED W/GR BR SA SI W/GVL		N	RS/NM	05/28/2002
3	875.5	244.5	2		1	0.-25.	Ap	DK BR SI LO W/ORGANICS	Datum 1m E	N	RS/NM	05/23/2002
3	875.5	244.5	2		2	25.-30.	Ap	DK BR SI LO W/ORGANICS		N	RS/NM	05/23/2002
3	875.5	244.5	2		3	30.-35.	Ap	DK BR SI LO MOTTLED W/YL BR SI		N	RS/NM	05/23/2002
3	875.5	244.5	2		4	35.-40.	B	DK BR SI LO MOTTLED W/YL BR SI		N	RS/NM	05/23/2002
3	875.5	244.5	2		5	40.-45.	B	YL BR SI	Poss. Pm in SE Cnr	N	TB/RS	05/24/2002
3	875.5	244.5	2		6A	45.-50.	B	YL BR SI	Bisected Fea. In SE Cnr	N	TB/RS	05/24/2002
3	875.5	244.5	2		7A	50.-55.	B	YL BR SI	Bisected Fea. In SE Cnr	N	TB/FA	05/28/2002
3	875.5	244.5	2		6B	45.-50.	B	YL BR SI	Remainder of Unit Excavated	N	TB/FA	05/28/2002
3	875.5	244.5	2		7B	50.-55.	B	YL BR SI	Unit Leveled at 55cmbd	N	TB/FA	05/28/2002
3	875.5	244.5	2		8	55.-60.	B	YL BR SI		N	TB/FA	05/28/2002
3	875.5	244.5	2		9	60.-65.	B	YL BR SI		N	TB/FA	05/28/2002
3	875.5	244.5	2		10	65.-70.	B	YL BR SI		N	TB/FA	05/28/2002
3	875.5	244.5	2		11	70.-75.	B	YL BR SI		N	TB/FA	05/28/2002
3	875.5	244.5	2		STP	75.-115.		YL BR SA SI		N	TB/FA	05/28/2002
3	875.5	244.5	2		STP	115.-135.		YL BR SA SI MOTTLED W/GR BR SA SI W/GVL		N	TB/FA	05/28/2002
5	839.	245.5	3		1	0.-25.	Ap & B	MD GR BR SI LO CHANGING TO GR BR SI CL		N	AN/JM	05/22/2002

Unit	North	East	Locus	Feature	Level	Depth (cm bd)	Horizon	Soil	Comments	CM	Crew	Date
5	839.	245.5	3		2	25.-30.	B	YL BR SI LO		N	AN/JM	05/22/2002
5	839.	245.5	3		3	30.-35.	B	YL BR SI LO		N	LM/JM	05/22/2002
5	839.	245.5	3		4	35.-40.	B	YL BR SI LO		H	LM/JM	05/23/2002
5	839.	245.5	3		5	40.-45.	B	YL BR SI LO		P	LM/JM	05/23/2002
5	839.	245.5	3		6	45.-50.	B	YL BR SI LO		H	LM/JM	05/23/2002
5	839.	245.5	3		7	50.-55.	B	YL BR SI LO		N	LM/JM	05/23/2002
5	839.	245.5	3		8	55.-60.	B	YL BR SI LO		N	LM/JM	05/23/2002
5	839.	245.5	3		9	60.-65.	B	YL BR SI LO		N	LM/JM	05/23/2002
5	839.	245.5	3		10	65.-70.	B	GR BR SI; MORE COMPACT		N	LM/JM	05/23/2002
5	839.	245.5	3		11	70.-75.	B & A2	GR BR SI		P	LM/JM	05/23/2002
5	839.	245.5	3		12	75.-80.	B & A2	VERY DK BR SI LO	Charcoal Strip E-W in Middle of Unit	P	LM/JM	05/23/2002
5	839.	245.5	3		13	80.-85.	A2	VERY DK BR SI LO		P	JM/AN	05/24/2002
5	839.	245.5	3		14	85.-90.	A2	VERY DK BR SI LO		N	JM/AN	05/24/2002
5	839.	245.5	3		15	90.-95.	A2	VERY DK BR SI LO CHANGING TO GR BR SI		N	JM/AN	05/24/2002
5	839.	245.5	3		16	95.-100.	A2	VERY DK BR SI LO MOTTLED W/GR BR SI LO		N	AN/PM	05/24/2002
5	839.	245.5	3		17	100.-105.	A2 & B	GR BR SI; SE CNR YL BR SI W/ROCKS		N	AN/PM	05/24/2002
5	839.	245.5	3		18	105.-110.	A2 & B	YL BR SI MOTTLED W/BR SI		N	AN/PM	05/24/2002
5	839.	245.5	3		19	110.-115.	B	YL BR SI CL		N	AN/PM	05/24/2002
5	839.	245.5	3		STP	115.-135.				N	AN/PM	05/24/2002
6	830.5	254.	3		1	0.-25.	Ap	GR BR SI LO		H	TB/WT	05/22/2002
6	830.5	254.	3		2	25.-30.	B	GR BR SI LO W/YL BR SI IN E 1/2		N	TB/WT	05/22/2002
6	830.5	254.	3		3	30.-35.	B	MD BR SI		N	TB/WT	05/22/2002
6	830.5	254.	3		4	35.-40.	B	MD BR SI		N	LM/JM	05/23/2002

Unit	North	East	Locus	Feature	Level	Depth (cm bd)	Horizon	Soil	Comments	CM	Crew	Date
6	830.5	254.	3		5	40.-45.	B & A2	MD BR SI LO		N	NM/TB	05/23/2002
6	830.5	254.	3		6	45.-50.	A2	MD BR SI MOTTLED W/DK BR SI		N	TB/RS	05/24/2002
6	830.5	254.	3		7	50.-55.	A2	DK BR SI MOTTLED W/YL BR SI		N	TB/RS	05/24/2002
6	830.5	254.	3		8	55.-60.	A2 & B	YL BR SI MOTTLED W/DK BR SI		P	TB/RS	05/24/2002
6	830.5	254.	3		9	60.-65.	B	YL BR SI		N	TB/RS	05/24/2002
6	830.5	254.	3		10	65.-70.	B	YL BR SI		N	TB/RS	05/24/2002
6	830.5	254.	3		11	70.-75.	B	YL BR SI		N	TB/RS	05/24/2002
6	830.5	254.	3		12	75.-80.	B	YL BR SI		N	TB/RS	05/24/2002
6	830.5	254.	3		STP	80.-87.		LT OL BR SI		N	TB/RS	05/24/2002
6	830.5	254.	3		STP	87.-105.		LT OL BR SI W/GVL & COBBLES		N	TB/RS	05/24/2002
7	830.5	259.	3		1	0.-25.	Ap	MD BR SI LO		H	NM/CO	05/22/2002
7	830.5	259.	3		2	25.-30.	Ap & B	MD BR SI LO		P/H	NM/CO	05/22/2002
7	830.5	259.	3		3	30.-35.	B	YL BR SI LO MOTTLED W/BR (HUMUS?)		P/H	NM/CO	05/22/2002
7	830.5	259.	3		4	35.-40.	B & A2	YL BR SI LO		H	NM/TB	05/23/2002
7	830.5	259.	3		5	40.-45.	A2	YL BR SI		N	NM/TB	05/23/2002
7	830.5	259.	3		6	45.-50.	A2	VERY DK BR SI LO MOTTLED W/YL BR SI LO		N	NM/TB	05/23/2002
7	830.5	259.	3		7	50.-55.	A2 & B	VERY DK BR SI MOTTLED W/YL BR SI		N	NM/TB	05/23/2002
7	830.5	259.	3		8	55.-60.	B	YL BR SI LO MOTTLED W/VERY DK BR SI LO		N	NM/TB	05/23/2002
7	830.5	259.	3		9	60.-65.	B	YL BR SI MOTTLED W/VERY DK BR SI		N	NM/TB	05/23/2002
7	830.5	259.	3		10	65.-70.	B	LT YL BR SI LO		N	NM/TB	05/23/2002
7	830.5	259.	3		11	70.-75.	B	LT YL BR SI		N	NM/TB	05/23/2002
7	830.5	259.	3		STP	70.-85.		YL BR SI		N	NM/TB	05/23/2002
7	830.5	259.	3		STP	85.-104.		YL BR SA SI W/GVR & COBBLES		N	NM/TB	05/23/2002

Unit	North	East	Locus	Feature	Level	Depth (cm bd)	Horizon	Soil	Comments	CM	Crew	Date
8	838.	245.5	3		1	0.-25.	Ap	MD BR SI LO CHANGING TO YL BR SI		N	JM/LM	05/24/2002
8	838.	245.5	3		2	25.-30.	B	MD TO LT BR SI W/CL		N	JM	05/28/2002
8	838.	245.5	3		3	30.-35.	B	MD TO LT BR SI W/CL		N	JM	05/28/2002
8	838.	245.5	3		4	35.-42.	B	MD TO LT BR SI W/CL		N	JM/LM	05/28/2002
8	838.	245.5	3		5	42.-45.	B	MD TO LT BR SI W/CL		N	JM/LM	05/28/2002
8	838.	245.5	3		6	45.-52.	B	MD TO LT BR SI W/CL		N	JM/LM	05/28/2002
8	838.	245.5	3		7	52.-55.	B	MD TO LT BR SI W/CL		N	JM/LM	05/28/2002
8	838.	245.5	3		8	55.-60.	B	MD TO LT BR SI W/CL		N	JM/LM	05/28/2002
8	838.	245.5	3		9	60.-65.	B & A2	MD TO LT BR SI W/CL CHANGING TO DK BR SI CL		N	JM/LM	05/28/2002
8	838.	259.	3		10	65.-69.	B & A2	MD TO LT BR SI W/CL	Buried A	N	JM/LM	05/28/2002
8	838.	259.	3		11	69.-74.	A2	DK BR SI	Buried A	P	JM/LM	05/28/2002
8	838.	259.	3		12	74.-79.	A2	VERY DK BR SI		N	RS/JM	05/29/2002
8	838.	259.	3		13	79.-84.	A2	VERY DK BR SI		N	RS/JM	05/29/2002
8	838.	259.	3		14	84.-89.	A2 & B/C	N 3/4-VERY DK BR SI MOTTLED W/GR BR SI; S 1/4-GR BR SI MOTTLED W/VERY DK BR SI W/COBBLES		N	RS/JM	05/29/2002
8	838.	259.	3		15	89.-94.	B/C	N 1/2-VERY DK BR SI MOTTLED W/GR BR SI; S 1/2- YL OL BR SI CL W/GVL & COBBLES		N	RS/JM	05/29/2002
8	838.	259.	3		16	94.-96.	C	GR BR SI W/GVL & COBBLES		N	RS/JM	05/29/2002
9	839.	243.5	3		1	0.-26.	Ap	DK GR BR SI LO CHANGING TO YL BR SI		N	TB/FA	05/28/2002
9	839.	243.5	3		2	26.-30.	Ap & B	YL BR SI	Soil Not Screened	N	TB/FA	05/28/2002
9	839.	243.5	3		3	30.-40.	B	YL BR SI	Soil Not Screened	N	TB/FA	05/29/2002
9	839.	243.5	3		4	40.-45.	B	YL BR SI		N	TB/FA	05/29/2002
9	839.	243.5	3		5	45.-50.	B & A2	YL BR SI MOTTLED W/DK GR BR		N	TB/FA	05/29/2002

Unit	North	East	Locus	Feature	Level	Depth (cm bd)	Horizon	Soil	Comments	CM	Crew	Date
9	839.	243.5	3		6	50.-55.	B & A2	YL BR SI MOTTLED W/DK GR BR		N	TB/FA	05/29/2002
9	839.	243.5	3		7	55.-60.	B & A2	MOTTLED LT YL BR SI, GR BR SI & MD BR SI		N	TB/FA	05/29/2002
9	839.	243.5	3		8	60.-65.	B & A2 & B2	E 1/2-BR YL GR; W 1/2- LT YL		N	TB/FA	05/29/2002
9	839.	243.5	3		9	65.-70.	B & A2 & B2	E 1/2-GR BR SI MOTTLED W/MD BR & LT YL BR; W 1/2- LT YL BR SI	Soil Level Sloping Significantly from W to E	N	TB/FA	05/29/2002
9	839.	243.5	3		10	70.-70.	B & A2 & B2	LT YL BR SI MOTTLED W/DK BR SI	Soil Level Sloping Significantly from W to E	N	TB/FA	05/29/2002
9	839.	243.5	3		11	70.-75.	B	YL BR SI/YL BR SA SI		N	TB/FA	05/29/2002
9	839.	243.5	3		12	75.-80.	B	YL BR SI		N	TB/FA	05/29/2002
9	839.	243.5	3		13	80.-85.	B	YL BR SI MOTTLED W/GR SI AROUND ROOTS		N	TB/FA	05/29/2002
9	839.	243.5	3		14	85.-90.	B	YL BR SI; DK BR SI AROUND ROOTS; SLIGHTLY RED AT BOTTOM OF LEVEL		N	TB/FA	05/29/2002
9	839.	243.5	3		15	90.-95.	B	YL BR SI; DK BR SI AROUND ROOTS		N	TB/FA	05/29/2002
9	839.	243.5	3		STP	95.-110.		YL BR SI		N	TB/FA	05/29/2002
9	839.	243.5	3		STP	110.-130.		YL BR SI SA W/GVL & COBBLES		N	TB/FA	05/29/2002

Appendix 2.3 Addendum Reconnaissance Catalog, Owego/Apalachin Central School District Project

Bag #	North	East	Description	Count	Comments
A-1	841.14	272.08	BONE Sus scrofa (PIG)	1	SAWED
A-2	831.12	288.66	BONE Sus scrofa (PIG)	1	L. HUMERUS
A-3	834.12	471.31	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
A-4			NUMBER NOT ASSIGNED		
A-5	824.47	489.50	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
A-6	792.02	473.17	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
A-7	818.74	490.78	ONONDAGA CHERT BIFACE FRAGMENT	1	POINT?
A-8	820.77	491.33	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
A-8	820.77	491.33	NET WEIGHT	1	
A-9	858.21	510.60	ONONDAGA CHERT NON-CORTICAL FLAKE	2	
A-10	864.80	514.26	PEBBLE CHERT, UNIDENTIFIED CORTICAL FLAKE	1	
A-11	834.52	505.67	ONONDAGA CHERT NON-CORTICAL FLAKE	2	
A-12	836.41	506.32	ONONDAGA CHERT NON-CORTICAL FLAKE	2	
A-13	852.37	512.72	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
A-13	852.37	512.72	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
A-14	847.78	522.99	ONONDAGA CHERT NON-CORTICAL FLAKE	2	
A-15	842.73	519.73	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
A-16	836.95	515.07	ONONDAGA CHERT NON-CORTICAL FLAKE	2	
A-17	834.34	513.92	ONONDAGA CHERT BIFACE FRAGMENT	1	LARGE, POSS. KNIFE
A-18	863.06	468.38	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
A-19	814.51	504.35	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
A-20	804.27	502.27	ONONDAGA CHERT NON-CORTICAL FLAKE	1	BURNED

Bag #	North	East	Description	Count	Comments
A-21	825.40	508.76	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
A-22	839.49	519.64	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
A-23	843.67	522.15	ONONDAGA CHERT CORTICAL FLAKE	1	
B-1	832.93	287.02	BONE Sus scrofa (PIG)	1	SAWED,CUT
B-2	832.33	477.53	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
B-2	832.33	477.53	FIRE-CRACKED ROCK	1	
B-3	810.03	479.44	PEBBLE CHERT, UNIDENTIFIED UNMODIFIED ROCK	1	DISCARDED
B-4	789.71	476.47	ONONDAGA CHERT NON-CORTICAL FLAKE	1	LARGE, UTILIZED
B-5	825.85	496.25	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
B-6	837.78	502.16	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
B-7	839.51	503.41	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
B-8	844.32	506.12	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
B-9	855.80	512.29	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
B-10	901.08	535.71	ONONDAGA CHERT BIFACE FRAGMENT	1	
B-11	866.08	521.16	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
B-12	835.63	512.84	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
B-13	835.16	512.79	PEBBLE CHERT, UNIDENTIFIED UNMODIFIED ROCK	1	DISCARDED
B-14	833.36	510.97	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
B-15	832.30	510.39	ONONDAGA CHERT NON-CORTICAL FLAKE	1	BURNED
B-16	831.02	510.10	UNIDENTIFIED MATERIAL NON-CORTICAL FLAKE	1	LT. PURPLE-GREY W/TAN INCLUSIONS
B-17	830.20	510.17	UNIDENTIFIED MATERIAL NON-CORTICAL FLAKE	1	COARSE LT. PURPLE-BLUE CHERT
B-18	823.33	505.20	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
B-19	823.18	505.18	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
B-20	819.06	503.75	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED

Bag #	North	East	Description	Count	Comments
B-21	818.64	504.15	UNIDENTIFIED MATERIAL NON-CORTICAL FLAKE	1	GREY W/DK RED-BROWN MOTTLES; UTILIZED
B-22	875.82	556.60	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
B-23	846.92	527.10	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
B-24	800.77	525.22	UNIDENTIFIED MATERIAL NON-CORTICAL FLAKE	1	BLUE-GREY W/QUARTZ INCLUSIONS
C-1	856.54	464.71	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
C-2	857.52	464.91	ONONDAGA CHERT BIPOLAR FLAKE	1	
C-3	826.46	460.70	FIRE-CRACKED ROCK	1	
C-4	868.63	499.95	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
C-5	858.64	503.44	UNIDENTIFIED MATERIAL NON-CORTICAL FLAKE	1	COARSE PURPLE CHERT
C-6	858.73	503.42	FIRE-CRACKED ROCK	1	
C-7	810.82	478.46	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
C-8	810.26	491.15	UNIDENTIFIED MATERIAL NON-CORTICAL FLAKE	1	UTILIZED; GREY W/TAN STRIPED INCLUSIONS
C-9	839.49	512.65	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
C-10	834.25	509.75	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
C-11	834.69	510.91	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
C-12	828.56	506.20	ONONDAGA CHERT NON-CORTICAL FLAKE	1	POSS. UTILIZED
C-13	827.70	505.62	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
C-14	823.88	516.85	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
C-15	823.79	517.05	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
D-1	838.90	285.07	BONE Sus scrofa (PIG)	1	L. HUMERUS
D-2	836.74	459.29	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
D-3	767.79	451.37	ONONDAGA CHERT PROJECTILE POINT MEADOWOOD	1	GROUND BASE
D-4	790.28	464.43	BONE SHEEP/GOAT/DEER	1	

Bag #	North	East	Description	Count	Comments
D-5	879.07	508.99	ONONDAGA CHERT NON-CORTICAL FLAKE	1	BURNED
D-6	801.82	488.62	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
D-7	812.15	492.82	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
D-8	813.79	493.42	UNIDENTIFIED CHERT UNIDENTIFIABLE SIDE-NOTCHED PROJECTILE POINT	1	LT GREY SPECKLED CHERT; UNFINISHED, REWORKED; UTILIZED; GROUND BASE
D-9	815.88	495.78	UNIDENTIFIED MATERIAL NON-CORTICAL FLAKE	1	LT. PURPLE-GREY W/TAN INCLUSIONS
D-10	824.53	500.19	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
D-11	815.92	495.79	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
D-12	838.25	507.31	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
D-13	844.83	512.93	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
D-14	843.21	512.78	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
D-15	843.15	511.61	UNIDENTIFIED MATERIAL CORTICAL FLAKE	1	LIPPED PLATFORM; DK RED-GREY CHERT
D-16	839.74	511.71	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
D-17	830.49	505.37	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
D-18	828.33	505.19	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
D-19	828.85	503.50	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
E-1	837.80	465.54	UNIDENTIFIED MATERIAL NON-CORTICAL FLAKE	1	MOTTLED GREY W/TAN STRIPED INCLUSIONS
E-2	836.98	464.71	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
E-3	835.61	464.15	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
E-4	834.53	463.09	ONONDAGA CHERT CORTICAL FLAKE	1	RETOUCHED; EARLY PREFORM?
F-16	924.81	189.66	FIRE-CRACKED ROCK	1	
G-15	941.28	169.86	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
G-15	941.28	169.86	ONONDAGA CHERT BIFACE FRAGMENT	1	FINELY FINISHED
J-9	920.65	203.29	ONONDAGA CHERT NON-CORTICAL FLAKE	1	

Bag #	North	East	Description	Count	Comments
J-16	940.93	171.72	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
L-1	882.34	581.71	FIRE-CRACKED ROCK	1	
L-2	870.43	575.42	FIRE-CRACKED ROCK	1	
L-3	832.27	555.57	FIRE-CRACKED ROCK	1	
L-4	768.82	533.08	FIRE-CRACKED ROCK	1	
L-5	808.01	554.96	FIRE-CRACKED ROCK	1	
L-6	820.24	560.92	FIRE-CRACKED ROCK	1	
L-7	835.79	569.39	FIRE-CRACKED ROCK	1	
L-8	848.82	576.89	FIRE-CRACKED ROCK	1	
L-9	865.06	583.66	FIRE-CRACKED ROCK	1	
L-9	865.06	583.66	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
L-9	865.06	583.66	UNIDENTIFIED MATERIAL NON-CORTICAL FLAKE	1	COARSE PURPLISH-BLUE CHERT
L-10	866.05	581.80	FIRE-CRACKED ROCK	1	
L-11	862.78	586.44	FIRE-CRACKED ROCK	2	
L-12	862.83	577.39	FIRE-CRACKED ROCK	1	
L-13	871.37	580.06	FIRE-CRACKED ROCK	1	
M-1	865.18	576.37	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
M-2	805.44	555.59	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
M-3	843.54	575.90	ONONDAGA CHERT CORTICAL FLAKE	1	
M-4	859.67	584.34	ONONDAGA CHERT BIFACE	1	
M-5	860.97	584.55	ONONDAGA CHERT NON-CORTICAL FLAKE	2	1 UTILIZED
M-6	862.16	584.14	FIRE-CRACKED ROCK	1	
M-7	865.60	608.06	FIRE-CRACKED ROCK	1	
N-1	867.19	581.33	FIRE-CRACKED ROCK	1	

Bag #	North	East	Description	Count	Comments
N-2	814.74	563.78	FIRE-CRACKED ROCK	1	
N-3	861.33	588.48	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
N-4	867.56	592.37	FIRE-CRACKED ROCK	1	
N-5	869.50	594.12	FIRE-CRACKED ROCK	1	
N-6	870.39	595.10	FIRE-CRACKED ROCK	1	
NO#			ONONDAGA CHERT NON-CORTICAL FLAKE	1	TAG BLANK
NO#			ONONDAGA CHERT NON-CORTICAL FLAKE	3	NO TAG IN BAG
NO#			GLASS CLEAR BOTTLE-UNID.	1	
O-1	770.55	575.90	IRONSTONE TABLEWARE/TEAWARE	1	MAKERS MARK: J&G MEAKIN
O-2	950.69	574.84	UNIDENTIFIED MATERIAL CORTICAL FLAKE	1	DK BROWN
O-3	945.90	587.45	GLASS EMBOSSED CLEAR BOTTLE STOPPER	1	BASE: "1891", EMBOSSED
O-3	945.90	587.45	AQUA BOTTLE STOPPER	1	
P-1	798.76	554.46	MILK GLASS BUTTON	1	
P-2	691.51	541.67	IRONSTONE TABLEWARE/TEAWARE	1	MAKERS MARK: "E&../IRONSTO.."
P-3	692.49	540.08	GLASS PRESCRIPTION FINISH SUN PURPLED BOTTLE NECK	1	
P-4	837.37	611.27	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
R-1	836.56	577.80	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
R-2	796.28	556.80	IRONSTONE TABLEWARE/TEAWARE SAUCER	1	1850-2002
R-3	789.36	553.69	ONONDAGA CHERT NON-CORTICAL FLAKE	1	BURNED
R-4	693.20	505.43	PORCELAIN ELEC. INSULATOR	1	FOR ELECTRIC FENCE
R-5	809.60	605.76	RHYOLITE NON-CORTICAL FLAKE	1	
R-6	746.76	588.56	GLASS AQUA CANNING JAR LID	1	
S-1	833.06	590.53	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
S-2	854.11	608.82	FIRE-CRACKED ROCK	1	

Bag #	North	East	Description	Count	Comments
S-3	894.65	587.13	FIRE-CRACKED ROCK	1	
S-4	938.61	566.53	ONONDAGA CHERT NON-CORTICAL FLAKE	1	UTILIZED
S-5	956.04	554.80	UNMODIFIED ROCK	1	BROKEN, NOT NECESSARILY FCR
S-6	952.79	577.68	GLASS AQUA BOTTLE-LIQUOR	1	FLASK NECK
T-1	789.97	574.56	FIRE-CRACKED ROCK	1	
T-2	654.19	565.72	MILK GLASS BLUE UNDIFF. GLASS	1	
T-3	918.72	566.68	FIRE-CRACKED ROCK	1	
U-1	848.65	603.98	ONONDAGA CHERT NON-CORTICAL FLAKE	1	
V-1	738.47	535.42	GLASS BLUE BEAD	1	OPAQUE

Appendix 2.4 STP and Unit Artifact Catalog, Owego Creek Site

Unit	North	East	Locus	Level	Depth (cm bd)	Horizon	Description	Comments	Count	Weight (g)	Crew	Date
5	839.	245.5	3	4	35-40	B	FERROUS METAL UNDIAG. NAIL FRAG.		2	8.3	LM/JM	05/23/2002
5	839.	245.5	3	5	40-45	B	UNIDENTIFIED MATERIAL BIFACE FRAGMENT		1	3.1	LM/JM	05/23/2002
5	839.	245.5	3	6	45-50	B	FERROUS METAL UNDIAG. NAIL FRAG.		2	3.8	LM/JM	05/23/2002
5	839.	245.5	3	11	70-75	B & A2	GRIT TEMPERED SMOOTHED-OVER CORD-MARKED UNDECORATED BODY SHERD		3	2.2	LM/JM	05/23/2002
5	839.	245.5	3	11	70-75	B & A2	GRIT TEMPERED ERODED SURFACE UNDECORATED BODY SHERD		1	0.1	LM/JM	05/23/2002
5	839.	245.5	3	12	75-80	B & A2	LIMESTONE DEBITAGE/CORE CORTICAL FLAKE		1	0.1	LM/JM	05/23/2002
5	839.	245.5	3	13	80-85	A2	GRIT TEMPERED SMOOTHED-OVER CORD-MARKED UNDECORATED BODY SHERD	MEND	2	1.	JM/AN	05/24/2002
6	830.5	254.	3	1	0-25	Ap	BONE Odocoileus virginianus (DEER)	PHALANX	1	2.1	TB/WT	05/22/2002
6	830.5	254.	3	8	55-60	A2 & B	ONONDAGA CHERT DEBITAGE/CORE BIFACIAL THINNING FLAKE		1	0.5	TB/RS	05/24/2002
7	830.5	259.	3	1	0-25	Ap	GLASS MELTED GLASS		1	2.6	NM/CO	05/22/2002
7	830.5	259.	3	2	25-30	Ap & B	FERROUS METAL CUT NAIL FRAG		1	4.5	NM/CO	05/22/2002
7	830.5	259.	3	2	25-30	Ap & B	ONONDAGA CHERT DEBITAGE/CORE BIFACIAL THINNING FLAKE		1	0.2	NM/CO	05/22/2002
7	830.5	259.	3	3	30-35	B	ALUMINUM TIN CAN		1	0.5	NM/CO	05/22/2002
7	830.5	259.	3	3	30-35	B	GRIT TEMPERED ERODED SURFACE UNDECORATED BODY SHERD		1	0.3	NM/CO	05/22/2002
7	830.5	259.	3	4	35-40	B & A2	FERROUS METAL UNDIAG. NAIL FRAG.		1	7.9	NM/TB	05/23/2002
8	838.	245.5	3	11	69-74	A2	ONONDAGA CHERT DEBITAGE/CORE CORE FRAG.		1	32.1	JM/LM	05/29/2002
8	838.	245.5	3	11	69-74	A2	ONONDAGA CHERT DEBITAGE/CORE CORTICAL FLAKE		1	0.2	JM/LM	05/29/2002
8	838.	245.5	3	11	69-74	A2	ONONDAGA CHERT DEBITAGE/CORE CORTICAL CHUNK		1	0.3	JM/LM	05/29/2002

Appendix 2.5 Lithic Analysis, Owego Creek Site

Unit	Level	Depth (cm bd)	North	East	Size	Description	Condition	Dorsal Scar Count	Cortex Type	Platform type	Platform Angle	Utilized	Heat Treated or Burned	Count	Weight (gm)	Crew	Date
5	5	40-45	839.	245.5	1"	UNIDENTIFIED MATERIAL BIFACE FRAGMENT								1	3.1	LM/JM	05/23/2002
5	12	75-80	839.	245.5	1/4-1/2"	LIMESTONE CORTICAL FLAKE	B	0-2	Surficial, Smooth	Flat	<45°			1	0.1	LM/JM	05/23/2002
6	8	55-60	830.5	254.	1/2-1"	ONONDAGA CHERT BIFACIAL THINNING FLAKE	W	>2	Marginal, Smooth	Faceted	<45°	1		1	0.5	TB/RS	05/24/2002
7	2	25-30	830.5	259.	1/2-1"	ONONDAGA CHERT BIFACIAL THINNING FLAKE	W	>2	No Cortex					1	0.2	NM/CO	05/22/2002
8	11	69-74	838.	245.5	1/4-1/2"	ONONDAGA CHERT CORTICAL FLAKE	W	>2	Surficial, Smooth	Cortical	45°-90°			1	0.2	JM/LM	05/29/2002
8	11	69-74	838.	245.5	1/4-1/2"	ONONDAGA CHERT CORTICAL CHUNK								1	0.3	JM/LM	05/29/2002
8	11	69-74	838.	245.5	1"	ONONDAGA CHERT CORE FRAGMENT								1	32.1	JM/LM	05/29/2002

APPENDIX III. CORRESPONDENCE

NEW YORK STATE OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION
Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

September 12, 2001

Daniel Deats
Hawk Engineering
PO Box 427
Binghamton, NY 13902-0427

Dear Mr. Deats

Re: SED
Owego Free Academy Additions Project
Town of Owego, Tioga County, NY
00PR0756

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP) with regard to the potential for this project to affect significant historical/cultural resources. OPRHP has reviewed your letter dated August 24, 2001 that proposes treatment plans for two archaeological sites located on this property. These sites have been identified as the Owego Free Academy Site (SUBI-2089, ORPHP# A10706.000098) and the Owego Creek Site (SUBI-2090, OPRHP #A10706.000099). ORPHP offers the following comments:

1. Your proposal calls for these sites to be protected in place by adding approximately 12" of fill over the existing surface to allow for minor grading and seeding. While OPRHP appreciates your efforts to protect the site intact we continue to have concerns regarding potential impacts during construction. OPRHP can concur with the use of fill to cover these sites under the following conditions:

    a) Prior to placement of fill, the entire site area should be covered with a geotextile fabric. Placement of this fabric will help to delineate the original ground surface and act as a visible barrier during construction. Once this barrier is in place there must be no grading, or construction that penetrates it without additional archaeological investigation.

    b) The proposal indicates that the surface will be tilled one last time and applying a herbicide to eliminate weeds. However, the act of tilling the soil is likely to affect the sites and result in a large number of artifacts being exposed. Therefore, OPRHP recommends that your archaeological consultant be brought in to conduct additional surface reconnaissance of the tilled area within site boundaries. The material collected should be analyzed a report prepared. Since there will be no additional ground disturbance, no subsurface testing should be needed. The application of herbicide should not occur until after the archaeological work is completed.

2. Your proposal does not address the potential for ground disturbance related to drainage and/or irrigation systems. If any such systems are proposed currently or at any future date, and such systems will result in ground disturbance within the boundaries of the identified sites, OPRHP recommends that additional archaeological investigation be carried out.

3. Your current proposal does not indicate what will happen at the third archaeological site identified on this property. While Phase 2 investigation has been completed for portions of the Huntington Creek Site (SUBI-2088 OPRHP #A10740.000602) and it has been determined that work at Loci 3, 4 and 5 will not have an impact on significant cultural resources, ORPHP has received no information on the avoidance or potential significance of Loci 1 and 2. Please provide additional information on the proposed treatment of these areas.

Please contact me at extension 3291 if you have any questions regarding these comments.

Sincerely,

Douglas P. Mackey

Douglas P. Mackey
Historic Preservation Program Analyst
Archaeology

MANAGEMENT SUMMARY

A. PROJECT GOAL: Addendum Reconnaissance Survey consisting of surface survey of the entire plowed field south of the driveway, including the area of the prehistoric Owego Creek site (SUBi-2090) and prehistoric Owego Free Academy Site (SUBi-2089) and a Phase 2 archaeological Site Examination of three spatial loci associated with the prehistoric Owego Creek site.

B. PROJECT LOCATION: Town of Owego, Tioga County, New York (MCD 10706).

C. USGS QUADRANGLE: 1969 Owego, New York 15 minute USGS quadrangle.

D. RESULTS OF ADDENDUM RECONNAISSANCE:

LOCATION: The Owego Free Academy site is located in the Town of Owego, Tioga County, New York, within the Glaciated Allegheny Plateau section of the Appalachian Plateau province. The setting within the surrounding area is an agricultural field bordered on the west by Owego Creek and on the south by Huntington Creek. Elevation within the project area is approximately 247 m (810 ft) ASL.

SITE LIMITS: Based on the initial reconnaissance, at its maximum, the site measured 220 x 230 m (722 x 807 ft) and encompasses 29,182 m^2 (314,112 ft^2) or 2.9 ha (7.2 ac) within the project limits. Artifacts mainly concentrated in the northernmost portion of the field, just south of the existing driveway. Based on the addendum reconnaissance data, these boundaries have been modified to include the addendum artifacts (Figure 4). In addition, the southern site boundary, near Huntington Creek, was pulled north since only a few pieces of FCR were recovered during the initial reconnaissance and no additional artifacts were recovered during the addendum reconnaissance. These artifacts were likely dragged south by plowing activities. The revised site size is approximately 219 m (718.5 ft) long and 160 m (524.9 ft) wide, at the maximum. It encompasses approximately 23,948 m^2 (257,774 ft^2) or 2.4 ha (5.9 ac) within the project boundaries. Within the site boundaries, two loci were defined: a western locus, Locus 1, measuring, at its maximum, 141.5 x 119.5 m (464 x 392 ft), approximately 12,909 m^2 (138,951 ft^2) or 1.1 ha (2.7 ac), and an eastern locus, Locus 2, measuring 161 x 78 m (528 x 256 ft) at is maximum, approximately 11, 039 m^2 (118,823 ft^2) or 1.3 ha (3.2 ac).

CONTEXT: The site is located approximately 2.4 km (1.5 mi) north of the Susquehanna River. Owego Creek lies just west and north of the project area. The Owego Free Academy site is located in an agricultural field just north of Huntington Creek, a small creek feeding into Owego Creek. The setting within the surrounding area is an agricultural field. The site files show that the Owego Creek site is within a 3.2 km (2 mi) radius of 30 prehistoric/protohistoric sites (Pratt and Pratt 2000:18-20). Eight prehistoric sites are located within a 1.6 km (1 mi) radius of the Owego Free Academy site (Pratt and Pratt 2000:2, 19-20). The prehistoric sites include camps and villages and date from the Late Archaic to the Contact period. In addition, one multicomponent site includes a component dating from the 1780s to 1850s.

SITE TESTING: Archaeologists conducted systematic surface survey and artifact mapping following replowing of the project area.

RESULTS: Archaeologists recovered 255 artifacts from the Owego Free Academy site during initial and addendum reconnaissances from the surface and from three STPs. Artifacts included: flakes, cores, a drill, rough stone tools, bifaces, fire-cracked rock, and projectile points.

SITE AGE AND FUNCTION: The Owego Free Academy site consists of prehistoric lithics, rough stone tools, and fire-cracked rock. The site may represent one or more small resource processing stations associated with an individual or small group of hunter-gatherers. The documentation of several distinct loci suggests the repeated use of this landform through time. Diagnostic artifacts were recovered from the plowed surface, including a Brewerton-like Side-Notched projectile point (3500-1500 B.C.), a Susquehanna Broad projectile point (1500-200

B.C.), and a Meadwood point (1000-500 B.C.). These projectile points date to the Late Archaic, Transitional, and Early Woodland periods (Ritchie 1989). The presence of rhyolite flakes supports a Transitional period component.

INTEGRITY: The Owego Free Academy site retains high physical integrity, including two spatially distinct clusters of artifacts.

SIGNIFICANCE: The Owego Free Academy site has research potential due to the excellent site integrity, quantity and diversity of artifact types, the potential for identifying features, and the presence of diagnostic artifacts dating to the Late Archaic, Transitional, and Early Woodland periods.

POTENTIAL IMPACTS: At present, the Owego Free Academy site is within an area that will be adversely impacted by proposed construction of a varsity softball field, field hockey fields, a football practice field, and a temporary diversion berm.

RECOMMENDATIONS: We recommend that the site within the project limits is potentially eligible for the National Register of Historic Places. We recommend that impacts to the site be avoided. If impacts to the site can not be avoided, we recommend a Phase 2/3.

E. SITE DESCRIPTION: Owego Creek Site, SUBi-2090

LOCATION: The Owego Creek site is located in the Town of Owego, Tioga County, New York, within the Glaciated Allegheny Plateau section of the Appalachian Plateau province. The setting within the surrounding area is an agricultural field bordered on the west by Owego Creek and on the south by Huntington Creek. Elevation within the project area is approximately 247 (810 ft) ASL.

SITE LIMITS: At its maximum, the Owego Creek site measures 80 x 78.5 m (262 x 257 ft) and encompasses 3957 m^2 (42,593 ft^2) or .4 ha (.9 ac) within the project limits. Artifacts are unevenly distributed within this area. Three loci were identified during the initial and addendum reconnaissances based on the presence of artifacts. Individual loci range in size from 225 m^2 (2421 ft^2) to 1,518 m^2 (16,334 ft^2). All three loci were investigated during the Site Examination.

CONTEXT: The site is located approximately 2.4 km (1.5 mi) north of the Susquehanna River. Owego Creek lies just west and north of the project area. The Owego Creek site is located in an agricultural field just north of Huntington Creek, a small creek feeding into Owego Creek. The setting within the surrounding area is an agricultural field. The site files show that the Owego Creek site is within a 3.2 km (2 mi) radius of 30 prehistoric/protohistoric sites (Pratt and Pratt 2000:18-20). Eight prehistoric sites are located within a 1.6 km (1 mi) radius of the Owego Creek site (Pratt and Pratt 2000:2, 19-20). The prehistoric sites include camps and villages and date from the Late Archaic to the Contact period. In addition, one multicomponent site includes a component dating from the 1780s to 1850s.

SITE TESTING: Archaeologists excavated 10 shovel test pits (STPs) spaced 2 and 3 m (6.6 and 10 ft) apart within Locus 1 and eight judgmentally placed 1 x 1 m (3.3 x 3.3 ft) units within the limits of Loci 2 and 3.

RESULTS: Artifacts recovered during the Site Examination iucluded 15 prehistoric artifacts (1 biface fragment, 1 core, 2 bifacial thinning flakes [1 utilized], 2 cortical flakes, 1 cortical chunk, 7 non-diagnostic ceramics, and 1 possible fire-cracked rock) and historic period materials (nails, glass, etc.) from Locus 3. No artifacts were recovered from Loci 1 and 2 during Site Examination. No features were identified at the site during the Site Examination.

SITE AGE AND FUNCTION: The Owego Creek site consists of prehistoric lithics and ceramics. Each locus may represent a small resource processing station associated with an individual or small group of hunter-

gatherers. The documentation of several distinct loci suggests the repeated use of this landform through time. No diagnostic artifacts were identified to place the site or individual loci within a temporal framework.

INTEGRITY: The Owego Creek site retains high physical integrity, including prehistoric artifacts in a buried soil horizon (A2).

SIGNIFICANCE: The Owego Creek site has limited research potential due to the uncertainty of temporal affiliation, relatively low diversity and density of cultural material, and the lack of features.

POTENTIAL IMPACTS: At present, the site (Loci 1, 2, and 3) is located within an area that will be adversely impacted by the construction of a temporary sediment trap and diversion berm.

RECOMMENDATIONS: Given the low artifact density, lack of features, and the absence of other unique characteristics, we propose that the Owego Creek site (Loci 1, 2, and 3) is not eligible for the National Register of Historic Places. We recommend that no further work is needed and that the proposed work in this area will not adversely impact a significant cultural resource.

F. AUTHOR/INSTITUTION: Laurie E. Miroff, Public Archaeology Facility, State University of New York at Binghamton.

G. DATE: June 20, 2002

H. SPONSOR: Hawk Engineering and the Owego/Apalachin School District.

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

January 11, 2001

Daniel R. Deals
Hawk Engineering, P.C
PO Box 427
Binghamton, NY 13902-0427

Dear Mr. Deals:

Re: SED
Stage 1B Cultural Resource Survey
Owego-Apalachin Central School District
Town of Owego, Tioga County, NY
00PR0756

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the Owego Free Academy Project in accordance with the New York State Parks, Recreation and Historic Preservation Law, Section 14.09.

Based upon review of the Stage 1B Cultural Resource Management Survey Report, it is our understanding that three prehistoric archeological sites have been identified within the project area. If the project cannot be designed in a manner that will avoid impacts to these sites OPRHP recommends that Stage 2 archeological investigations of the sites is warranted. In addition to the Stage 2 recommendations included in this report, OPRHP strongly recommends that areas beyond the already identified boundaries be plowed and re-examined to insure that site boundaries of each site within the agricultural fields have been completely identified. This should include the area north of the driveway a the Owego Free Academy Site

When responding please be sure to refer to the OPRHP project review (PR) number noted above. If you have any questions, please feel free to call me at (518) 237-8643 ext. 3255.

Sincerely,

Robert D. Kuhn
Assistant Director,
Field Services Bureau

August 7, 2002

Daniel Deats
Hawk Engineering, P.C.
PO Box 427
Binghamton, NY 13902-0427

Dear Mr. Deats,

Re: SED
Addendum Phase 1 and
Stage 2 Archaeological Report
Owego Free Academy and Owego Creek Sites,
Owego-Apalachin School District
Town of Owego, Tioga County, NY
00PR0756

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP) with regard to the potential for this project to affect significant historical/cultural resources. OPRHP has reviewed the report titled "Cultural Resource Management Report, Addendum Reconnaissance Survey and Phase 2 Site Examination, The Owego Creek Site (SUBi-2090), Owego/Apalachin Central School District Project, Village of Owego, Tioga County, New York" prepared by the Public Archaeology Facility in June 2002. This report provides additional coverage of the plowed fields around these sites and a more detailed exam of three separate loci at the Owego Creek Site. Based on our review OPRHP offers the following comments.

1. OPRHP concurs that the potential of the Owego Creek Site (A10706.000099) to produce significant data is minimal and that the site does not meet the criteria to be considered eligible for the National Register of Historic Places and we have no further concerns regarding that site.

2. Based on the data recovered form the addendum investigations at the Owego Free Academy Site (A10706.000098) this site appears to be eligible for the National Register of Historic Places. Therefore, OPRHP recommends that impacts to this site be avoided. If the site can not be avoided ORPHP recommends that additional data retrieval investigations be conducted to mitigate any adverse impacts.

3. If any ground disturbing activity will take place in this area please contact OPRHP to discuss potential avenues for mitigation.

Please contact me at extension 3291 if you have any questions regarding these comments.

Sincerely,

Douglas P. Mackey
Historic Preservation Program Analyst
Archaeology

Cc: Nina Versaggi, Public Archaeology Facility

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island Resource Center, PO Box 189, Waterford, NY 12188-0189

FEMA PROJECT REVIEW COVER FORM

Please complete this form and attach it to the top of any **and all information submitted to this office** for review. Accurate and complete forms will assist this office in the timely processing and response to your request.

☐ **PROJECT NUMBER** **PR** (only if a project was previously submitted)

☒ This is a new project (If checked, complete **ALL** the following)

Project Name: **Owego-Apalachin School District Bus Barn Storage Building Repairs**
Location: **75 Elm Street (42.1028, -76.26995)**

City/Town/Village: **Village of Owego (MCD 10740)**
County: **Tioga County**

TYPE OF REVIEW REQUIRED/REQUESTED

This Project at a minimum is using federal funds (FEMA) AND state funds (New York State Emergency Management Office)

FEMA CONTACT FOR PROJECT

Name: Daria E. Merwin
Title: Historic Preservation Specialist
Phone: 571-408-3144
Fax: 518-464-6591

E-Mail address: Daria.Merwin@fema.dhs.gov

Send Correspondence to:
FEMA 4020-DR-NY
Joint Field Office
Charles Diters
EHP Team Lead
10 Jupiter Lane
Albany, New York 12205

With copy furnish to:
Mr. Rick Lord
Chief of Mitigation Programs
New York State Office of Emergency Management
1220 Washington Avenue, Building 22
Albany, New York 12226-2251

URGENCY OF REVIEW: **Immediate** (3 days) ☐ **Expedited** (14 days) ☐ **Regular** (30 days) ☒
Comments: damaged circa 1947 building does not appear to be National Register eligible

FEMA Disaster Number: 4031-DR-NY
PW # 01999

SIGNATURE: Daria E. Merwin **DATE:** June 1, 2012

Daria E. Merwin, Historic Preservation Specialist, for
Megan Jadrosich, Regional Environmental Officer

PW 01999 – Owego-Apalachin School District Bus Barn Storage Building Repairs

Location and Resource:	Owego-Apalachin School District Bus Barn Storage Building, 75 Elm Street, Village of Owego (MCD 10740), Tioga County (42.1028, -76.26995) (Figures 1-6).
Cause of Failure:	Heavy rains associated with Tropical Storm Lee resulted in Owego Creek and the Susquehanna River over running their banks, flooding the Village of Owego and the school district's Bus Barn Storage Building. Floodwaters rose to approximately 6 feet, causing extensive damage to floors, walls, electrical, and mechanical systems.
Description of Damage:	The storage building is concrete block on a poured concrete slab foundation, built in 1947. There is a second floor only over the north part of the structure (14x40 feet). The flood water came into contact with the concrete block structure and any items in the building up to 6 feet including aluminum windows, wood interior doors, hollow metal frame exterior doors, steel insulated overhead doors; bathrooms, water, gas and utility lines, a boiler, electrical system, telephone wiring, air compressor and water heater.
Undertaking:	All exterior and interior cleaning and repairs, as well as all repairs to damaged utilities, will be made with in-kind materials, replacing largely modern (i.e., second half of the 20th century) structural elements, finishes, and utilities that were damaged by flooding (Figures 4-5). Cleanup includes mold remediation and asbestos (found in vinyl floor tiles) abatement. Proposed flood hazard mitigation consists of the installation of vent covers, door dams, and window dams to minimize water infiltration in future floods.
APE:	The area of potential effect (APE) encompasses the ground floor of the 9,359 square foot structure.
Archeology:	A review of SHPO records on June 1, 2012 indicated that the APE is in an area of known archeological sensitivity (Figure 6). The site files of the SHPO and NYS Museum indicate that the storage building is within the general bounds of a large prehistoric site (NYSM 6900).
Standing Structures:	A review of SHPO records on June 1, 2012 indicated that the storage building is more than 1,000 feet northwest of the Owego Central Historic District (97NR01230) (Figure 6). As the name suggests, the Bus Barn Storage Building was originally used as a school bus garage and maintenance facility, though recently it has served as storage space for the school district. The 1947 large concrete block, flat roof structure is utilitarian in design, and does not appear to be eligible for the National Register.
Findings:	Repairs to damaged exterior and interior finishes, doors, utilities, and other features will be done with in-kind materials to restore the building to pre-disaster conditions. No new ground disturbance will be required for the building repairs. FEMA finds that the undertaking will result in "no historic properties affected."
Prepared by:	Daria E. Merwin, FEMA Historic Preservation Specialist

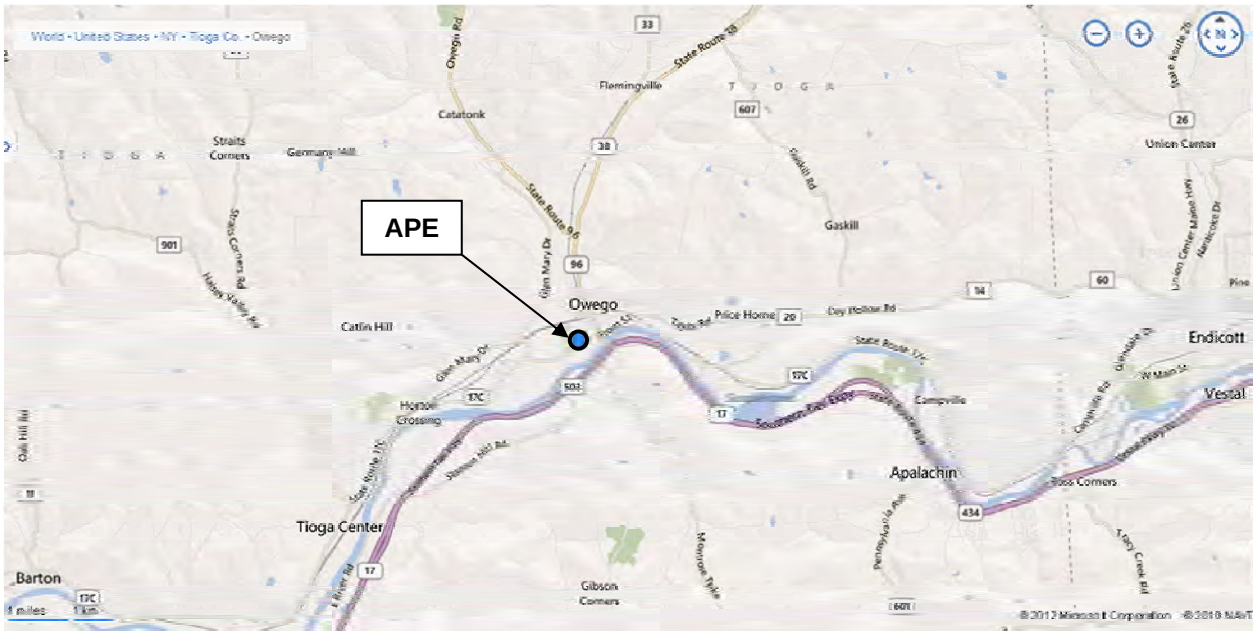

Figure 1. Street map showing the location of the APE in Owego, Tioga County.

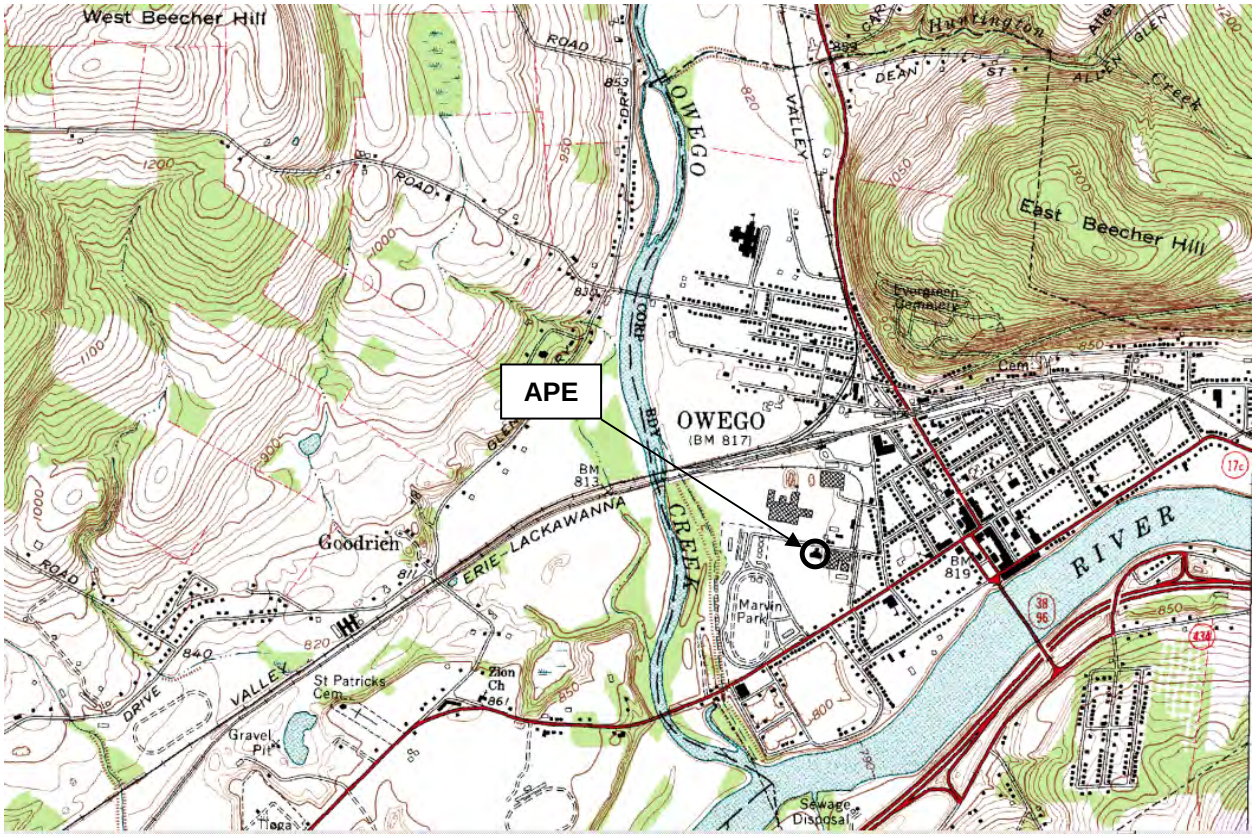

Figure 2. 1969 USGS topographic map of *Owego, New York* (7.5 minute series).

Figure 3. Aerial view looking west towards the Bus Barn Storage Building.

Figure 4. Looking southeast at the Bus Barn Storage Building, a 1947 concrete block/poured concrete slab foundation structure.

Figure 5. Typical interior damage; note water line on the wall almost to the top of the door.

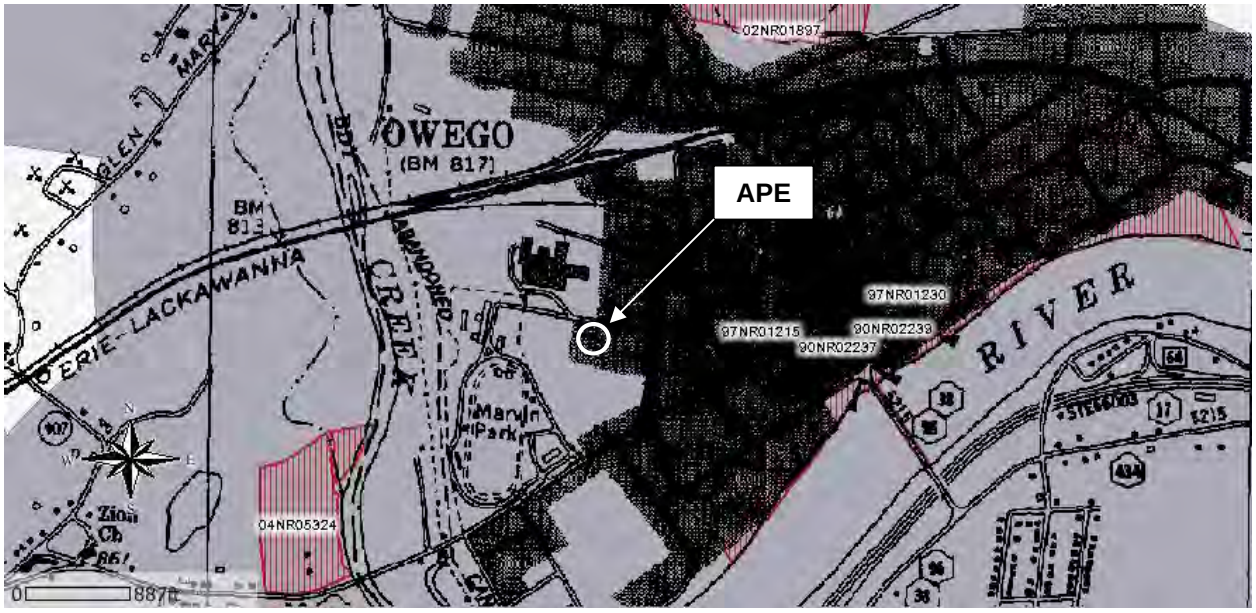

Figure 6. Archeological Sensitivity Areas (gray circles) and National Register listed properties (red polygons; note the APE at 75 Elm Street is not within the National Register district) in the vicinity of the APE (online SHPO GIS database, accessed June 1, 2012).

Andrew M. Cuomo
Governor

Rose Harvey
Commissioner

New York State Office of Parks,
Recreation and Historic Preservation

Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643
www.nysparks.com

June 4, 2012

Charles Diters
FEMA-Dept. of Homeland Security
10 Jupiter Lane
Albany, New York 12204
(via e-mail only)

Re: FEMA, SOEM
Emergency Mitigation/21 Projects
12PR02265

Dear Mr. Diters:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the projects in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your projects. Such impacts must be considered as part of the environmental review of the projects pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

I have reviewed the materials submitted for each of these undertakings and our findings are attached. Our determinations are based on the submitted scopes of work for each undertaking.

If I can be of any further assistance do not hesitate to contact me at (518) 237-8643, ext. 3263.

Sincerely,

John A. Bonafide
Director, Bureau of Technical
Preservation Services

cc: Richard Lord, SOME *(via e-mail)*
enc: Findings

Findings Attachment

PW #	Street/Vic	MCD	County	FEMA Finding	NYSHPO Finding
DR-4020					
PW #05453	Freight Master Museum	Catskill	Greene	No adverse effect on historic properties	Concur
PW #-4563	8 Tyrell Av, 74 Bushey Blvd, 79 Cornelia St, 34 Flynn Av	City of Plattsburgh	Clinton	No historic properties affected	Concur
PW #03400	Tibbetts Brook Park	City of Yonkers	Westchester	No historic properties affected	Concur
PW#05328	127 S. Broadway/ St Joseph	City of Yonkers	Westchester	No adverse effect to historic properties	Concur
PW #05046	904 Lexington Av, Hunter College West Bldg	Manhattan	New York	No historic properties affected	Concur
PW #05164	930 Lexington Ave Hunter College Thomas Hunter Hall	Manhattan	New York	No adverse effect on historic properties	Concur
PW #06532	60 Centre St (NY Co Courthouse)	Manhattan	New York	No adverse effect to historic properties	Concur
PW #05879	Faber Park Men's Locker Rm	Staten Island	Richmond	No adverse effect to historic properties	Concur
PW #06044	376 + 392 Segiune Ave	Staten Island	Richmond	No historic properties affected	Concur
PW #05445	Cairo Office Building	Town of Cairo	Greene	No adverse effect to historic properties	Concur
PW #06649	Sunset Road	Town of Hunter	Greene	No adverse effect to historic properties	***No historic properties affected***
PW #05570	301 E. Main St/ Southside Hospital	Town of Islip	Suffolk	No historic properties affected	Concur

PW #04367	1 Library Road	Village of Briarcliff Manor	Westchester	No historic properties affected	Concur
PW #01223	6 Park Street	Village of Fonda	Montgomery	No adverse effect to historic properties	Concur
PW #02613	8 Railroad Street	Village of Fonda	Montgomery	No adverse effect to historic properties	Concur
PW #02046	Broadway and Station Road	Village of Irvington	Westchester	No historic properties affected	Concur
PW #05559	59 Campbell Avenue	Village of Suffern	Rockland	No adverse effect to historic properties	Concur
PW #04740	Wooster Grove, East Main Street (County Rt 52)	Village of Walden	Orange	No historic properties affected	Concur
PW #03426	1 Tugboat Alley	Village of Waterford	Saratoga	No adverse effect to historic properties	Concur
DR-4031					
PW #02000	36 Talcott Street	Village of Owego	Tioga	No historic properties affected	Concur
PW #01999	Owego-Apalachin Schools bus barn 75 Elm St	Village of Owego	Tioga	No historic properties affected	Concur

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE

Andrew M. Cuomo
Governor

Rose Harvey
Commissioner

New York State Office of Parks, Recreation and Historic Preservation

Division for Historic Preservation
P.O. Box 189, Waterford, New York 12188-0189
518-237-8643

22 August 2013

Dr. Nina Versaggi
Public Archaeology Facility
Binghamton University, SUNY
Binghamton, NY 16902-6000

Re: FEMA
Monkey Run Maintenance Building Construction
Village of Owego, Tioga County
13PR03584

Dear Dr. Versaggi:

The State Historic Preservation Office (SHPO) has reviewed the latest information submitted for this project (*Data Recovery Plan, Owego Free Academy Site (SUBi-2089), Proposed Maintenance Building Project, Monkey Run Alternative, Owego Apalachin School District, Village of Owego, Tioga County, New York*; dated 3 June 2013; prepared by Public Archaeology Facility). Our review has been in accordance with Section 106 of the National Historic Preservation Act and relevant implementing regulations.

SHPO has several comments and requests for information regarding this proposed data recovery plan.

1. Please provide documentation that Native American consultation has been initiated regarding this project.
2. Please indicate whether the Federal Emergency Management Agency (FEMA) plans to develop a Memorandum of Agreement (MOA) for this project.
3. SHPO recommends that if any indication of human remains is encountered during the proposed field work that a provision be included for the entire site area to be stripped of plow zone and examined for the presence of burials.
4. SHPO recommends that a summary of completed or planned community outreach activities should accompany submission of the final data recovery report.

If you have any questions please don't hesitate to contact me.

Sincerely,

Philip A. Perazio, Historic Preservation Program Analyst – Archaeology Unit
Phone: 518-237-8643 x3276; FAX: 518-233-9049
Email: Philip.Perazio@parks.ny.gov

Cc: Donna Bolognino, FEMA (via email)
William Russell, Owego-Apalachin School District (via email)
Joseph Plunkett, Simmons Consulting (via email)

U.S. Department of Homeland Security
FEMA Region II
Leo O'Brien Federal Building
11A Clinton Avenue, Suite 742
Albany, NY 12207

FEMA

January 21, 2015

John Bonafide, Director, Bureau of Technical Preservation Services
NYS Office of Parks, Recreation and Historic Preservation
Division for Historic Preservation
Peebles Island Resource Center
PO Box 189
Waterford, NY 12188

cc: Larry Moss, Historic Preservation Technical Specialist (electronic submittal only)

Re: **Section 106 Consultation for Federal Emergency Management Agency**
Project #: PA-02-NY-4031-02001 and 01999; 13PR03584
Subgrantee: Owego Apalachin Central School District
Undertaking: Maintenance and Storage Facility Replacement Project
Location: Monkey Run Site, off of Sheldon Guile Boulevard, Town of Owego, Tioga County, NY 13850; GPS: 42.12121 -76.27297
Determination: Adverse Effects to Historic Properties

Dear Mr. Bonafide,

The Public Assistance Program of the Department of Homeland Security-Federal Emergency Management Agency (FEMA) is proposing to provide grant funding to the Owego Apalachin Central School District (Subgrantee) for the construction of a replacement maintenance and storage facility on the Monkey Run property, located off of Sheldon Guile Boulevard in the Town of Owego, Tioga County, New York. The project will require ground disturbance in the vicinity of a National Register-eligible archaeological site. In accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470f), and its implementing regulation, 36 Code of Federal Regulations (CFR) Part 800, FEMA is initiating consultation for the proposed undertaking.

The existing maintenance and storage facility, located at 75 Elm Street in the Village of Owego, Tioga County, New York, received flood damage as a result of Tropical Storm Lee, which impacted the Village and Town of Owego during the incident period of September 7, 2011 to September 11, 2011. The facility was substantially damaged and the Subgrantee has requested funding to relocate the facility to an alternate location outside of the 100-year floodplain. After consideration of possible locations, the Subgrantee has proposed that the replacement maintenance and storage facility be constructed at the Monkey Run Site, a 49.88-acre property

that currently contains athletic fields associated with the Owego Apalachin Middle School and the Owego Free Academy.

Description of Undertaking:

The Subgrantee proposes to construct a new, approximately 25,195 square foot maintenance and storage facility at the Monkey Run Site. The facility will include associated parking, access and utilities. The area of disturbance encompasses approximately 3.72 acres and extends between 12 and 48 inches below ground for site improvements and building footers. The area of disturbance may be enlarged if water retention basins are deemed necessary.

Area of Potential Effects:

The Area of Potential Effects (APE) encompasses an approximately 3.72-acre area of disturbance that encompasses the building footprint as well as access, parking, and utilities. The site is located north of Sheldon Guile Boulevard, presently the location of baseball fields (Figure 1).

Identification and Evaluation

The Subgrantee contracted the Public Archaeology Facility (PAF) to conduct a Phase 1 Archaeological Survey of the Monkey Run Property as part of a school district project in 2000. This report and its subsequent addendum are attached for reference. A prehistoric site, the Owego Free Academy Site (SUBi-2089) was identified at that time within the current project APE and a Phase 2/3 data recovery recommended if the site could not be avoided. The site contains a high density of prehistoric cultural material identified on the surface and below the ground surface, with diagnostic artifacts recovered from the plow zone that date from the Archaic, Transitional, and Late Archaic/Early Woodland periods. The School District determined at that time that the site could be avoided and no further work was pursued on this property. However, the Monkey Run Property has since been determined to be the preferred location of the new maintenance and storage facility and FEMA will be continuing the Section 106 coordination with SHPO and THPOs for the project. A Data Recovery Plan has been drafted that outlines the proposed field, analysis and reporting methods. This report was submitted to FEMA and SHPO in a draft format in 2013 under 13PR03584, and has since been revised in accordance with updated plans in December 2014 and is attached for review and comment.

Assessment of Effects/Findings

Based on the aforementioned identification and evaluation, FEMA has determined that the project will result in Adverse Effects to Historic Properties. There are no aboveground historic resources in the APE; however, the APE includes a National Register-eligible archaeological site that will be affected by the construction of the new facility. Due to the adverse effects to the Owego Free Academy Site, a Memorandum of Agreement (MOA) will be prepared outlining measures to mitigate the adverse effects to the cultural resource.

FEMA is submitting this Undertaking to you for your review and comment, and requests your comments and/or concurrence within 30 days. Should you have any questions or need additional information regarding this undertaking, please contact me at 518-396-3842 or via email at Shauna.Haas1@fema.dhs.gov.

Sincerely,

Shauna J. Haas
Historic Preservation Specialist

Additional cc: Cayuga Nation of New York
Onondaga Nation
Seneca Nation of Indians
New York State Division of Homeland Security and Emergency Services

Enclosures:
Figure 1 Project Location Map
Cultural Resource Management Reports
Data Recovery Plan

Andrew M. Cuomo
Governor

Rose Harvey
Commissioner

New York State Office of Parks,
Recreation and Historic Preservation

Division for Historic Preservation
Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643
www.nysparks.com

February 19, 2015

Department of Homeland Security/ FEMA
Shauna J Haas, Historic Preservation Specialist
NWS Earle, Bldg. C-54
201 Route 34 South
Colts Neck, NJ 07722

Re: Owego Apalachin School Maintenance & Storage Facility Replacement
Monkey Run Site, Owego/ Tioga County
4031-DR-NY/ 13PR03584

Dear Shauna:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

SHPO concurs with the proposed Data Recovery Plan (22 December, 2014). Please submit the proposed MOA for review and comment prior to implementation of the DRP.

If further correspondence is required regarding this project, please refer to the SHPO Project Review (PR) number noted above. If I can be of further assistance, please contact me at (518) 268-2187.

Sincerely,

L Moss

Larry K Moss
Historic Preservation Technical Specialist

CC: Donna Bolognino, FEMA
Rick Lord, DHSES

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

February 23, 2015

Ms. Donna Bolognino
FEMA
Leo O'Brien Building
11A Clinton Ave STE 742
Albany, NY 12207

Re: FEMA
Owego Apalachin School - Maintenance Building Replacement PA-02-NY-4031-02001 and 01999
Town of Owego, Tioga County
13PR03584

Dear Ms. Bolognino:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

SHPO recommends that an alternatives analysis should be prepared for this project to assess the possibility of selecting another location in order to avoid adverse effects to the identified precontact site, the Owego Free Academy Site (10706.000098), located within the project's Area of Potential Effects (APE).

If you have any questions please don't hesitate to contact me.

Sincerely,

Philip A. Perazio, Historic Preservation Program Analyst - Archeology Unit
Phone: 518-268-2175
e-mail: philip.perazio@parks.ny.gov via e-mail only

NEW YORK STATE OF OPPORTUNITY. Parks, Recreation and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

March 30, 2015

Ms. Donna Bolognino
FEMA
Leo O'Brien Building
11A Clinton Ave STE 742
Albany, NY 12207

Re: FEMA
Owego Apalachin School - Maintenance Building Replacement
PA-02-NY-4031-02001 and 01999
Town of Owego, Tioga County
13PR03584

Dear Ms. Bolognino:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the Owego Free Academy Precontact site (10706.000098) alternatives analysis in accordance with Section 106 of the National Historic Preservation Act of 1966. The materials reviewed by the SHPO include, among other items, a floodplain map, a written description of the parcel selection process, a written description of the building siting process, and the Owego Free Academy site artifact distribution map.

Based on this review, it is the SHPO's opinion that the Owego Apalachin School District made a reasonable and good faith effort to avoid and reduce adverse effects to the Owego Free Academy site given the need to find a level site located outside both the 100-year and 500-year floodplain. The SHPO concurs with FEMA that this undertaking will have an adverse effect on the Owego Free Academy site, and we look forward to reviewing a Memorandum of Agreement (MOA). The comments that follow are intended to help develop an appropriate treatment plan.

Comment 1. The SHPO understands that the consulting Indian Nations value the Owego Free Academy site as a place of religious and cultural significance and that archaeological data recovery alone does not adequately compensate the Nations for the physical destruction of this cultural significant site. Two alternatives to archaeological data recovery proposed by the Nations include a Native American educational component and the acquisition and preservation of archaeological sites away from the project area, known as archaeological mitigation banking. According to the Advisory Council on Historic Preservation (ACHP), archaeological mitigation banking can be an appropriate treatment measure.

Comment 2. The SHPO understands that the FEMA grant is capped and that there is a set amount of funds the District has available for treatment measures. Therefore, the SHPO recommends that the amount of archaeological data recovery, previously proposed in the June 3, 2014 Data Recovery Plan (revised February 20, 2015), be reduced and that the remaining funds are set aside for the alternative mitigations proposed by the consulting Indian Nations.

Comment 3. If the amount of money available for data recovery is reduced to compensate for additional spending on education and archaeological mitigation banking, the SHPO recommends that the number of test units be reduced and the number of shovel tests be increased. This will allow a larger artifact sample to be collected while reducing the amount of record keeping, and should be practicable, given that the precontact artifacts were recovered from the plow zone. Archaeological features will be recovered during mechanical soil stripping. The SHPO will also accept a condensed Phase III Data Recovery report and suggests that written descriptions are kept to a minimum and that data are displayed in tables and figures.

Comment 4. To facilitate the project schedule, we recommend that if specific alternative mitigation measures have not been agreed to by the time the MOA is ready for signature, that the MOA include a dollar amount and a time frame by which an alternative mitigation scope will be finalized.

If you have any questions, I can be reached at (518) 268-2179.

Sincerely,

Nancy Herter

Nancy Herter
Archeology Unit Program Coordinator
e-mail: nancy.herter@parks.ny.gov

via e-mail only

U.S. Department of Homeland Security
FEMA Region II
Leo O'Brien Federal Building
11A Clinton Avenue, Suite 742
Albany, NY 12207

FEMA

January 21, 2015

Clint Halfdown, Chief
Cayuga Nation of New York
P.O. Box 803
Seneca Falls, NY 13148

cc: Tim Twoguns, Nation Representative, Cayuga Nation of New York

Re: **Section 106 Consultation for Federal Emergency Management Agency**
Project #: PA-02-NY-4031-02001 and 01999
Subgrantee: Owego Apalachin Central School District
Undertaking: Maintenance and Storage Facility Replacement Project
Location: Monkey Run Site, off of Sheldon Guile Boulevard, Town of Owego, Tioga County, NY 13850; GPS: 42.12121 -76.27297
Determination: Adverse Effects to Historic Properties

Dear Chief Halfdown,

The Public Assistance Program of the Department of Homeland Security-Federal Emergency Management Agency (FEMA) is proposing to provide grant funding to the Owego Apalachin Central School District (Subgrantee) for the construction of a replacement maintenance and storage facility on the Monkey Run property, located off of Sheldon Guile Boulevard in the Town of Owego, Tioga County, New York. The project will require ground disturbance in the vicinity of a National Register-eligible archaeological site. In accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470f), and its implementing regulation, 36 Code of Federal Regulations (CFR) Part 800, FEMA is initiating consultation for the proposed undertaking.

The existing maintenance and storage facility, located at 75 Elm Street in the Village of Owego, Tioga County, New York, received flood damage as a result of Tropical Storm Lee, which impacted the Village and Town of Owego during the incident period of September 7, 2011 to September 11, 2011. The facility was substantially damaged and the Subgrantee has requested funding to relocate the facility to an alternate location outside of the 100-year floodplain. After consideration of possible locations, the Subgrantee has proposed that the replacement maintenance and storage facility be constructed at the Monkey Run Site, a 49.88-acre property that currently contains athletic fields associated with the Owego Apalachin Middle School and the Owego Free Academy.

Description of Undertaking:

The Subgrantee proposes to construct a new, approximately 25,195 square foot maintenance and storage facility at the Monkey Run Site. The facility will include associated parking, access and utilities. The area of disturbance encompasses approximately 3.72 acres and extends between 12 and 48 inches below ground for site improvements and building footers. The area of disturbance may be enlarged if water retention basins are deemed necessary.

Area of Potential Effects:

The Area of Potential Effects (APE) encompasses an approximately 3.72-acre area of disturbance that encompasses the building footprint as well as access, parking, and utilities. The site is located north of Sheldon Guile Boulevard, presently the location of baseball fields (Figure 1).

Identification and Evaluation

The Subgrantee contracted the Public Archaeology Facility (PAF) to conduct a Phase 1 Archaeological Survey of the Monkey Run Property as part of a school district project in 2000. This report and its subsequent addendum are attached for reference. A prehistoric site, the Owego Free Academy Site (SUBi-2089) was identified at that time within the current project APE and a Phase 2/3 data recovery recommended if the site could not be avoided. The site contains a high density of prehistoric cultural material identified on the surface and below the ground surface, with diagnostic artifacts recovered from the plow zone that date from the Archaic, Transitional, and Late Archaic/Early Woodland periods. The School District determined at that time that the site could be avoided and no further work was pursued on this property. However, the Monkey Run Property has since been determined to be the preferred location of the new maintenance and storage facility and FEMA will be continuing the Section 106 coordination with SHPO and THPOs for the project. A Data Recovery Plan has been drafted that outlines the proposed field, analysis and reporting methods. This report was submitted to FEMA and SHPO in a draft format in 2013, revised in accordance with updated plans in December 2014, and is attached for review and comment.

Assessment of Effects/Findings

Based on the aforementioned identification and evaluation, FEMA has determined that the project will result in Adverse Effects to Historic Properties. There are no aboveground historic resources in the APE; however, the APE includes a National Register-eligible archaeological site that will be affected by the construction of the new facility. Due to the adverse effects to the Owego Free Academy Site, a Memorandum of Agreement (MOA) will be prepared outlining measures to mitigate the adverse effects to the cultural resource.

FEMA is submitting this Undertaking to you for your review and comment, and requests your comments and/or concurrence within 30 days. Please let us know if you have any additional information regarding the project area and whether or not you wish to be included in ongoing consultation for the project and/or as a consulting party on the MOA for the project. Should you

have any questions or need additional information regarding this undertaking, please contact me at 518-396-3842 or via email at Shauna.Haas1@fema.dhs.gov. If practicable, I would appreciate an electronic copy of the concurrence letter be emailed to my attention to expedite the grant review process.

Sincerely,

Shauna J. Haas
Historic Preservation Specialist

Additional cc: Onondaga Nation
Seneca Nation of Indians
New York State Office of Parks, Recreation, and Historic Preservation (SHPO)
New York State Division of Homeland Security and Emergency Services

Enclosures:
Figure 1 Project Location Map
Data Recovery Plan
Cultural Resource Management Reports (CD)

Haas, Shauna

From: Crissy Murphy <crissy.murphy@verizon.net>
Sent: Friday, February 20, 2015 10:07 AM
To: Haas, Shauna; timtwoguns@verizon.net
Subject: RE: FEMA - Owego Apalachin Maintenance and Storage Building

Hi Shauna,
We do not have any comments on the DRP, and do not wish to be party to the MOA. Would you please continue to send updates as the project progresses?

Thank you!

From: Haas, Shauna [mailto:shauna.haas1@fema.dhs.gov]
Sent: Thursday, February 19, 2015 10:48 AM
To: timtwoguns@verizon.net; crissy.murphy@verizon.net
Subject: FEMA - Owego Apalachin Maintenance and Storage Building

Good morning,
I am writing to follow up on a letter that was mailed to you last month regarding the FEMA-funded Owego Apalachin Maintenance and Storage Building project. I have attached the letter for your reference.

First of all I am interested if you had any comments on the DRP that was included in the package. Also, would the Cayuga Nation of New York like to be included in the project as it moves forward? We can keep you updated as the project progresses and provide copies of reports. Please let us know if you wish to have a representative monitor, or if you would like to be a party to the MOA that will be developed shortly to mitigate the adverse effects of the project.

Feel free to email a response, or I can be reached at either number below if you have any further comments or questions.

Thank you,

Shauna J Haas
Historic Preservation Specialist
shauna.haas1@fema.dhs.gov
desk (732)866-2839 BB (518)859-9010
Department of Homeland Security FEMA
NWS Earle, Bldg. C-54
201 Route 34 South
Colts Neck, NJ 07722

From: Haas, Shauna
To: "ononationhispres@aol.com"
Cc: Bolognino, Donna
Subject: FEMA Owego Apalachin Maintenance Facility Project
Date: Tuesday, February 24, 2015 4:27:00 PM
Attachments: THPO Consult_Onondaga.pdf

Mr Gonyea,

I would like to follow up on our phone conversation last week and confirm that we discussed the following points regarding the Owego Apalachin Central School District Maintenance and Storage Facility Construction project:

- You had no further comment on the Draft Recovery Plan, but would like to continue to participate in the project going forward.
- You would like to monitor during the archeology survey
- You would like to be a consulting party to the Memorandum of Agreement

Please correct me on any points I misunderstood or add to anything I may have missed. I have attached the original consultation letter for your reference. We will be following up shortly with additional information and to schedule a discussion regarding the Memorandum of Agreement.

Thank you,

Shauna J Haas
Historic Preservation Specialist
shauna.haas1@fema.dhs.gov
desk (732)866-2839 BB (518)859-9010
Department of Homeland Security FEMA
NWS Earle, Bldg. C-54
201 Route 34 South
Colts Neck, NJ 07722

From: Thane Joyal
To: Bolognino, Donna
Subject: Re: FEMA-DR- 4031 Owego Maintenance Building MOA
Date: Thursday, May 28, 2015 1:14:07 PM

Hi, Donna--Thank you for your telephone message about this. I spoke to Tony today about this; I'd suggest a small revision, Tony still does want to see a monitor at the site, but the Nation does not typically become a party to agreements like this MOA, and this document should just reflect that the Nation does not wish to be a party to the MOA. Please don't hesitate to contact me if you have any questions--you can reach me on my cell phone today at (315)380-4522.
Sincerely,
-Thane

On Wed, May 13, 2015 at 2:48 PM, Bolognino, Donna <Donna.Bolognino@fema.dhs.gov> wrote:

> Good afternoon,
>
> Attached please find the draft MOA and attachments for this project. I request you review and provide any comments back to me by return e-mail, in track changes within the next two weeks, 5/27/15 or sooner.
>
> If you have any questions regarding the project or the MOA please contact me at your earliest convenience. With everyone's continued cooperation we can continue to progress this project.
>
> Regards,
>
> Donna Bolognino
>
> Recovery EHP Coordinator
>
> Donna.Bolognino@fema.dhs.gov
>
> desk (518)396-3843 BB (518)795-5318
>
> Department of Homeland Security FEMA
>
> Leo O'Brien Federal Building
>
> 11 A Clinton Avenue Suite 742
>
> Albany, NY 12207

--
Thane Joyal, Esq.
512 Jamesville Avenue
Syracuse, NY 13210

Office: (315)475-2559
Cell: (315)380-4522
Fax: (315)475-2465

Haas, Shauna

From: Jay Toth <jay.toth@sni.org>
Sent: Wednesday, January 21, 2015 2:23 PM
To: Haas, Shauna
Cc: Scott Abrams
Subject: RE: FEMA DR 4031 PW 1999 and 2001 - Consult for Owego Maintenance and Storage Facility

Follow Up Flag: Follow up
Flag Status: Flagged

Shauna,

Anytime there is a Phase 3/data recovery regarding native sites, we wish to participate in the MOA.

Please share SHPO comments when you rec. them.

Thanks
JAY

From: Haas, Shauna [mailto:shauna.haas1@fema.dhs.gov]
Sent: Wednesday, January 21, 2015 2:16 PM
To: Jay Toth
Subject: RE: FEMA DR 4031 PW 1999 and 2001 - Consult for Owego Maintenance and Storage Facility

Thank you, I have updated our files and corrected the hard copy letter regarding the president.

We are initiating consultation with the SHPO concurrently on this project; the previous studies were not conducted under our agency and I do not have SHPO comments on them.

To clarify, we have found that the project will result in Adverse Effects and will be preparing an MOA and implementing a Phase III Data Recovery Plan. Please let me know if the Seneca Nation wishes to continue to be involved in the project moving forward, and/or as a consulting party to the Memorandum of Agreement. An Environmental Assessment is also being prepared for this project, if you wish to continue to be notified of actions related to this project.

Much appreciated,
Shauna

From: Jay Toth [mailto:jay.toth@sni.org]
Sent: Wednesday, January 21, 2015 1:44 PM
To: Haas, Shauna
Subject: RE: FEMA DR 4031 PW 1999 and 2001 - Consult for Owego Maintenance and Storage Facility

In the future, Please forward the SHPO comments on these projects.

*FYI- the new SNI president is Maurice John.

Thanks

JAY toth, MA, MS

Seneca Nation
Tribal Archeologist
90 OHI:YO WAY
Salamanca,NY 14779

(716)-945-1790
Ext. 3582

From: Haas, Shauna [mailto:shauna.haas1@fema.dhs.gov]
Sent: Wednesday, January 21, 2015 1:30 PM
To: Jay Toth
Subject: FEMA DR 4031 PW 1999 and 2001 - Consult for Owego Maintenance and Storage Facility

Mr Toth,

Attached please find the consultation letter for a project involving the replacement of the maintenance and storage facility of the Owego Apalachin Central School District in the Town of Owego, Tioga County, New York. A hard copy is also being mailed to President Barry Snyder today.

Please feel free to contact me if you have any questions.

Best,

Shauna J Haas
Historic Preservation Specialist
shauna.haas1@fema.dhs.gov
desk (732)866-2839 BB (518)859-9010
Department of Homeland Security FEMA
NWS Earle, Bldg. C-54
201 Route 34 South
Colts Neck, NJ 07722

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www.sni.org

U.S. Department of Homeland Security
Federal Emergency Management Agency Region II
Leo O'Brien Federal Building
11 A Clinton Avenue, Suite 742
Albany, NY 12207

February 2, 2015

-- Electronic transmission only

Re: Owego Apalachin Central School District
Maintenance and Storage Facility Replacement Project
Village of Owego, Tioga County, New York
FEMA-4031-DR-NY
Interested Party Review Request

Dear ,

The Owego Apalachin Central School District (Subgrantee) has made application through the NYS Division of Homeland Security and Emergency Services (DHSES; Grantee) to the Department of Homeland Security - Federal Emergency Management Agency (FEMA) under its Public Assistance (PA) Program for the demolition of damaged buildings and construction of a new maintenance and storage facility at a new location, known as the Monkey Run Site, in the Town of Owego, Tioga County, New York. The previous maintenance and storage facility, located at 75 Elm Street in the Village of Owego, sustained damages associated with Tropical Storm Lee between September 7 and September 11, 2011, which was subsequently declared a major disaster (DR-4031-NY) on September 13, 2011 (amended September 23, 2011). In accordance with Section 106 of the National Historic Preservation Act, FEMA and the NYS Office of Parks, Recreation & Historic Preservation (SHPO) have determined that the construction of a new facility at the proposed site will result in Adverse Effects to Historic Properties.

We hereby notify you of our findings, and invite your participation as an interested party to comment. The following information describes the project in more detail. We request in particular that you review the section labeled *Avoidance/ Mitigation of Adverse Effects* and provide us any comment you may have on the mitigation measures we are proposing to address the adverse effects.

Description of Undertaking
FEMA PA will contribute funding to construct a new approximately 25,195 square foot maintenance and storage facility, including associated parking, access and utilities, on the northernmost property of the Owego School Complex within the Town of Owego. The property, often referred to as the Monkey Run Site, currently contains several athletic fields associated with the Owego Apalachin Middle School and the Owego Free Academy. The proposed site (area of disturbance) is approximately 3.72 acres located north of Sheldon Guile Boulevard and

is located outside of the 100-year floodplain and mostly outside of the 500-year floodplain. The Subgrantee will either demolish or render safe and secure the previous facility.

Impact of the Undertaking on Historic Resources

The Monkey Run Site contains no structures of 50 years or more in age. However, the property is mapped within an archaeological sensitive area according to online SHPO mapping tools. The property was previously surveyed as a part of proposed school district projects. In 2000, the Subgrantee contracted the Public Archaeology Facility (PAF) to conduct a Phase 1 Archaeological Survey of the Monkey Run Property. A prehistoric site, the Owego Free Academy Site (SUBi-2089) was identified at that time within the current project area of disturbance and a Phase 2/3 data recovery recommended if the site could not be avoided. The site contains a high density of prehistoric cultural material identified on the surface and below the ground surface, with diagnostic artifacts recovered from the plow zone that date from the Archaic, Transitional, and Late Archaic/Early Woodland periods. The School District determined at that time that the site could be avoided and no further work was pursued on this property. However, the Monkey Run Site has since been determined to be the preferred location of the new maintenance and storage facility. A Data Recovery Plan has been drafted that outlines the proposed field, analysis and reporting methods.

Avoidance and Mitigation Measures

The Subgrantee considered and evaluated eight alternative sites for their feasibility to construct a new, consolidated maintenance and storage facility that would combine the use and function of the two older buildings. The Monkey Run Site was chosen as the preferred location as it is already owned by the Subgrantee and met other site requirements, such as being of adequate size, outside of the floodplain, and in the vicinity of the Subgrantee's other facilities. The No Action alternative would not meet the project purpose and need.

As the proposed project cannot avoid the archaeological site, the construction of the new facility will result in adverse effects to the Owego Free Academy Site. A Data Recovery Plan has been drafted, outlining the proposed field, analysis and reporting methods that will be implemented prior to project initiation. The goal of the Data Recovery methodology is to thoroughly sample the APE within the site limits and retrieve a representative sample of artifacts and features from the site area so that the research topics presented can be addressed. All artifacts, notes and other documentation of the data recovery will be curated according to federal (36 CFR Part 79) and state guidelines (NYAC 1994) in the facilities of the Department of Anthropology at Binghamton University. After excavations and analyses are complete, appropriate potential public outreach projects will be undertaken. Public outreach could include for example, a pamphlet for local schools, an addition of the site results to PAF's web page, and/or a small exhibit for schools and local historical societies. Once the outreach potential of the data is known, a final decision will be made as to the most effective presentation and the target audience for that presentation. The next step in the process will be development of a Memorandum of Agreement between FEMA, SHPO, NYS DHSES, and the Owego Apalachin Central School District detailing the terms of the measures to mitigate adverse effects.

Please let me know if you have any comments on the project or additional information regarding the project area. We request that you send any comments or requests for additional information

within fifteen (15) calendar days of receipt of this letter. Should you have any questions, please contact me at 732-866-2839 or by e-mail at shauna.haas1@fema.dhs.gov.

Sincerely,

Shauna J. Haas
Historic Preservation Specialist

Enclosures: *Figure 1Project Location Map*

Cc: New York State Office of Parks, Recreation, and Historic Preservation (NYSHPO)
New York State Division of Homeland Security and Emergency Services (NYSDHSES)

From:	David Chamberlain
To:	Haas, Shauna
Subject:	Re: Request for comment on FEMA funded project in Town of Owego
Date:	Wednesday, February 04, 2015 04:53:56

Big Horn Lenape Nation
57 Decker Hill Rd.
Owego, NY 13827
In the time of the Deep Snow Moon/ Feb.4, 2015
Hay Shauna!

Thank you for the information and request of comment on the Monkey Run Site at the Owego School area. We have talked to Dr. Nina Versaggi about this, and everything seems to be going well. At least no burials were to be found, as this is our main concern. Everything being done meets with our acceptance. If any thing of importance should come up, please let us know. Again, we thank you.

Wawoolamulsee! Hitakonanoolaxk/Big Horn Lenape Nation

On Monday, February 2, 2015 3:32 PM, "Haas, Shauna" <shauna.haas1@fema.dhs.gov> wrote:

Attention: Hitakonanoolaxk, Tree Beard, Medicine Chief, Big Horn Lenape People

Good Afternoon,

This is a request to comment on the effects on historic resources and proposed mitigation activities associated with a FEMA funded project in the Town of Owego, Tioga County, NY. The undertaking includes the construction of a new maintenance and storage facility for the Owego-Apalachin Central School District as detailed in the attachment. Please do not hesitate to contact me if you have any questions.

I look forward from hearing from you,

Shauna J Haas
Historic Preservation Specialist
shauna.haas1@fema.dhs.gov
desk (732)866-2839 BB (518)859-9010
Department of Homeland Security FEMA
NWS Earle, Bldg. C-54
201 Route 34 South
Colts Neck, NJ 07722

Haas, Shauna

From: Mark Trabucco <mark.trabucco@gmail.com>
Sent: Wednesday, February 25, 2015 11:10 AM
To: Haas, Shauna
Subject: Re: Request for comment on FEMA funded project in Town of Owego

Hi Shauna,
Thank you for your consideration. As this project does not concern architecture, and we have confidence that the University is competent, it is not necessary that we be in the loop.
We may find we have more of a stake in the administration building project, however.
Thank you again for your attention.
Mark

> On Feb 19, 2015, at 10:23 AM, Haas, Shauna <shauna.haas1@fema.dhs.gov> wrote:
>
> Hi Mark,
> To follow up on our earlier phone conversation, I wanted to confirm that any concerns you or the OHPC had with this project have been addressed. Please let me know if you wish to be involved further in the project, such as to receive notifications of significant findings, public involvement, etc. or if the OHPC has no further comment.
> Thank you,
> Shauna
>
> ---
>
> **From:** Haas, Shauna
> **Sent:** Monday, February 02, 2015 3:28 PM
> **To:** 'owegohistoric@hotmail.com'; 'mark.trabucco@gmail.com'
> **Subject:** Request for comment on FEMA funded project in Town of Owego
>
> Attention: Mark Trabucco, Chairman, Owego Historical Preservation Commission
>
> Good Afternoon,
>
> This is a request to comment on the effects on historic resources and proposed mitigation activities associated with a FEMA funded project in the Town of Owego, Tioga County, NY. The undertaking includes the construction of a new maintenance and storage facility for the Owego-Apalachin Central School District as detailed in the attachment. Please do not hesitate to contact me if you have any questions.
>
> I look forward from hearing from you,
>
> *Shauna J Haas*
> Historic Preservation Specialist
> shauna.haas1@fema.dhs.gov
> desk (732)866-2839 BB (518)859-9010
> Department of Homeland Security FEMA
> NWS Earle, Bldg. C-54
> 201 Route 34 South
> Colts Neck, NJ 07722

Haas, Shauna

From: Haas, Shauna
Sent: Thursday, February 26, 2015 10:50 AM
To: 'Sedore, Emma'
Subject: RE: Request for comment on FEMA funded project in Town of Owego
Attachments: Figure_Site Plan and FP.pdf

I apologize, realize I left off the attachment I referred to.

From: Haas, Shauna
Sent: Wednesday, February 25, 2015 4:36 PM
To: 'Sedore, Emma'
Subject: RE: Request for comment on FEMA funded project in Town of Owego

Good afternoon,

In response to your inquiry, see below. Please let me know if you have any further questions or comments.

- How much of the 3.72 acres are still in the floodplain, since it is found that they are "mostly" outside? I do not currently have a specific number for this, and plans are still being developed. However, I have included a figure that shows the current general layout and approximate floodplain boundaries. Only a small portion of the parking lot will be within the 500-year floodplain. The building will be completely out of the 100- and 500-year floodplains.

- What significant artifacts have been found? To date, a Phase 1 archeological survey has been conducted, which identified the site as being intact and having potential to yield significant information. During the earlier surveys, approximately 250 artifacts were discovered, the majority of which were chipped stone artifacts, with some rough stone artifacts and fire-cracked rock. The nature of the artifacts, materials used, and diagnostic points indicated that the site has potential to lend more information on the role of the site within the prehistoric settlement and subsistence system of the Upper Susquehanna.

- Does it make a difference if the artifacts are common arrowheads or if they were larger to determine if the site can or cannot be disturbed for buildings and heavy activity? Alternatives to construction on the site have been considered by the OACSD before coming to the conclusion that the site cannot be avoided. The type of artifacts, among other factors, was taken into consideration during the Phase 1 survey as to whether or not there was indeed a site on the property and whether or not that site is potentially significant and/or must be preserved. This site was not found to be significant for preserving in situ, but data recovery could provide additional information. We are also consulting with tribes with an interest in the area and none have raised concerns regarding data recovery on this site, although a Tribal monitor will be present for field activities.

- How long would it take for the Anthropology Dept. to complete the search? Field survey is currently estimated at 8-10 weeks. The End of Field letter will be submitted two weeks after the completion of field work, and the final report will be submitted within a year of the acceptance of the End of Field Letter.

- Would the Tioga County Historical Society become the owners of the artifacts? Artifacts generally belong to the property owner, although it is common for tribes or local museums and collections to request to curate the artifacts collected on a site. The current proposal being pursued is for the artifacts to be curated by PAF, the archeologists, and to be curated according to federal (36CFR Part 79) and state guidelines (NYAC 1994) in the

facilities of the Department of Anthropology at Binghamton University, who maintains a professional collections curation facility.

- If important artifacts are found, would the site remain as athletic fields? Our consultation does not mandate a specific outcome. At this time data recovery prior to construction on the site is the direction in which we are moving, although the mitigation activities are still under discussion and we have protocol in place for unanticipated discoveries. Section 106 is a process, and does not stop a project from moving forward but rather involves the consulting parties in seeking, discussing, and considering views about how project effects on historic properties should be handled.

Thank you for your participation in this project.
Best,
Shauna

From: Sedore, Emma [mailto:SedoreE@co.tioga.ny.us]
Sent: Thursday, February 19, 2015 11:04 AM
To: Haas, Shauna
Subject: RE: Request for comment on FEMA funded project in Town of Owego

Good Morning Shauna:

I have read the attached request and have the following questions:

- How much of the 3.72 acres are still in the floodplain, since it is found that they are "mostly" outside?
- What significant artifacts have been found?
- Does it make a difference if the artifacts are common arrowheads or if they were larger to determine if the site can or cannot be disturbed for buildings and heavy activity?
- How long would it take for the Anthropology Dept. to complete the search?
- Would the Tioga County Historical Society become the owners of the artifacts?
- If important artifacts are found, would the site remain as athletic fields?

Thank you,
Emma Sedore
Tioga County Historian

From: Haas, Shauna [mailto:shauna.haas1@fema.dhs.gov]
Sent: Thursday, February 19, 2015 9:34 AM
To: Sedore, Emma
Subject: RE: Request for comment on FEMA funded project in Town of Owego

Good morning,
As it has been more than two weeks since I sent this letter, I wanted to follow up to see if you had any questions or comments on the project. An email response would be great, or feel free to call me at either of the numbers listed below.
Best,
Shauna

From: Haas, Shauna
Sent: Monday, February 02, 2015 3:29 PM
To: 'sedoree@co.tioga.ny.us'
Subject: Request for comment on FEMA funded project in Town of Owego

Attention: Emma Sedore, Tioga County Historian

Good Afternoon,

This is a request to comment on the effects on historic resources and proposed mitigation activities associated with a FEMA funded project in the Town of Owego, Tioga County, NY. The undertaking includes the construction of a new maintenance and storage facility for the Owego-Apalachin Central School District as detailed in the attachment. Please do not hesitate to contact me if you have any questions.

I look forward from hearing from you,

Shauna J Haas
Historic Preservation Specialist
shauna.haas1@fema.dhs.gov
desk (732)866-2839 BB (518)859-9010
Department of Homeland Security FEMA
NWS Earle, Bldg. C-54
201 Route 34 South
Colts Neck, NJ 07722

U.S. Department of Homeland Security
Federal Emergency Management Agency
FEMA Region II
26 Federal Plaza, 13th Floor
New York, NY 10278

FEMA

April 1, 2015

Reid Nelson
Director, Office of Federal Agency Programs
Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington DC 20001-2637

Attention: Jaime Loichinger

Re: FEMA-4031-DR-NY
Project # PA-02-NY-4031-01999 and 02001
Owego Apalachin Central School District
Maintenance and Storage Facility Replacement Project
Town of Owego, Tioga County, New York
Adverse Effect Notification

Dear Mr. Nelson:

FEMA has received an application from the New York State Division of Homeland Security and Emergency Services (DHSES) as Grantee and the Owego Apalachin Central School District (OACSD) as Subgrantee for the construction of a replacement maintenance and storage facility in the Town of Owego, Tioga County, New York, using funding made available to the State of New York under FEMA's Public Assistance (PA) Program. The Sandy Recovery Improvement Act of 2013 amended the Stafford Act to authorize alternative procedures for FEMA's PA Program (Section 428). A pilot program using these procedures is being implemented in New York. Applicants may request funding for permanent work based on an estimate for repair, restoration, reconstruction or replacement of a public facility damaged in a disaster. The purpose of the pilot program is to increase flexibility for grant applicants, reduce costs for the PA Program, expedite assistance to eligible applicants, and provide financial incentives for timely, cost-effective completion of recovery projects. This project would take advantage of this pilot program and funding would be provided through the Section 428 program and applied to the Subgrantee's preferred alternative.

The existing maintenance and storage facilities at 75 Elm Street in the Village of Owego received flood damage as a result of Tropical Storm Lee, which impacted the region between September 7, 2011 and September 11, 2011 and was subsequently declared a major disaster (DR-4031-NY). The proposed location of the new maintenance and storage facility, commonly referred to as the Monkey Run Site, includes a previously identified prehistoric archeological

site: the Owego Free Academy Site (SUBi-2089). As the site cannot be avoided, FEMA and the NYS Office of Parks, Recreation and Historic Preservation (SHPO) have concurred that the undertaking will result in Adverse Effects to Historic Properties. FEMA's correspondence to SHPO is dated January 21, 2015 and SHPO's response concurring with the finding of Adverse Effects is dated March 30, 2015 (SHPO Reference No. 13PR03584, attached).

In accordance with 36 CFR Part 800.6(a)(1) we hereby notify you of our finding of adverse effect for the undertaking at the Monkey Run Site, off of Sheldon Guile Boulevard, in the Town of Owego. Per the requirements of 36 CFR 800.11(e) we provide the following for your consideration:

Description of Undertaking
The Owego Apalachin Central School District (Subgrantee) proposes to combine and relocate maintenance and storage facilities at an alternate location outside the 100-year floodplain. The proposed alternate location is known as the Monkey Run Site, a 49.88-acre property that currently contains athletic fields associated with the Owego Apalachin Middle School and the Owego Free Academy. The property is associated with the approximately 100-acre OACSD complex that includes the Owego Apalachin Elementary School, Owego Apalachin Middle School, Owego Free Academy, a bus barn/maintenance facility and portions of the associated road network, parking lots and athletic fields. Most of the property is located within the 100-year and 500-year floodplains. The Subgrantee proposes to construct a new, approximately 25,195 square foot maintenance and storage facility at the Monkey Run Site. The facility will include associated parking, access, a retention pond, and utilities. The facility will be constructed outside of the 100-year floodplain and only a small portion of the parking area will extend into the 500-year floodplain. The area of disturbance encompasses approximately 3.72 acres and extends between 12 and 48 inches below ground for site improvements and building footers. The Subgrantee will either demolish or render safe and secure the previous facilities.

Steps taken to identify historic properties
The damaged maintenance building is less than 50 years in age. The damaged storage facility is more than 50 years old, but lacks the significance to be eligible for listing in the National Register of Historic Places. The Monkey Run Site contains no structures of 50 years or more in age. However, the property is mapped within an archaeological sensitive area according to online SHPO mapping tools. The Monkey Run Site was previously surveyed as part of proposed school district projects. In 2000, the Subgrantee contracted the Public Archaeology Facility (PAF) to conduct a Phase 1 Archaeological Survey of the Monkey Run Site. A prehistoric site, the Owego Free Academy Site (SUBi-2089) was identified at that time within the current maintenance/storage building project area of disturbance and Phase 2/3 data recovery recommended if the site could not be avoided. The OACSD determined at that time that the site could be avoided and no further work was pursued on this property. See attached cultural resources studies and SHPO correspondence with the Subgrantee. Following damages to OACSD facilities sustained during Tropical Storm Lee, the Monkey Run Site has since been determined to be the preferred location of the new maintenance and storage facility.

Description of affected historic properties
The Owego Free Academy Site contains a high density of prehistoric cultural material identified on the surface and below the ground surface, with diagnostic artifacts recovered from the plow

zone that date from the Archaic, Transitional, and Late Archaic/Early Woodland periods. Archaeologists recovered 255 artifacts from the site during initial and addendum reconnaissances from the surface and three shovel test pits (STPs). Two clusters of artifacts are present, one locus to the east and one locus to the west. No features were identified during the Phase 1 survey; however 108 pieces of fire-cracked rock were identified on the plowed surface during initial and addendum reconnaissances, strongly suggesting the presence of a hearth or hearths nearby. The site has excellent integrity and different diagnostic artifacts are present within each locus. The site has the potential to yield information and understanding of the activities associated with this site and will provide a better understanding of settlement and subsistence practices in this portion of the Susquehanna Valley. The site also has cultural and/or religious significance to the consulting Indian Nations (Onondaga Nation and Seneca Nation of Indians).

Undertaking's effects on historic properties and application of Criteria of Adverse Effects:
The Owego Free Academy Site will be adversely affected by this undertaking as portions of a significant archeological site will be destroyed for the construction of the replacement facility. Based on current plans, construction will primarily take place in an area previously identified as Locus 2, with a portion of work designated for Locus 1; both locations will require data recovery.

Avoidance and mitigation of adverse effect
The Subgrantee considered and evaluated eight alternative properties for their feasibility as locations for the construction of a new, consolidated maintenance and storage facility that would combine the use and function of the two damaged buildings. Repair of the existing facilities was also considered but would require hazard mitigation measures to protect the facilities from future flood damage and would also have to meet local floodplain requirements. The Subgrantee chose to pursue an improved project in order to consolidate the facilities ouside of the floodplain. The Monkey Run Site was chosen as the preferred location as it is already owned by the Subgrantee and met other site requirements, such as being of adequate size, outside of the floodplain, and in the vicinity of the Subgrantee's other facilities. The No Action alternative would not meet the project purpose and need. See attached executive summary from the alternatives analysis and additional documentation describing site selection process.

In addition to alternate sites, placement of the building in different positions on the property or using alternative engineering and construction methods to minimize impacts to the Owego Free Academy Site were also considered. The placement of the building was chosen due to its location outside of the floodplain and in an area that has not historically flooded. In addition, building on fill would also not be feasible due to soil characteristics and floodplain requirements that would enlarge the area of disturbance and potentially disturb even more sensitive archeological deposits. See attached documentation describing building siting process.

As the proposed project cannot avoid archaeological resources, the construction of the new facility will result in adverse effects to the Owego Free Academy Site. The next step in the process would be the development of a Memorandum of Agreement (MOA) between FEMA, SHPO, DHSES (Grantee) and the Subgrantee detailing the terms of the measures to mitigate the adverse effects. The Onondaga Nation and the Seneca Nation of Indians will be concurring parties to this MOA (Tribal consultation described in more detail below).

The Subgrantee and their consultants initiated direct SHPO consultation on the maintenance and storage facility project in 2013 with submittal of a draft Data Recovery Plan (DRP), on which comments were provided. Compliance review of the project was then put on hold while funding sources were identified until December of 2014, when a revised draft DRP was provided to SHPO and FEMA. The current DRP is dated March 2015 and has been approved by FEMA and SHPO (see attached). The DRP outlines the proposed field, analysis and reporting methods that will be implemented prior to project initiation. The goal of the Data Recovery methodology is to thoroughly sample the APE within the site limits and retrieve a representative sample of artifacts and features from the site area so that the research topics presented can be addressed. All artifacts, notes and other documentation of the data recovery will be curated according to Federal (36 CFR Part 79) and State guidelines (NYAC 1994) in the facilities of the Department of Anthropology at Binghamton University. After excavations and analyses are complete, appropriate potential public outreach projects will be undertaken. Once the outreach potential of the data is known, a final decision will be made as to the most effective presentation and the target audience for that presentation. The Tribes will be invited to participate in determining outreach efforts.

Consulting Party review

Pursuant to 36 CFR 800.6(a)(4), on October 10, 2011 by public notice published in the *NY Daily News* and the *Kingston Daily Freedom*, the general public was notified of, and invited to comment upon, projects that might adversely affect historic properties in their jurisdiction.

FEMA initiated consultation with the Onondaga Nation, the Cayuga Nation, and the Seneca Nation of Indians on January 21, 2015 with letters sent via hardcopy and email to representatives of each Tribe (see attached Tribal Consultation). The Draft DRP was included in each package. Anthony Gonyea, Faithkeeper, of the Onondaga Nation responded through a verbal request on February 19, 2015 to monitor the archeological field survey and be a party to the MOA but had no further comments on the DRP. Crissy Murphy, National Representative Assistant of the Cayuga Nation emailed on February 20, 2015 that the Nation did not have any comment on the DRP. The Cayuga Nation declined to participate further but wished to be notified of major project activities. Jay Toth, Tribal Archaeologist of the Seneca Nation of Indians, in an email dated January 21, 2015 initially requested to be a party to the MOA but had no further comment. See attached Tribal Responses. The Onondaga Nation and Seneca Nation of Indians will be concurring parties to the MOA.

Consultation has been ongoing with the two Tribes that expressed interest via email and telephone conversations. Representatives of the Seneca Nation of Indians have expressed concerns with the destruction of what they consider to be a culturally significant site and requested additional information on the site selection and consideration of alternatives, which has since been provided by the Subgrantee and is attached under the Alternatives Analysis and Supplemental Information. The Seneca Nation representatives have also verbally requested alternative mitigation measures in addition to the data recovery, including a financial commitment to conservation of other archeological sites and Tribal involvement in educational outreach activities. The Onondaga Nation has an ongoing relationship with PAF and the Subgrantee due to involvement in previous projects and will continue to be included in outreach activities as well.

FEMA also invited the Tioga County Historical Society, Owego Historical Preservation Commission (OHPC), Tioga County Historian, Town of Owego, and the Big Horn Lenape Nation, identified as potential Interested Parties, to review and comment on the undertaking and finding. Contact was made via e-mail on February 2, 2015. A representative of the Tioga County Historical Society responded with no additional comment. The Chairman of the OHPC inquired about multiple components of the project and had a thorough discussion of the project with FEMA staff. Overall, the Chairman of the OHPC felt that the project was acceptable and had no additional comment. The Tioga County Historian had specific questions about how much of the facility would remain in the floodplain, the significance of the archeological site and curation of the artifacts, as well as timing of the project. FEMA provided answers to her questions and no additional comment was made. The Town of Owego did not respond, and the Big Horn Lenape Nation found the project approach acceptable and requested to be notified of any significant finds. See attached Interested Party Correspondence.

An initial conference call with all consulting parties invited (FEMA, SHPO, Grantee, Subgrantee and their consultants, Onondaga Nation, Seneca Nation of Indians) was held on March 6, 2015 to provide project background and discuss any Section 106 concerns. As additional information was requested from the Subgrantee during this call in order to address outstanding concerns regarding alternative site analysis and consideration of cultural resources, a second call was held on March 25, 2015 with the consulting parties. During this follow up call, SHPO stated that they reviewed all the information and were satisfied that the Subgrnatee had made a good faith effort to avoid or minimize impacts to the site. A consensus among all parties was reached that adequate information had been provided regarding the avoidance and minimization measures taken, that adverse effects could not be avoided, and that we should proceed with an MOA. Mitigation concepts were discussed and agreed upon that would be investigated further during the drafting and execution of the MOA. These concepts include 1) the DRP, which will include Tribal monitoring by the Onondaga Nation and after the plow zone is stripped, a walkover for identifying features conducted by PAF and Onondaga Nation monitor (as part of the DRP), with an invitation to additional Tribal representatives of the Seneca Nation of Indians, FEMA archeological staff, PAF archeologists, and SHPO archaeological staff to participate; 2) commitment towards efforts to conserve significant archaeological sites; and 3) education and public outreach efforts.

We look forward to the Council's response within fifteen (15) days of receipt of this letter in accordance with 36 CFR 800.6(a)(1). Should you have any questions, please contact me at (212) 680-3635 or Megan.Jadrosich@fema.dhs.gov or contact Shauna Haas at 518-859-9010 or by e-mail at Shauna.Haas1@fema.dhs.gov.

Sincerely,

Megan Jadrosich

Megan Jadrosich, PMP
Regional Environmental Officer
FEMA Region II

Attachments: SHPO Consultations and Responses
Cultural Resources Studies and Data Recovery Plan
Alternatives Analysis and Supplemental Information
THPO Consultation and Responses
Interested Party Correspondence

Cc: John Ketchum, Federal Preservation Officer, FEMA

Preserving America's Heritage

April 16, 2015

Ms. Megan Jadrosich, PMP
Regional Environmental Officer
Federal Emergency Management Agency-Region II
26 Federal Plaza, 13th Floor
New York, NY 10278

Ref: *Proposed Maintenance and Storage Facility Replacement Project*
Town of Owego, Tioga County, New York
FEMA-4031-DR-NY; Project #PA-02-NY-4031-01999 and 02001

Dear Ms. Jadrosich:

The Advisory Council on Historic Preservation (ACHP) has received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and it is determined that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the New York State Historic Preservation Office (SHPO), and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA, and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with the notification of adverse effect. If you have any questions or require further assistance, please contact Ms. Jaime Loichinger at 202-517-0219 or via e-mail at jloichinger@achp.gov.

Sincerely,

LaShavio Johnson

LaShavio Johnson
Historic Preservation Technician
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION
401 F Street NW, Suite 308 • Washington, DC 20001-2637
Phone: 202-517-0200 • Fax: 202-517-6381 • achp@achp.gov • www.achp.gov

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE NEW YORK STATE HISTORIC PRESERVATION OFFICER, THE NEW YORK STATE DIVISION OF HOMELAND SECURITY AND EMERGENCY SERVICES, AND THE OWEGO APALACHIN CENTRAL SCHOOL DISTRICT
PURSUANT TO 36 CFR §800.6(c), TO ADDRESS THE ADVERSE EFFECTS OF THE UNDERTAKING TO THE OWEGO FREE ACADEMY PREHISTORIC SITE, TOWN OF OWEGO, TIOGA COUNTY, NEW YORK

WHEREAS, the Federal Emergency Management Agency (FEMA) of the U.S. Department of Homeland Security proposes to administer Federal disaster assistance under FEMA's Public Assistance (PA) Program pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §5121-5206 (Stafford Act) through the New York State Division of Homeland Security and Emergency Services (herein referred to as "NYSDHSES"/"Grantee") to the Owego Apalachin Central School District, Town and Village of Owego, Tioga County, New York, (herein referred to as "Subgrantee") for the construction of a combined maintenance and storage facility (herein referred to as the "Undertaking") to replace the existing maintenance and storage buildings that were severely damaged as a result of flooding from the Federally-declared disaster DR 4031-NY (Tropical Storm Lee); and

WHEREAS, the Sandy Recovery Improvement Act of 2013 amended the Stafford Act to authorize alternative procedures for FEMA's Public Assistance (PA) Program (pursuant to Section 428 of the Stafford Act). A pilot program is being implemented in New York for the execution of Section 428 alternative procedures projects for permanent work. Under the Pilot, applicants may request funding for permanent work based on an estimate for repair, restoration, reconstruction or replacement of a public facility damaged in a disaster. The purpose of the pilot program is to increase flexibility for grant applicants, reduce costs for the PA Program, expedite assistance to eligible applicants, and provide financial incentives for timely, cost-effective completion of recovery projects. This project would take advantage of this pilot program and funding would be provided through the Section 428 program and applied to the Subgrantee's preferred alternative, which is described above as the Undertaking; and

WHEREAS, the Area of Potential Effects (APE) consists of an approximately 3.72-acre area of disturbance that encompasses the building footprint of the facility and associated parking, access, utilities, a retention pond, and outfall pipe on a property commonly referred to as the Monkey Run Site. Located north of Sheldon Guile Boulevard, it is presently the location of baseball fields associated with the School District's existing complex and is mapped as Figure 5 in the attached Data Recovery Plan (DRP); and

WHEREAS, the Subgrantee conducted a previous Phase 1 Archeological Survey in 2000 and an Addendum Reconnaissance Survey in 2002 that identified a prehistoric archeological site within the APE, and this site, known as the Owego Free Academy Prehistoric Site (SUBi-2089; SHPO USN# 10706.000098), was determined eligible for listing in the National Register of Historic

Places by the New York State Historic Preservation Officer (SHPO) in a letter dated August 7, 2002; and

WHEREAS, FEMA has determined that the Undertaking (as defined by 54 U.S.C. §300320 and 36 CFR §800.16(y)) may have an adverse effect on the Owego Free Academy Prehistoric Site and has consulted with the SHPO (correspondence dated January 21, 2015 and March 30, 2015, reference number 13PR03584) pursuant to 36 CFR Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (54 U.S.C §306108); and

WHEREAS, FEMA, pursuant to 36 CFR §800.6(a)(1), has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination with specified documentation and of its intent to prepare a Memorandum of Agreement (MOA) to satisfy FEMA's Section 106 responsibilities, and the ACHP, pursuant to 36 CFR §800.6(a)(1)(iii), has declined, in a letter dated April 16, 2015, to participate in the resolution of the adverse effect or to become a signatory party to an MOA, and;

WHEREAS, FEMA and the SHPO will be referred to as signatories for this MOA, and;

WHEREAS, FEMA has invited the Grantee and Subgrantee who will implement the Undertaking and Stipulations to be invited signatories to the MOA; and

WHEREAS, FEMA has notified the Cayuga Nation, the Onondaga Nation, and the Seneca Nation of Indians, all of New York, (collectively referenced as "Tribal Nations") as required under 36 CFR §800.3(f)(2) and provided information regarding identified historic properties in the APE, information regarding the history and topography of the APE and the draft DRP, and afforded the Tribal Nations an opportunity to participate in the consultation; and

WHEREAS, the Cayuga Nation responded to FEMA's notification and request for participation, expressing that they had no further comments on the project and did not wish to be party to the MOA, and requested continued updates on the project; and

WHEREAS, the Onondaga Nation has expressed interest in the project and has requested a Tribal field monitor be present during archeological field work but has declined the opportunity to be a party to the MOA; and

WHEREAS, the Seneca Nation of Indians has expressed interest in the project and has requested to be a party to the MOA; and

WHEREAS, FEMA invited the Seneca Nation of Indians to be a concurring party to the MOA and to participate in site visits during the data recovery and implementation of mitigation measures; and

WHEREAS, FEMA, in letters dated February 2, 2015, which were also delivered by email on that date, notified the Tioga County Historical Society, Owego Historical Preservation Commission (OHPC), Tioga County Historian, Town of Owego, and the Big Horn Lenape Nation (not federally recognized) of the Undertaking and invited comment on this project; and

WHEREAS, a representative of the Tioga County Historical Society responded with no additional comment. The Chairman of the OHPC inquired about multiple components of the project and had a thorough discussion of the project with FEMA Environmental Planning and Historic Preservation staff. Overall, the Chairman of the OHPC indicated that the project was acceptable and had no additional comment; and

WHEREAS, the Tioga County Historian had specific questions about how much of the facility would remain in the floodplain, the significance of the archeological site and curation of the artifacts, as well as timing of the project; and FEMA provided answers to her questions and no additional comment was made; and

WHEREAS, the Town of Owego did not respond, and the Big Horn Lenape Nation determined that the project approach was acceptable and requested to be notified of any significant finds; and

WHEREAS, to the best of their knowledge, FEMA and SHPO have determined that the archeological site does not possess special significance to any other ethnic group or community that historically ascribes cultural or symbolic value to the site and would object to the excavation of the site's contents; and

WHEREAS, as required by the National Flood Insurance Program (NFIP) new construction must be protected to, at, or above the 100-year floodplain Base Flood Elevation (BFE); and in accordance with state/local regulations, new construction must be protected to or above the BFE plus two feet; therefore the Subgrantee proposes to construct the new maintenance and storage facility on the limited area of the 49.9-acre Monkey Run parcel that is located outside of the 100-year floodplain and predominantly outside of the 500-year floodplain;

WHEREAS, an analysis of alternate locations to the Monkey Run site and alternate methods of construction in order to avoid or minimize adverse effects to historic properties as required by 36 CFR §800.6 was also considered by the consulting parties, and it was determined the prehistoric archeological site cannot be avoided and preserved in place in its entirety, and the SHPO concurred that the applicant made a reasonable and good faith effort to avoid or reduce adverse effects to the Owego Free Academy Prehistoric Site given the need to find a level site outside of the floodplain; and

WHEREAS, surveys suggest that the Owego Free Academy Prehistoric Site, located within the APE, is a single-task field camp site, which is defined as relatively high-density, short duration small site with a mostly bifacial tool kit, and this type of site has an unlikely probability of finding human remains or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001); and

WHEREAS, the Owego Free Academy Prehistoric Site is eligible for listing in the NRHP under Criterion D and is significant and of value chiefly for the information on pre-history that it is likely to yield through archeological, historical and scientific methods of recovery through archeological excavation, and FEMA, SHPO, Grantee and Subgrantee agree that it is in the

public interest to expend funds to implement the DRP attached as Appendix A to mitigate the adverse effects of this Undertaking; and

WHEREAS, the Owego Free Academy Prehistoric Site is valued by the consulting Tribal Nations as a place of religious and cultural significance and that archeological data recovery alone does not adequately compensate for the physical destruction of this culturally significant site, and alternative mitigation measures will be pursued including educational outreach that will include the Tribal Nations and preservation of alternate off-site archeological sites, also referred to as archeological mitigation banking; and

WHEREAS, all reference to the time periods in this MOA are in calendar days and notices and other written communication may be submitted by e-mail; and

NOW, THEREFORE, FEMA, SHPO, the Grantee and the Subgrantee agree that the Undertaking will be implemented in accordance with the following stipulations in order to mitigate the effect of the Undertaking on historic properties.

STIPULATIONS

To the extent of their legal authority, FEMA and SHPO as signatories, the Grantee and Subgrantee as invited signatories and the Seneca Nation of Indians as concurring party will ensure that the following measures are carried out:

I. Treatment Measures

A. Archeological Testing and Monitoring

1. It is the responsibility of the Subgrantee to implement the attached DRP, dated June 4, 2015 that has been developed in consultation with the SHPO. The DRP will be implemented under the direct supervision of a person, or persons meeting, at a minimum, the Secretary of the Interior's Professional Standards in Archeology (48 FR 44738-44739) as determined by SHPO.

2. Prior to field activities, the Subgrantee will coordinate with local law enforcement to provide advance notice of project work and information regarding confidentiality requirements for archeological sites and in the unlikely event of post-review discovery of human remains, the necessity to assess remains *in situ* to determine cultural affiliation prior to possible removal or other disturbance. See Stipulation IV and Appendix B for further information regarding the protocol for post-review discoveries.

3. The schedule of archeological testing and monitoring will adhere to that described in the attached DRP. A tribal member from the Onondaga Nation will monitor all ground disturbance activities as described in the DRP. In addition, volunteer site visits will be coordinated through the archeological firm conducting the excavations to include the Onondaga Nation, Seneca Nation of Indians, FEMA

archeological staff and SHPO to allow for investigation of potential burials and/or features following the stripping of the plow zone.

II. Monitoring and Reporting

A. The Subgrantee is responsible for coordinating bi-weekly conference calls with the Grantee and FEMA to discuss progress and will ensure that all parties to the agreement including the SHPO and Seneca Nation of Indians are kept informed of the status of the implementation of the treatment measures.

1. General Schedule will be as follows:

a. Two weeks after completion of archeological fieldwork, an End of Field Letter will be generated and provided to FEMA. Upon approval, FEMA will disseminate the report and their findings to SHPO, the Onondaga Nation, Cayuga Nation, Seneca Nation of Indians and the Grantee. SHPO will complete its reviews within 14 days.

b. When SHPO agrees that the work is completed and covers all aspects of the DRP, they will prepare and distribute a Concurrence Letter to FEMA who will share with the Tribal Nations and the Grantee who in turn will provide the letter to the Subgrantee.

c. Within one year of the concurrence of the End of Field Letter, a Final Report will be submitted to FEMA. Upon approval, FEMA will disseminate the report and their findings to the Grantee, SHPO and the Tribal Nations for their files. The completed community outreach plan(s) (see page 14 of the attached DRP) will include educational components to continue the Subgrantee's ongoing educational commitment with Tribal Nation inclusion and will be included as part of the Final Report.

d. The Final Report will adhere to the professional standards and to the *Department of Interior's Format Standards for Final Reports of Data Recovery Programs* (42 FR 477-70) and well as New York State Parks Recreation and Historic Preservation (NYSOPRHP) Standards (1994 and 2005) and New York Archaeological Council's (NYAC) *Cultural Resource Standards Handbook* (2000).

III. Archeological Preservation Funding or Archeological Mitigation Banking

A. The Subgrantee will make a contribution of $2,000 to a nonprofit archeological preservation fund, to be administered and distributed by The Archaeological Conservancy, to be utilized for acquisition, management, conservation, interpretation and preservation of archeological sites in New York State. The express purpose of the contribution is to foster and support the preservation of archeological sites and

education regarding the regional Native American Indian history to compensate for the impacts to the Owego Free Academy Prehistoric Site.

B. Archeological sites will be selected for use of Archeological Preservation Funding or Archeological Mitigation Banking for the acquisition, management, conservation, interpretation and preservation of archeological sites based on existing acquisition criteria and management plans currently employed by The Archaeological Conservancy, and in consultation with the Tribal Nations. The Archaeological Conservancy will notify FEMA once a site or sites have been chosen for the distribution of this funding; FEMA will then disseminate this information to all parties.

C. The contribution will be made by the Subgrantee directly to The Archaeological Conservancy within 30 days of the signatories signing and executing this MOA. Evidence of the donation should be provided to FEMA and the Grantee. FEMA will then notify the SHPO and Tribal Nations.

IV. Post-Review Discoveries

A. Should a previously unidentified archeological site be discovered, or if there are any unanticipated effects during implementation of the project, the Subgrantee's contractor shall immediately cease construction activities in the vicinity of the project area. Personnel should take all reasonable measures to avoid or minimize harm to the archeological find(s) and/or avoid or minimize further unanticipated effects. The person or persons encountering such properties or effects shall immediately notify the Subgrantee (if applicable), SHPO at 518-237-8643, FEMA Environmental/Historic Preservation at 518-396-3843, and the Grantee at 518-292-2370. If the discovery does not appear to include human remains or other indications of human interment, the Subgrantee will produce digital photographs, which can be transmitted electronically, and which will be sent to the Grantee, FEMA and SHPO under their direction. These photos are for use by the agencies only for identification purposes and will not be duplicated or shared. FEMA and SHPO will then make a determination whether the discovery warrants additional examination and will determine how to proceed in accordance with 36 CFR §800.13, Post-review Discoveries.

B. Should human remains, or what is suspected to be human remains, be discovered during the course of project implementation, the Subgrantee's contractor shall immediately stop construction activities in the vicinity of the discovery, secure the location and protect the discovery from damage and disturbance. Local law enforcement and the county coroner/medical examiner shall be immediately notified in addition to FEMA, SHPO, the Grantee and Subgrantee. Procedures will be followed as outlined in Appendix B (attached). FEMA will immediately notify the Onondaga Nation, Cayuga Nation and Seneca Nation of Indians of the discovery if they have not been previously notified by being on site during the discovery. The signatories and invited signatories will consult to determine the appropriate course of action from that point forward in accordance with the requirements of 36 CFR

§800.13(b)(3); federal, tribal, state and local laws, including the Haudenosaunee policy on the discovery of human remains (Appendix C).

V. Anticipatory Actions

In accordance with Section 110(k) of the NHPA and 54 U.S.C. §306113, FEMA shall not grant assistance to a subgrantee who, with intent to avoid the requirements of this Agreement or Section 106 of the NHPA, has intentionally significantly and adversely affected a historic property to which the assistance would relate, or having legal power to prevent it, allowed an adverse effect to occur. However, FEMA may, after consultation with the ACHP pursuant to 36 CFR §800.9(c), determine that circumstances justify granting such assistance despite the adverse effect created or permitted by the subgrantee.

VI. Duration of Agreement and Amendments

A. Unless amended or terminated in accordance with Stipulations VI.C and VIII, this MOA will remain in effect for three years from the date that is has been executed by all signatories or until FEMA determines that it has been satisfactorily fulfilled. The Subgrantee will notify the Grantee and FEMA when the Undertaking is completed, and FEMA will notify the signatories, invited signatories and concurring party by e-mail when it determines that the measures in Stipulations I, II and III are completed and opportunities for discoveries or unexpected events described in Stipulation IV are unlikely, thereby fulfilling the terms of this MOA.

B. This agreement will be null and void if its terms are not carried out within the three year duration. Prior to such time, FEMA may consult with the signatories to reconsider the terms of the agreement and amend the MOA.

C. Any signatory or invited signatory to this MOA may propose to FEMA that the MOA be amended. This MOA may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date that it is signed by all signatories.

VII. Dispute Resolution and Public Objection

A. Should any signatory or concurring party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, FEMA shall consult with such party to resolve the objection. If FEMA determines that the dispute cannot be resolved, FEMA will:

1. Forward all documentation relevant to the dispute, including FEMA's proposed resolution of the dispute to the ACHP in accordance with 36CFR§800.11(e). The ACHP shall provide FEMA with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FEMA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the

ACHP, signatories and concurring parties, and provide them with a copy of this written response. FEMA will then proceed according to its final decision.

2. If ACHP does not provide advice regarding the dispute within the thirty (30) day time period, FEMA shall make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, FEMA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories to the MOA, and provide them and the ACHP with a copy of such written response. FEMA will then proceed according to its final decision.

B. Any recommendation or comment provided by the ACHP will be understood to pertain only to the subject of the dispute, and the responsibilities of the signatories to this agreement to fulfill all actions that are not subject of the dispute will remain unchanged.

C. At any time while the MOA is in effect, should a member of the public object in writing to the MOA, its implementation or related documentation, FEMA shall take the objection into account, notify the Grantee, Subgrantee and SHPO, and consult as needed with the objecting party and appropriate consulting parties prior to resolution of the objection. FEMA may request that the ACHP participate in the consultation to resolve the public objection. The Subgrantee is not required to cease work on activities unrelated to the objection while the objection is being reviewed and resolved.

VIII. Termination and Non-Compliance

A. If any signatory to this MOA determines that its terms will not or cannot be carried out, that party will immediately consult with the other parties to attempt to develop an amendment in accordance with Stipulation VI.C above.

B. If within thirty (30) days an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

C. Once the MOA is terminated, and prior to work continuing on the Undertaking, FEMA must either a) execute a new MOA with the signatories and invited signatories of this agreement or b) pursuant to the provision of 36 CFR §800.7, request, take into account, and respond to the comments of the ACHP. FEMA will notify the signatories and invited signatories as to the course of action it will pursue.

IX. Execution and Implementation of the MOA

A. This MOA will be executed in counterpart with a separate signatory page to be signed by each party.

B. FEMA will provide each signatory and the ACHP with a signed original of this MOA. The MOA will become effective upon signature of all signatory parties and a copy will be filed with the ACHP pursuant to 800.6(b)(1)(iv).

C. Execution and implementation of this MOA evidences that FEMA has taken into account the effects of the Undertaking on historic properties, has afforded the ACHP a reasonable opportunity to comment on the Undertaking and its effects on historic properties, and that FEMA has satisfied its Section 106 responsibilities for all aspects of the Undertaking**.**

D. Execution and implementation of this MOA also evidences that the Grantee and SHPO have fulfilled their responsibility to consider historic resource impacts as mandated by Section 14.09 of the New York State Parks, Recreation, and Historic Preservation Law.

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE NEW YORK STATE HISTORIC PRESERVATION OFFICER, THE NEW YORK STATE DIVISION OF HOMELAND SECURITY AND EMERGENCY SERVICES, AND THE OWEGO APALACHIN CENTRAL SCHOOL DISTRICT
PURSUANT TO 36 CFR §800.6(c), TO ADDRESS THE ADVERSE EFFECTS TO THE OWEGO FREE ACADEMY PREHISTORIC SITE,
TOWN OF OWEGO, TIOGA COUNTY, NEW YORK

SIGNATORY PARTY 1 OF 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

BY: K O Zeringue **Date:** 6-8-15

Katherine Zeringue
Acting Regional Environmental Officer,
FEMA Region II

BY: Heather Smith **Date:** 6/8/15

Heather Smith
Recovery Division Director,
FEMA Region II

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE NEW YORK STATE HISTORIC PRESERVATION OFFICER, THE NEW YORK STATE DIVISION OF HOMELAND SECURITY AND EMERGENCY SERVICES, AND THE OWEGO APALACHIN CENTRAL SCHOOL DISTRICT
PURSUANT TO 36 CFR §800.6(c), TO ADDRESS THE ADVERSE EFFECTS TO THE OWEGO FREE ACADEMY PREHISTORIC SITE,
TOWN OF OWEGO, TIOGA COUNTY, NEW YORK

SIGNATORY PARTY 2 OF 2

NEW YORK STATE OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION

BY: Ruth Pierpont **Date:** 6/8/15

Ruth Pierpont
Deputy Commissioner/Deputy State Historic Preservation Officer

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE NEW YORK STATE HISTORIC PRESERVATION OFFICER, THE NEW YORK STATE DIVISION OF HOMELAND SECURITY AND EMERGENCY SERVICES, AND THE OWEGO APALACHIN CENTRAL SCHOOL DISTRICT
PURSUANT TO 36 CFR §800.6(c), TO ADDRESS THE ADVERSE EFFECTS TO THE OWEGO FREE ACADEMY PREHISTORIC SITE,
TOWN OF OWEGO, TIOGA COUNTY, NEW YORK

INVITED SIGNATORY PARTY 1 OF 2

NEW YORK STATE DIVISION OF HOMELAND SECURITY AND EMERGENCY SERVICES

BY: _____ **Date:** 6/8/15
Andrew X. Feeney
Alternate Governor's Authorized Representative

BY: _____ **Date:** 6/5/15
Richard M. Lord
Agency Preservation Officer

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE NEW YORK STATE HISTORIC PRESERVATION OFFICER, THE NEW YORK STATE DIVISION OF HOMELAND SECURITY AND EMERGENCY SERVICES, AND THE OWEGO APALACHIN CENTRAL SCHOOL DISTRICT PURSUANT TO 36 CFR §800.6(c), TO ADDRESS THE ADVERSE EFFECTS TO THE OWEGO FREE ACADEMY PREHISTORIC SITE, TOWN OF OWEGO, TIOGA COUNTY, NEW YORK

INVITED SIGNATORY PARTY 2 OF 2

THE OWEGO APALACHIN SCHOOL DISTRICT, TOWN AND VILLAGE OF OWEGO, TIOGA COUNTY, NEW YORK

BY: William C Russell **Date:** 6/8/15

Dr. William C. Russell
Superintendent of Schools Owego Apalachin Central School District
Town and Village of Owego, Tioga County

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE NEW YORK STATE HISTORIC PRESERVATION OFFICER, THE NEW YORK STATE DIVISION OF HOMELAND SECURITY AND EMERGENCY SERVICES, AND THE OWEGO APALACHIN CENTRAL SCHOOL DISTRICT
PURSUANT TO 36 CFR §800.6(c), TO ADDRESS THE ADVERSE EFFECTS TO THE OWEGO FREE ACADEMY PREHISTORIC SITE,
TOWN OF OWEGO, TIOGA COUNTY, NEW YORK

CONCURRING PARTY 1 OF 1

SENECA NATION OF INDIANS

BY: _____ **Date:** 6/8/15
Scott Abrams, Tribal Historic Preservation Officer

APPENDIX A

Data Recovery Plan for Owego Elementary School

Proposed by Public Archaeology Facility (PAF) June 4, 2015

Public Archaeology Facility Report

DATA RECOVERY PLAN
OWEGO FREE ACADEMY SITE (SUBi-2089)

PROPOSED MAINTENANCE BUILDING PROJECT
MONKEY RUN ALTERNATIVE

OWEGO APALACHIN SCHOOL DISTRICT
TOWN OF OWEGO (MCD 10706)
TIOGA COUNTY, NEW YORK
13PR03584

BY:

LAURIE E. MIROFF, PhD
AND
NINA M. VERSAGGI, PhD RPA

SUBMITTED TO:

OWEGO APALACHIN CENTRAL SCHOOL DISTRICT
36 TALCOT STREET
OWEGO, NY 13827

JUNE 3, 2014
(REVISED FEBRUARY 12, 2015)
(REVISED FEBRUARY 20, 2015)
(REVISED JUNE 4, 2015)

Binghamton University, State University of New York
Binghamton, New York 13902-6000

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I. INTRODUCTION

This document presents a second revision to the Phase 3 Data Recovery Plan (DRP) for the Owego Free Academy site (SUBi-2089), located on the parcel proposed for the Monkey Run Maintenance Building in the Town of Owego, Tioga County, New York (Figure 1). Revised project plans expanded the area of potential effect (APE) to include a retention pond, extra work space, and an outfall line to Owego Creek. These additions changed the scope of the field investigations and these are reflected in this revised DRP.

In 2000, Phase 1B reconnaissance survey conducted by the Public Archaeology Facility (PAF) for the Owego Apalachin Central School District project identified this prehistoric site and recommended a Phase 2 site examination to determine National Register eligibility (Miroff 2000). The Office of Parks, Recreation, and Historic Preservation (OPR&HP) agreed, but first requested that the site be replowed and re-examined to confirm site boundaries and determine that no additional sites existed within the project boundaries (Miroff 2002c). PAF archaeologists completed that work and recommended a Phase 2/3 data recovery if impacts to the site could not be avoided. In 2002, the Owego Apalachin School District decided they could avoid impacts to the site and no further work occurred on this parcel. In 2012, this parcel was considered for the proposed Monkey Run Maintenance Building. A Data Recovery Plan outlining our proposed field, analysis, and reporting methods was requested by the Owego Apalachin Central School District. Proposed project plans include construction of a maintenance building, associated parking, retention pond, and an outfall line to Owego Creek. These plans will impact most of Locus 1 and Locus 2 of the National Register eligible Owego Free Academy site.

1.1 Site Location

The Owego Free Academy site is located west of NY 96/38, north of the Village of Owego's center, in the Town of Owego, Tioga County, New York. The site is situated approximately 2.4 km (1.5 mi) north of the Susquehanna River. The Owego Free Academy site is located north of Huntington Creek (aka Monkey Run) and east of Owego Creek (Figure 2). The site lies at an elevation of approximately 250 to 253 m (820 to 830 ft) ASL.

Figure 1. Location of project area in Tioga County, New York.

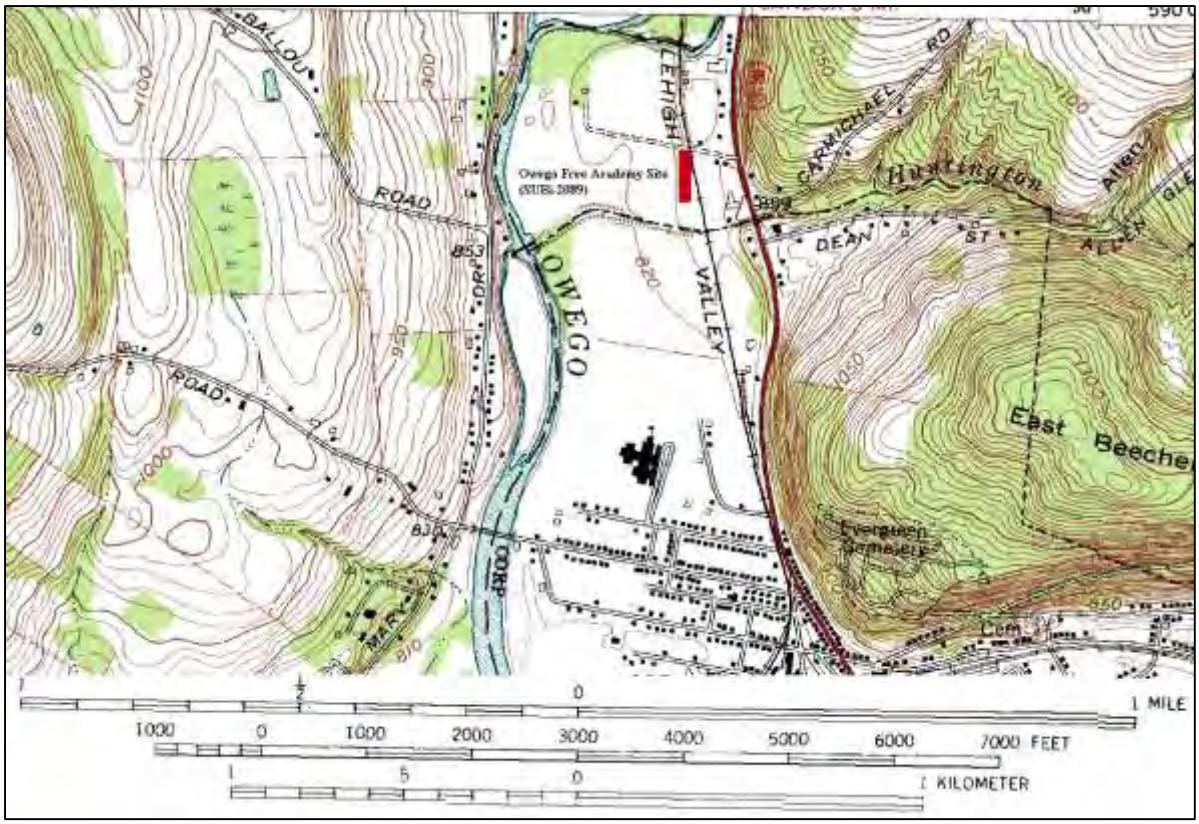

Figure 2. Location of the Owego Free Academy site on 1969 Owego, NY USGS 7.5' quadrangle.

1.2 Previous Archaeological Investigations

During the 2000 reconnaissance survey archaeologists conducted a surface survey of freshly plowed fields, and excavated 62 shovel test pits within the project boundaries. They identified the Owego Free Academy site (SUBi-2089) based on surface collected prehistoric artifacts (n=123) and four prehistoric artifacts recovered from three shovel test pits (STPs I31, I33, and L33). The results of the reconnaissance survey indicated that the site covered 429,182 m^2 (314,112 ft^2) or 2.9 ha (7.2 ac). However, since approximately 6.2 ha (ac) of the project area had only been disked and not plowed, surface visibility was not optimal. OPR&HP recommended that areas be re-plowed and re-examined to insure that site boundaries were completely identified and that no additional sites exist within the project boundaries.

During the addendum reconnaissance, the entire area was replowed and a second surface survey was conducted (Miroff 2002c). An additional 127 prehistoric artifacts were recovered from the Owego Free Academy site for a total of 254 artifacts (and one faunal remain) collected from the site. Artifacts mainly concentrated in the northernmost portion of the field. Based on the addendum reconnaissance data, site boundaries were modified to include the addendum artifacts (Figure 3). In addition, the southern site boundary, near Huntington Creek, was pulled north since only a few pieces of fire-cracked rock (FCR) were recovered during the initial reconnaissance and no additional artifacts were recovered during the addendum reconnaissance. These artifacts were likely dragged south by plowing activities. The revised site plan contains two loci: Locus 1, measuring, at its maximum, 141.5 x 119.5 m (464 x 392 ft), and covering approximately 12,909 m^2 (138,951 ft^2) or 1.1 ha (2.7 ac), and Locus 2, measuring 161 x 78 m (528 x 256 ft) at is maximum, encompassing approximately 11,039 m^2 (118,823 ft^2) or 1.3 ha (3.2 ac).

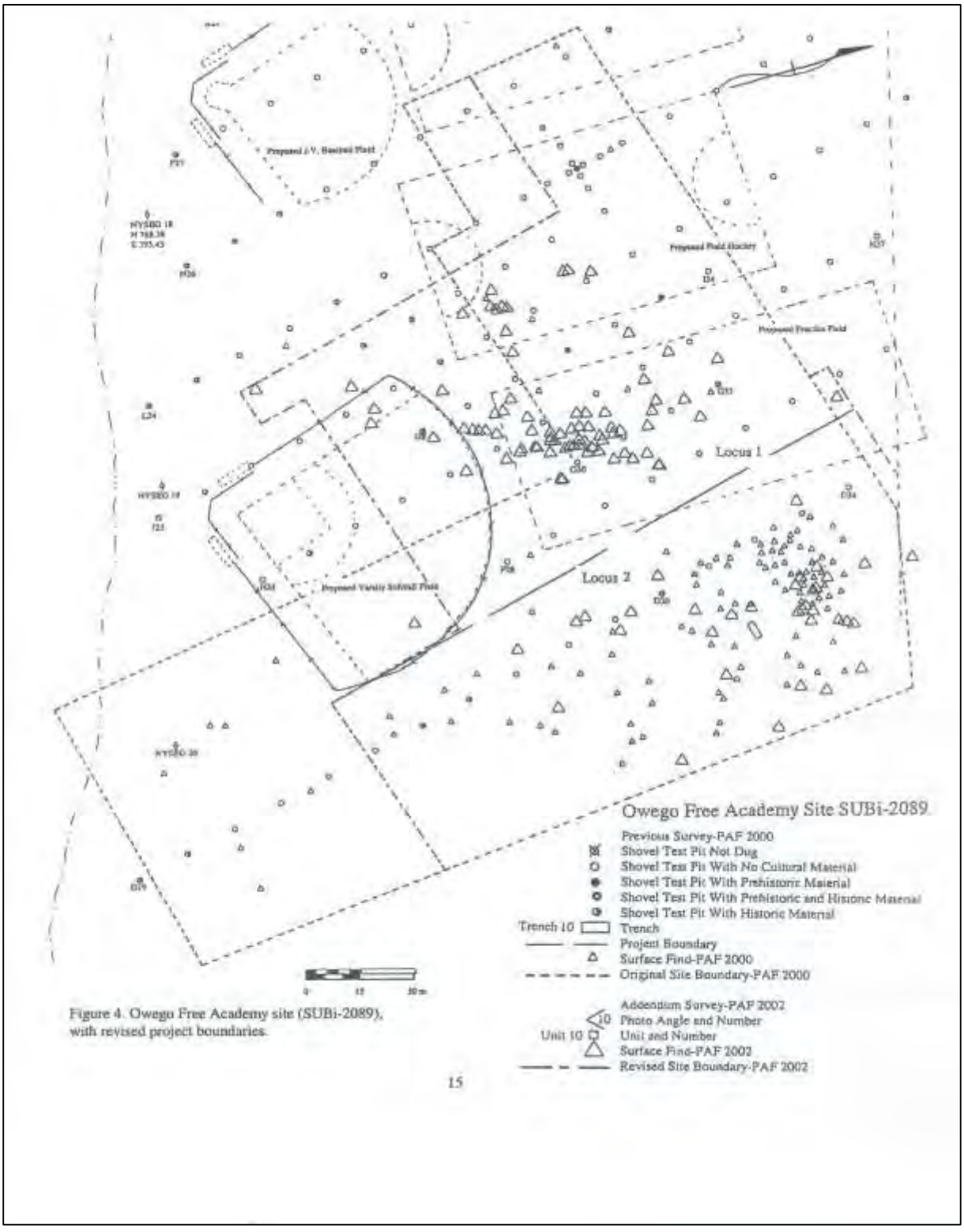

Figure 4. Owego Free Academy site (SUBi-2089), with revised project boundaries.

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Figure 3. Owego Free Academy site (Monkey Run Maintenance Parcel) investigations map.

Table 1 summarizes the artifacts found from the reconnaissance and addendum reconnaissance surveys. The prehistoric assemblage includes chipped stone artifacts, rough stone artifacts, and fire-cracked rock. Three diagnostic projectile points, a Late Archaic Brewerton-like Side-Notched type (ca. 3,000-2,500 B.C.), a Transitional period Susquehanna Broad point (1,500-200 B.C.), and an Early Woodland Meadowood point (1,000-500 B.C.) suggest multiple uses of the site over time. Artifacts were made primarily from Onondaga chert, with smaller numbers of artifacts made from rhyolite, chalcedony, pebble chert, and an unidentified material. Artifacts cluster in two loci: one to the east and one to the west. The eastern cluster contains the Brewerton-like Side-Notched projectile point. Diagnostic artifacts in the western cluster include the Susquehanna Broad point and the Meadowood point.

Table 1. Summary of Prehistoric Artifacts from Owego Free Academy Site

Artifacts		**Count**	**Percent**
Chipped Stone Artifacts	Non-cortical flake	69	27.2
	Utilized non-cortical flake	22	8.7
	Cortical flake	5	2.0
	Utilized non-cortical flake	2	0.8
	Bifacial thinning flake	3	1.2
	Utilized bifacial thinning flake	3	1.2
	Bipolar flake	1	0.4
	Chunk/shatter	15	5.9
	Utilized chunk/shatter	8	3.1
	Projectile point	4	1.6
	Biface	1	0.4
	Biface fragment	6	2.4
	Drill	1	0.4
	Core	3	1.2
Fire-cracked rock	FCR	108	42.5
Rough Stone Artifacts	Net weight	1	0.4
	Pitted hammerstone	2*	0.8
	Total**	**254**	**100**

*1 bi-pitted; **1 animal bone (sheep/goat/deer).

Reconnaissance STP and trench data documented some variability in stratigraphy across the parcel north of Huntington Creek where the Owego Free Academy site lies. The main difference is that B-horizon silts are much deeper on the flood plain of Owego Creek to the west of the site. Soils in the trench excavated within the boundaries of the Owego Free Academy site (Trench 6) began with medium brown silt with gravel to 29 cm (11 in) below ground surface (bgs). Yellow brown silt (little soil) with gravel followed to 41 cm (16 in) bgs. The profile ended with gray, yellow brown sandy silt (little soil) with gravel (C-horizon) at 89 cm (35 in) bgs. Prehistoric artifacts were recovered from the surface or the upper 39 cm (15 in; plow zone/A1-horizon). One artifact was found in B-horizon soils between 75 and 82 cm (30 and 32 in) bgs.

II. RESEARCH CONTEXT

The Public Archaeology Facility is involved in extensive research on Late Archaic sites throughout the Upper Susquehanna, including work in: the upper main stem between Cooperstown and Oneonta (Miroff et al. 2010; Rafferty 2002), the main stem of the river between Oneonta and Binghamton (Knapp 2005; Kudrle 2004, 2005; Miroff 2002a; Miroff and Kudrle 2003; Wurst and Lain 1998; Wurst and Versaggi 1992), the Chenango sub-basin (Knapp 2011; Wurst and Versaggi 1993), the lower main stem of the river between Binghamton and Waverly (Grills 2012; Miroff and Wilson 2006; Miroff et al. 2008; Versaggi and Miroff 2004; Versaggi et al. 1982), the Owego Creek sub-basin (Miroff 2000, 2002c), the Chemung sub-basin (Miroff 2002b), the Canisteo sub-basin (Horn 2008); and the Tioga River sub-basin (Kudrle 2002; Miroff 2006).

In addition, PAF is conducting research on Transitional-Early Woodland period sites, including work at: the Broome Tech site along the western edge of the Chenango River (Knapp in progress; Versaggi and Knapp 2000), the Stratton Mill Creek site on the north side of the Susquehanna River (Grills in progress), Indeck on a portion of the floodplain/outwash terrace on the eastern edge of the Susquehanna River (Wurst and Versaggi 1992:82), and the John Moore Farm site on an alluvial terrace adjacent to the Susquehanna River and west of its confluence with the Chenango River (Kudrle 2013).

The research proposed for the Owego Free Academy site will use existing research designs and contribute to these ongoing investigations by addressing the series of research topics discussed in Section 2.3.

2.1 Environmental Setting

The project area lies within the Glaciated Low Plateau section of the Appalachian Plateau physiographic province, an area that was repeatedly covered by continental ice sheets during the Pleistocene. The last of these continental ice sheets, the Wisconsin, retreated from the project area sometime between 14,000 and 16,000 B.P., releasing vast amounts of meltwater and outwash that flowed south through the Owego Creek valley.

The Owego Free Academy site is located on a large glacial terrace approximately 0.4 km (0.25 mi) east of Owego Creek, a fifth-order tributary of the Upper Susquehanna River (Figure 4). The site lies 2.8 km (1.7 mi) north of where Owego Creek joins the Susquehanna River. The Owego Free Academy site lies adjacent to Huntington Creek (Monkey Run), a minor tributary of Owego Creek. Approximately 0.6 km (0.4 mi) to the north, Catatonk Creek joins Owego Creek. Catatonk Creek provides a natural transportation corridor leading to Cayuga Lake.

Bedrock underlying the site is Upper Devonian-age sedimentary rock, mostly shales and siltstones (Gardeau Formation, Beers Hill shale, Grimes siltstone, and others; Rickard and Fisher 1970). These formations are not generally cited as sources of chert and other cryptocrystalline rock suitable for stone tool production. However, the surficial geography of the area is dominated by glacial drift (outwash and till) which is likely to contain nodules of exotic cryptocrystalline rock.

As the Wisconsin glacial epoch came to a close around 16,000 years ago, the valleys of the North Branch Susquehanna River and tributaries such as Owego Creek were deeply aggraded with glacial outwash. In the lowest reach of the Owego Creek valley large amounts of outwash accumulated because of the elevated base level of the main stem valley. As the ice front receded from the drainage basins, the supply of outwash was cut off and the river and its tributaries began reworking and removing the accumulated glacial material. Removal of the outwash was seldom complete, resulting in the creation of remnant outwash terraces along valley edges as the streams downcut the central part of their valleys and began construction of floodplains made up of coarse- to fine-textured alluvium. The soil profiles of these floodplains, constructed as the river and stream channels migrated laterally across the valley floor, generally exhibit a fining-upward character. The base of the profile is made up of channel-bottom gravel, cobbles, and channers capped by sand deposited as in-channel bars or lateral deposition. The sand is covered by very fine sand, silt, and clay deposited by overbank floods that spread across the aggrading floodplain surface.

Much of the soils adjacent to Owego Creek, including the Owego Free Academy site, are mapped as Unadilla silt loam, 0-3% slope (Unn; USDA 2012; Figure 4). The Unadilla series consists of deep and very deep, well drained soils formed on valley terraces and lacustrine plains in silty, lacustrine sediments or old alluvial deposits. A typical Unadilla profile consists of an Ap/Bw1/Bw2/Bw3/BC/C2 sequence. Thickness of the solum (A and combined Bw horizons) ranges from 50 to 125 cm (20 to 49 in). Rock fragment content ranges from 0 to 5 percent in the solum and 0 to 60 percent in the C or 2C horizon.

2.2 Prehistoric Context

New York State prehistory is traditionally divided into four main phases: Paleoindian (c. 10,000-8,000 B.C.), Archaic (8,000-1,500 B.C.), Transitional (1,500-1,000 B.C.), and Woodland (c. 1,000 B.C. to European contact; Ritchie 1980:xxx-xxxi). While this cultural-historical framework obscures temporal and regional variability, it does highlight major developmental trends in the northern woodlands. Diagnostic projectile points recovered from the Owego Free Academy site include a Late Archaic Brewerton-like Side-Notched point (3,000-2,500 B.C.), one Transitional period Susquehanna Broad projectile point (1,500-200 B.C.), and one Early Woodland Meadowood point (1,000-500 B.C.), suggesting that the site was repeatedly occupied from at least the Late Archaic through Early Woodland periods.

The Archaic period marks the transition to post-Pleistocene adaptations and climatic regimes. A spruce-pine forest, and later a mixed deciduous forest, developed in the northeast and these were populated by modern animal and plant species. The Early Archaic (8,000-6,000 B.C.) period defines initial human adaptation to these conditions. Site and population densities during this period are low, a fact that has generally been related to the availability of resources. Explanations have focused on the lack of mast and mast-browsing species in pine dominated forests, the low availability of fish until modern conditions of temperature, flow and gradient were reached, and the generally dispersed nature of resource patches in major valleys during the Early and Middle Archaic (Armstrong et al. 2000:52). The generally poor environmental conditions may also have confined settlement to the more stable environments of Pennsylvania, New Jersey, and coastal New York while scattered Early Archaic sites in central New York represent only occasional northward excursions (Ritchie and Funk 1973:337). However, dispersed resource patches existed within major river valleys and around upland water resources (Custer 1996; Versaggi 2000).

The Middle Archaic period (6,000-4,000 B.C.) differs little from the preceding Early Archaic. The climate did reach its modern condition by approximately 5,500 B.C. (Funk 1993) which would have led to an increase in oak and, presumably, mast browsing animal species. There is a slight increase in site frequency but population in the Plateau remained low. An increase in the number of sites is the major departure from an Early Archaic settlement pattern where small, temporary camps seem to represent an orientation to dispersed resource patches.

The Late Archaic period (4,000-1,500 B.C.) is one of increasing population density and cultural diversity related to local processes. Settlement patterns suggest an increased focus on aquatic resources with most sites located near small lakes, rivers, and wetlands, although they were often situated on terraces and upland slopes (Trubowitz 1977:98-120; Versaggi 1996). Late Archaic subsistence/settlement patterns exhibit a range of variability tied to seasonal scheduling and resource availability. Large base camps located near major water sources provided a focal point for groups during the tougher months of the year from which small groups of foragers could range to procure and process needed resources. During other seasons, base camps would divide into smaller groups who engaged in more mobile foraging activities. This pattern of seasonal aggregation and dispersal results in several site types, including: large residential camps, small special purpose camps, and resource processing locations (Versaggi 1996).

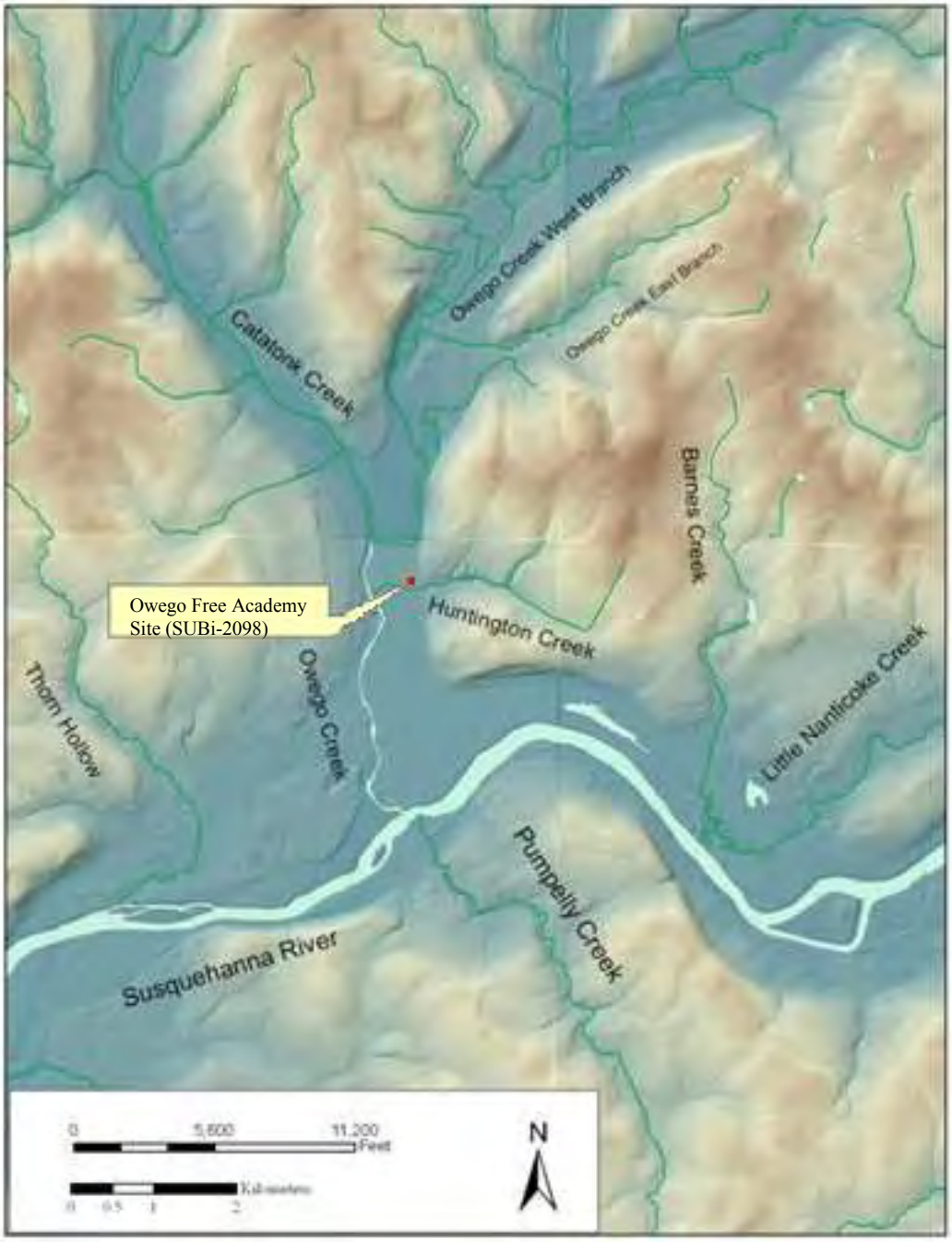

Figure 4. Regional digital elevation map (DEM) showing the location of the Owego Free Academy site.

Two major studies of the Upper Susquehanna have provided good contextual information for the Late Archaic in the region (Funk 1993; Versaggi 1996). From established residential base camps, daily foraging groups roamed the valley and uplands around the residence and returned each day with the resources they collected or hunted. These foragers would have left light scatters of debris from their resource procurement and processing activities within patches surrounding their work areas. When there was a need for securing resources far distant from the base, other work parties would travel to these areas and spend days or weeks away from the main camp. These groups would create task-specific, or special purpose camps in the far regions where they worked and then return to the base with the products of their trip. In this manner a large diversity of sites and site types would result from this logistical system of organization (Versaggi 1996). One predictive model for this part of the upper Susquehanna Valley suggests that the environmental setting along the Susquehanna River provided excellent locations for fishing during the spawning season, especially near tributary confluences. These fish and deer resources available along the creeks could have provided for a seasonally nomadic population that migrated toward the confluence with main waterways during the fall and winter (Versaggi 1987).

The following Transitional period (1,500-200 B.C.) is characterized by a subsistence practice focused on hunting, gathering, and fishing. Small, temporary camps, often oriented toward river or coastal areas, typify settlement patterns during this period (Ritchie and Funk 1973:71-73). Broad-blade and leaf-shaped projectile points (some fashioned from "exotic" raw materials) are typical. These broad-bladed points are identified as "Susquehanna Broad," "Orient/Dry-Brook," and "Perkiomen" within the regional literature. Susquehanna Broad (Frost Island) sites are generally more numerous types within the Upper Susquehanna Watershed compared to Orient and/or Dry Brook (Funk 1993:250). Toward the end of the period, ceramic vessels were manufactured and co-occurred with steatite (Versaggi and Knapp 2000).

During the Early Woodland period (200-0 B.C.), long-distance contact with cultural groups in the Midwest region developed, evidenced by the presence of non-local raw materials. This contact continued into the subsequent Middle Woodland period (0 B.C.-A.D. 900). During the Early and Middle Woodland periods, subsistence was distinguished by hunting and gathering and a greater reliance on native plant species such as chenopodium, sunflower, and tobacco (Funk 1993:31; Ritchie 1980:241). Settlement types for these periods included large and small camps with associated special purpose sites. In the Upper Susquehanna Valley, subsistence and settlement patterns began to be characterized by seasonal base camps located in optimal settings for long periods, possibly for multiple seasons (Versaggi 1987:305, 2000). Pottery occurred frequently and steatite vessels are virtually gone by this time.

2.3 Research Objectives

The data recovery will focus on the role of the Owego Free Academy site within the prehistoric settlement and subsistence system of the Upper Susquehanna. Within this general theme, researchers will address the following specific topics:

- *Chronology*. Excavations documented a Late Archaic Brewerton-like Side-Notched point (3,000-2,500 B.C.), one Transitional period Susquehanna Broad projectile point (1,500-200 B.C.), and one Early Woodland Meadowood point (1,000-500 B.C.) from the surface. The presence of additional diagnostic artifacts can assist in defining site chronology. The presence of Late Archaic, Transitional, and Early Woodland components presents the opportunity to explore how the Owego Creek valley was used by prehistoric people during these periods of New York's prehistoric past. Current research has questioned the accepted temporal divisions of these three periods in the Susquehanna Valley (Versaggi and Knapp 2000) and this site would contribute to clarifying these issues.

- *Subsistence and Seasonality.* Analysis of stone tools and usewear along their edges provides data on the types of potential food resources procured and processed on the site and may allow for the assessment of seasonality of the occupation. No features were identified at the site during the reconnaissance and addendum surveys. However, the presence of fire-cracked rock suggests that a feature or features are present. Features

not only contain carbon for radiometric dating, the carbon is usually preserved plant remains that provide more direct evidence of subsistence and seasonality.

- *Site function.* Formal tools, utilized flakes, and intra-site spatial structure have high research potential in regards to questions of site function for the Owego Free Academy site. Tight clustering of artifacts and the diversity of artifacts identified (e.g., various types of chipped stone and rough stone tools) suggest that site occupants were conducting diverse activities at the site. The presence of an exotic raw material (rhyolite) offers the potential to examine interregional trade between groups. Assessing site function allows for this site to be placed within existing models and frameworks for regional settlement patterns.

- *Lithic reduction strategies.* Data on debitage, raw materials, and tool forms can be used to address the stages of reduction present on the site and how these relate to models of mobility and lithic management. These strategies also contribute to an interpretation of site function.

2.4 Regional Comparisons

Data from the Owego Free Academy site will be compared with other similarly dated sites in the Upper Susquehanna drainage including the Owego Elementary School site recently discovered on the school district property (Knapp 2013). Comparisons will include sites from the Upper Susquehanna's main trunk as well as its various sub-basin tributaries. Baseline data collected from these sites will include, but is not limited to, the following: site size, site age, landform, stream order, distance to water, feature types and densities, artifact density, and type. Mapping of this baseline data will allow the sites to be placed in a larger regional and landscape context. Sites can be incorporated into a unified GIS model for the area, potentially illuminating spatial patterns not visible through individual maps and/or data-sets.

2.5 Synthesis and Interpretation

Each of the research topics discussed above will be integrated into an interpretative model of subsistence and settlement in the Owego Creek valley. This synthesis will specifically address the function of this site within a larger prehistoric land use system and the regional context of the site. Stone tool analysis and an examination of subsistence remains recovered from features are critical information for assessing site function and seasonality. These data will highlight the types of resources targeted and the range of processing activities occurring at the site. Data on lithic reduction/management systems in operation at the site will inform on group mobility, which is relevant to any understanding of the site's role in a larger land use system. Data on raw material types utilized at the site will contribute to our understanding of possible lithic exchange networks and regional alliances among groups.

III. METHODOLOGY

In order to accomplish the research objectives of this data recovery, field investigations will need to adequately sample the horizontal and vertical extent of the site within the project area. On February 16, 2015, the APE for this project was refined to avoid much of Locus 1 of the archaeological site, and to include more specific information on the types of impacts and their depths. This revised methodology addresses this revised impact information as well as the current usage and ground cover at the site. The goal of this DR methodology is to thoroughly sample the APE within the site limits and retrieve a representative sample of artifacts and features from the site area so that the research topics presented in Section II can be addressed.

3.1 Field Methodology

Owego Free Academy is a large site with two spatial loci covering a total of approximately 2.4 ha (5.9 ac). The proposed impact areas overlap portions of these two loci. In addition, there is an outfall line to Owego Creek, measuring about 464 m (1521 ft). Figures 5 and 6 (pp. 11 and 12) show the area of potential effect (APE) and how these overlay onto the two loci of the site. The vertical impacts will extend to 10 ft in the proposed building footprint, and to at least 6 ft in all other areas. The proposed access road south of Huntington Creek was tested in 2001 and during the testing for the proposed administration building. No archaeological sites were found in this area. Since the Phase 1 and 2 investigations in 2000, the ground conditions have changed to include a ball field and grass-covered surfaces that would be difficult now to plow. The proposed field strategies substitute close-interval STP testing for plowing/surface survey, unit excavation, and stripping of the A-horizon to identify cultural features. Specifically, we propose the following:

- **Systematic STPs.** Because the project area is no longer an agricultural field, plowing is not feasible. Instead, portions of the proposed APE that overlap the archaeological site and the outflow line will be tested with transects of STPs spaced at 7.5 to 15 m (25-50 ft) intervals to redefine the horizontal concentrations of cultural material within Locus 1 and Locus 2, and along the newly defined outfall line. Portions of the APE are within an alluvial context, and we are expecting that deep testing will be necessary in some areas, such as the outfall line and portions of Locus 1. Based on previous research, most of the artifacts will be confined to the Ap (topsoil) horizon and the transition to B horizon (subsoil).

- **Unit excavation.** Archaeologists will excavate **30-50 units measuring 1 x 1 meter** within the project area on the Owego Free Academy site to obtain a larger sample of artifacts and possibly identify carbon-rich features. As with the STP testing, some units, particularly in Locus 1, may need to be excavated to depths up to or more than 1 m (3.3 ft) in depth.

- **Mechanical stripping of the site topsoil.** Once unit excavations are complete, a backhoe will remove the Ap-horizon from a 50-100% sample of the site that falls within the recently revised APE. We estimate that 1.5 to 2.0 acres of topsoil will need to be scraped. Archaeologists will shovel clean the surface of the B1-horizon to locate features. Since features are as important as artifact clusters on the site, this field strategy will insure that this data potential is fully examined. In addition, if any burials are present, this method will expose the top of the burial pit. A backhoe with a **smooth-bladed bucket** supplied by the Owego Apalachin Central School District will remove the Ap-horizon. This topsoil stripping will be monitored by the project and field directors. Once the B1-horizon is exposed, crews will shovel-scrape the loose soil in order to clean the subsoil surface to reveal dark stains representing potential cultural features. Soil will need to be excavated to a depth of approximately 30-40 cm (10-16 in) to remove the Ap-horizon, although depths may vary due to the construction of and present use as athletic fields.

- **Feature excavation.** Any features located during unit excavation or shovel-scraping will be systematically excavated using the normal PAF process. First, their boundaries will be defined by trowelling, then plan views will be drawn and the feature will be photographed. Soil discolorations, post-holes, etc. will be cross-sectioned to obtain a vertical profile. Profiles will be drawn and photographed. Standard-sized (approximately 10 liters, where possible) soil samples for flotation will be collected for each feature. **We estimate that 5-10 features will be found within the project limits.**

- **Monitoring by Nation Representatives.** After FEMA consultation with Native American representatives, monitoring of archaeological investigations may become part of this field methodology.

Units will be excavated by removing the top 25 cm (10 in) plow zone as a single level. The remaining soil matrix will be excavated in arbitrary 5 cm (2 in) levels within the natural or cultural soil layers to identify potential temporal stratification in the cultural deposits. Each unit will extend at least 10 cm (4 in) into culturally sterile subsoil. Archaeologists will excavate all units with shovels and trowels. Soil will be screened through a ¼ inch hardware mesh onto plastic sheeting. All artifacts will be noted and bagged by level.

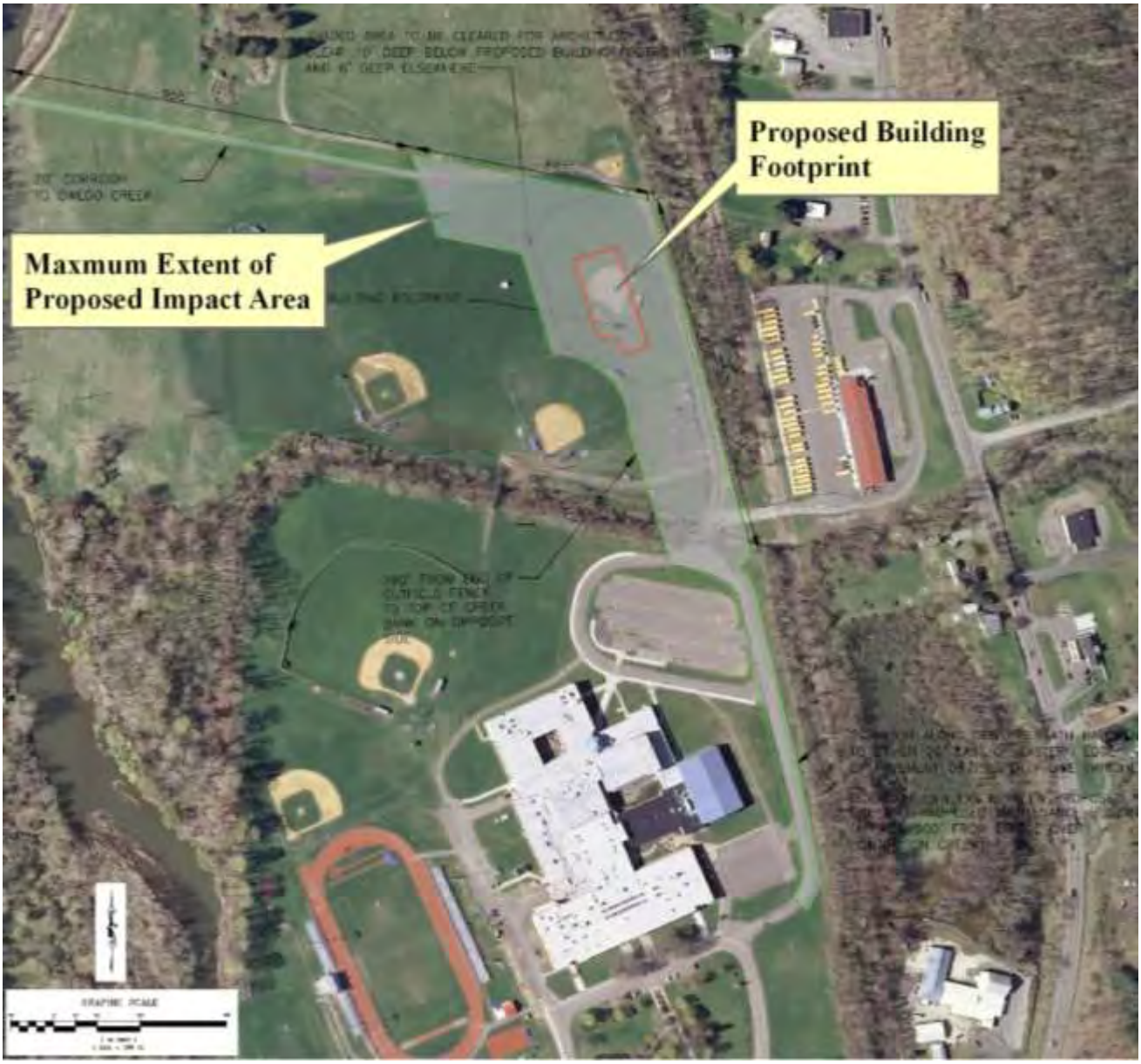

Figure 5. Area of Potential Effect (APE) for proposed Owego Free Academy Maintenance Building.

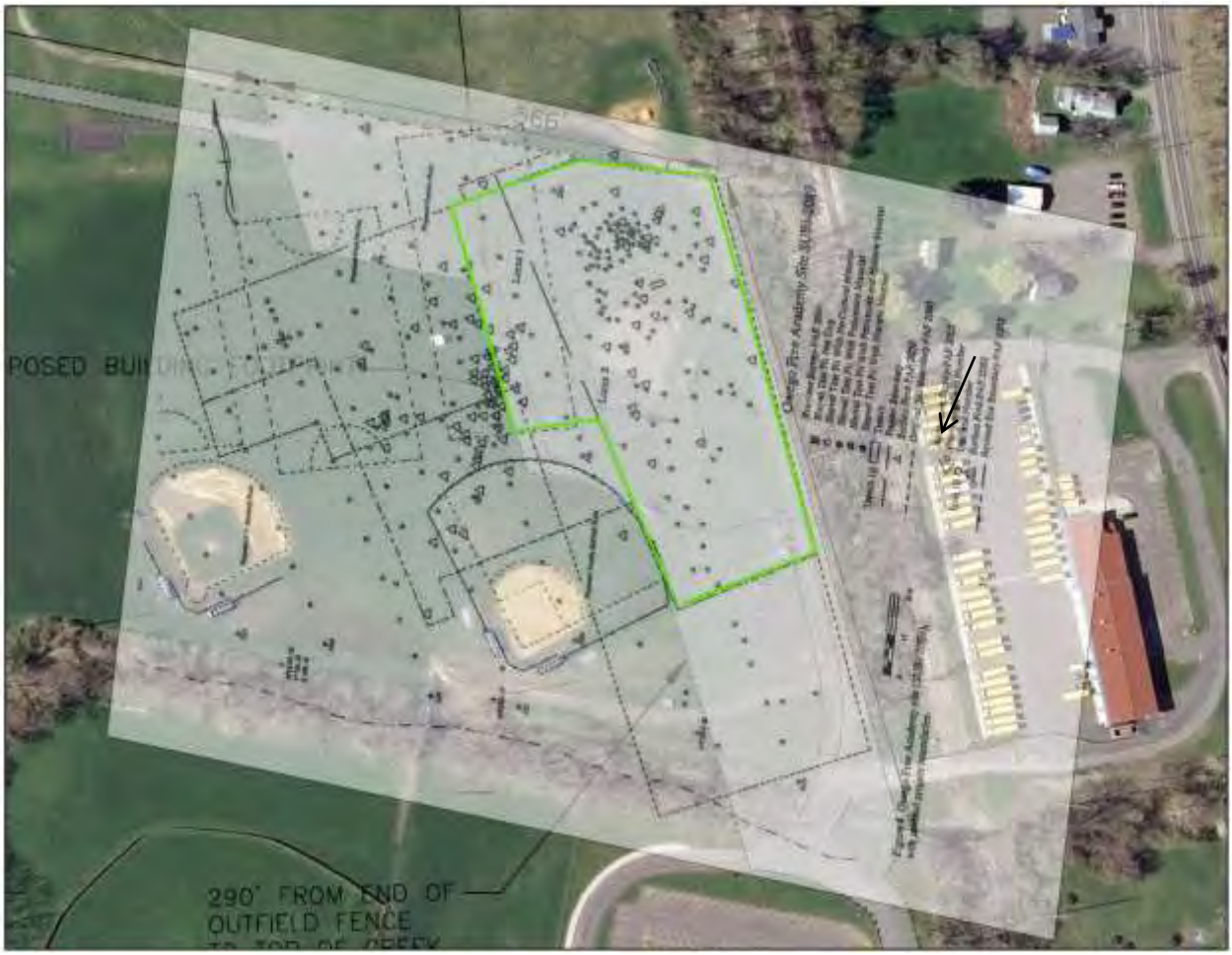

Figure 6. Overlay of 2002 artifact clusters (Locus 1 and Locus 2) on the Area of Potential Effect.

With this proposed data recovery, the site within the APE will be tested with shovel test pits, and 30-50 m^2 will be systematically excavated and screened. The mechanical stripping of 50-100% of the site area within the APE will provide thorough coverage for features and partial recovery of artifacts noted during the stripping process. This combination of excavation and soil removal offers the best potential for collecting the data necessary to address the research objectives of this DRP.

3.2 Laboratory Methods

Following fieldwork, all artifacts will be processed and analyzed in the laboratories of the Public Archaeology Facility. Artifacts will be processed and catalogued according to standard procedures. Analysis of chipped and rough stone artifacts will occur in a staged manner according to reduction stages and functional attributes. Other artifacts, such as fire-cracked rock (FCR), will be counted and/or weighed as appropriate.

3.3 Analysis Methods

Chronology

Central to the analysis of the Owego Free Academy site is a definition of the chronological components present on the site. This task is dependent on finding additional diagnostics and/or datable features. Assuming that features are found, carbon samples will be submitted to Beta-Analytic of Coral Gables, Florida to provide radiometric dating of the site. Carbon samples too small for standard C-14 methods will be submitted for AMS dating. These data will be combined with stratigraphic information to define both vertical and horizontal components on the site. The resulting chronology will structure the form of all subsequent analyses.

Landuse and Settlement Patterns

Detailed lithic analysis (technological and functional) and intra-site analysis are needed to address this research objective. Technological analysis will focus on the procurement and manufacture of chipped stone tools, while the functional data will focus on the activities these tools performed. In both cases, the purpose of the analysis is to make visible productive tasks (labor) that were occurring within the site context. However, the type of labor that each category of data addresses is very different. Technological analysis provides information on the techniques and stages of lithic reduction that were being performed on site. Information regarding procurement of lithic raw material is also recorded during this phase of analysis. Functional analysis addresses the types of activities for which lithic tools were used. These data provide a more holistic view of the chipped stone tradition and provide an interesting perspective on the day-to-day activities that were occurring on the site.

Technological Lithic Analysis

In central and western New York, the Onondaga formation is the major chert-bearing unit (Cassedy 1993:40). In southern New York, Onondaga cherts are by far the most commonly encountered material on prehistoric sites. While primary quarry sources are not common, source areas have been identified for Onondaga chert along the east-west Onondaga Escarpment that runs through the Syracuse area. It is likely that the majority of Onondaga chert found in archaeological contexts in the southern New York region were obtained from secondary sources (Lavin and Prothero 1992). Raw material types can aid in understanding possible lithic exchange networks and regional interaction.

All chipped stone debitage will be assigned to one of five artifact classes: bifacial tools, unifacial tools, cores, flakes, and chunk/shatter. Each artifact will then be size-graded by placing the artifact on its ventral surface on a series of graded circles of known diameter: from 0-1" the size grades are every 1/16", from 1-2" the size grades are every 1/8", and above 2" three size grades are recognized (2-2.5", 2.5-3", and >3"). Every artifact will be weighed to the nearest 0.01 gram.

After the initial size grading, recording of raw material, and weighing, artifacts will be separated into two different analytic streams: debitage (cores and flakes) and tool. Cores are defined as culturally modified stone from which one or more flakes have been removed for further modification or use, but in which the piece itself is generally not intended for further use. Cores are assigned to one of the following subtypes: bipolar, amorphous, bifacial, and blade. Flakes are pieces of stone removed from a core by a single blow. All flakes will be assigned to one of the following subtypes: cortical (having at least some cortex on the dorsal surface), non-cortical (no dorsal cortex), bipolar (exhibiting characteristic damage at opposing edges), and blade (defined as flakes that have a length:width ratio of greater than two and typically have parallel dorsal flake scars that run the length of the flake). Chunk and shatter are catch-all categories for pieces of stone that lack flake attributes (i.e., debris). In general, chunk and shatter have an ambiguous ventral surface and striking platform. A chunk is a blocky fragment of material; a cortical chunk is a chunk with exterior surface (cortex) present. Shatter, generally small in size, is defined by the lack of diagnostic flake attributes (platforms or easily differentiated dorsal and ventral surfaces; Henry 1989:254; Parry 1987:34; Sullivan and Rozen 1985).

A detailed attribute analysis will be conducted on the flake assemblage. As part of PAF's standard attribute analysis the following data will be recorded: flake condition, dorsal cortex type, platform type, platform grinding, platform lipping, exposure to heat (evaluated based on color change or presence of pot lid spalls), and macroscopic/microscopic evidence of usewear.

The system of recording flake condition is based on Sullivan and Rozen's (1985) debitage typology which was intended as an "interpretation free" system of debitage classification. There are four types of flake condition: whole, broken, fragment, and debris. Whole flakes retain the platform and all margins are intact. Broken flakes have intact platforms, but are broken along a lateral or distal margin. Flake fragments lack platforms. Debris includes chunks and shatter, and is therefore not technically flakes.

The resulting artifact catalogs will be entered into a relational data base management program (Paradox) to facilitate subsequent analysis.

Functional Lithic Analysis

The typology used for the analysis of chipped stone artifacts is modeled after the type-subtype classification system described by Odell (1982, 1996). The system separates the lithic artifacts into formal tool types (e.g., drill, gouge, graver, etc.), debitage/core, fire-cracked rock, groundstone, or unmodified rock. Formal tools (e.g., drills, gravers, hoes, projectile points, etc.) are then further described by specific characteristics (e.g., a projectile point may be catalogued as fluted, bifurcated based, or Brewerton, etc.). Expedient tools are an important aspect of a site's functional interpretation. Debitage will be examined macroscopically for usewear. In addition, a sample of utilized chipped stone artifacts (including both formal and informal tools) will be submitted for a detailed microwear analysis. Interpretations will follow based on the patterning evident.

Feature Analysis

To establish feature function a typological analysis will be conducted. Important variables to be used in this analysis are: size, shape, and feature contents. This analysis will involve an examination of existing feature typologies for the Eastern Woodlands (e.g., Hatch and Stevenson 1980; Knapp 1996; Ritchie and Funk 1973; Stahl 1985; Stewart 1975, 1977).

Large-volume (e.g., 10 liters, where possible) soil samples will be collected and floated from each feature on the site. The recoveries from each floated feature will be sent to consultants for archaeobotanical analysis and, if larger than expected volumes are derived, these will be sampled during analysis. Faunal remains will be analyzed at Binghamton University. The data generated from feature and subsistence analyses will be used to address the research topics outlined in Section II.

Intra-site Analysis

Analysis of site function and structure within the project limits will examine spatial variability in artifact diversity and density across the site space. Units excavated on the site will be characterized by their individual artifact content using Surfer and GIS mapping. Content will be defined using the gross categories derived from the lithic reduction study and the low-power search for utilization. The data generated from these spatial analyses will be used to estimate site function and how this site fits within existing settlement models of prehistoric landuse within the Upper Susquehanna drainage.

Regional Analysis and Interpretation

Each of the data sets discussed above will be integrated to provide an interpretation of the prehistoric landuse patterns in the region surrounding the Owego Free Academy site. This synthesis will specifically address the function of this site within a larger settlement and subsistence system and the regional context of the site. An examination of subsistence remains recovered from features is critical information for assessing site function and seasonality. These data will highlight the types of resources targeted and the range of processing activities occurring at the site. Data on lithic reduction/management systems in operation at the site will inform us on group mobility, which is relevant to any understanding of the site's role in a larger settlement system. Data on raw material types utilized at the site will contribute to our understanding of possible lithic exchange networks and regional integration of groups. These data will be used to refine and enhance the research context presented in Section II.

Proposed Schedule

Field:	10 weeks (weather permitting)
End of Field letter:	2 weeks following the completion of field work
Final Report:	1 year following acceptance of the End-of-Field Letter

Note: No previous testing has been conducted along parts of the outfall line. If the testing proposed here locates additional archaeological sites, Phase 2 and 3 levels of investigation may be necessary.

IV. COMMUNITY OUTREACH

After excavations and analyses are complete, PAF staff will consider potential public outreach projects, such as a pamphlet, program, or exhibition for the Owego Apalachin School District, an addition of the site results to PAF's

web page, and/or programs for other locals groups, such as the historical society. Once the outreach potential of the data is known, a final decision will be made as to the most effective presentation and the target audience for that presentation.

In addition, once the quality of results is known, presentations will be made at professional and/or amateur meetings such as the annual New York State Archaeological Association conference, Eastern States Archaeological Federation, or Mid-Atlantic Archaeology Conference. Depending on the results of analysis, findings and interpretations will be prepared for publication in scholarly journals and presentations at national meetings, such as Society for American Archaeology.

V. CURATION POLICY

The Public Archaeology Facility maintains professional collections curation facilities that comply with federal standards (36 CFR Part 79) and professional guidelines. All artifacts, notes and other documentation of the data recovery will be curated according to federal (36 CFR Part 79) and state guidelines (NYAC 1994) in the facilities of the Department of Anthropology at Binghamton University.

Use of our collections is restricted to qualified professionals and students for study, loan, public interpretation, exhibition and scientific analysis. All requests for collection use are considered by the Director of PAF. Short-term, supervised use of collection material is available in secure work areas. Long-term loans are time limited and made only to researchers associated with an institution (educational or museum) who can demonstrate that a safe and secure environment can be maintained for the duration of the loan.

The proper curation of collections at the university maintains this data base in the public domain and guarantees that this information is available for serious researchers.

VI. STATE HISTORIC PRESERVATION OFFICE/NEW YORK STATE OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION HUMAN REMAINS DISCOVERY PROTOCOL

If a post-review discovery includes human remains, or other indications of human interment are encountered during construction or archeological investigations, FEMA requires that the guidelines contained in the ACHP's "Policy Statement Regarding Treatment of Burial Sites, Human Remains and Funerary Objects" be followed and the following protocol be implemented:

1. The person or persons encountering such properties or effects shall immediately notify the SHPO, FEMA Environmental/Historic Preservation and the Grantee at the numbers listed in Post-Review Discoveries Section of this Agreement. Construction in the area of such sites or effects shall not resume until the requirements of 36 CFR §800.13(b) (3) have been met.

2. At all times human remains must be treated with the utmost dignity and respect. Should human remains be encountered, work in the general area of the discovery will stop immediately and the location will be immediately secured and protected from damage and disturbance.

3. Human remains or associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.

4. The SHPO, the appropriate Indian Nations, and the involved state and federal agencies will be notified immediately. The Subgrantee will notify and meet any requirements of the coroner and local law enforcement. A qualified forensic anthropologist, bioarcheologist or physical anthropologist will assess the remains in situ to determine if the remains are Native American or non-Native American.

5. If human remains are determined to be Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Please note that avoidance is the preferred choice with SHPO and the Indian Nations. FEMA will consult SHPO and/or the appropriate Indian Nations to develop a plan of action that is consistent with the Native American Graves Protection and Repatriation Act (NAGPRA) guidance.

6. If human remains are determined to be non-Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Consultation with the SHPO and

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APPENDIX B

If a post-review discovery includes human remains, or other indications of human interment are encountered during construction or archeological investigations, FEMA requires that the guidelines contained in the ACHP's "Policy Statement Regarding Treatment of Burial Sites, Human Remains and Funerary Objects" be followed and the following protocol be implemented:

1. The person or persons encountering such properties or effects shall immediately notify the SHPO, FEMA Environmental/Historic Preservation and the Grantee at the numbers listed in Post-Review Discoveries Section of this Agreement. Construction in the area of such sites or effects shall not resume until the requirements of 36 CFR §800.13(b) (3) have been met.

2. At all times human remains must be treated with the utmost dignity and respect. Should human remains be encountered, work in the general area of the discovery will stop immediately and the location will be immediately secured and protected from damage and disturbance.

3. Human remains or associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.

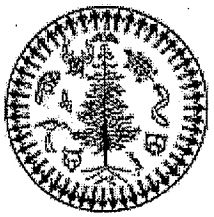
4. The SHPO, the appropriate Indian Nations, and the involved state and federal agencies will be notified immediately. The Subgrantee will notify and meet any requirements of the coroner and local law enforcement. A qualified forensic anthropologist, bioarcheologist or physical anthropologist will assess the remains *in situ* to determine if the remains are Native American or non-Native American.

5. If human remains are determined to be Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Please note that avoidance is the preferred choice with SHPO and the Indian Nations. FEMA will consult SHPO and/or the appropriate Indian Nations to develop a plan of action that is consistent with the Native American Graves Protection and Repatriation Act (NAGPRA) guidance.

6. If human remains are determined to be non-Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Consultation with the SHPO and other appropriate parties will be required to determine a plan of action.

APPENDIX C

Haudenosaunee Policy and Protocol on Human Remains



The Haudenosaunee Policies on this page are the official word of the Haudenosaunee Confederacy as promulgated by the Grand Council of Chiefs concerning cultural patrimony & repatriation.

Note:

From Kanatiyosh. The policies contain statements that are important to insure cultural sensitivity towards the Haudenosaunee. The statements are evidence of why some school projects, museums, private collections, sellers, governments, and etc., are not being culturally sensitive or respectful to the Haudenosaunee.

Haudenosaunee Policy on Human Remains

Haudenosaunee Beliefs

We have been taught that we bury our dead into the ground so that their bodies can become part of the scared Earth. We believe that we come from the Mother Earth and that the human remains that rest within the Earth are an important spiritual connection to the spirit of the Earth. The Earth is enriched by the dead as our flesh becomes part of the soil.

The souls of the dead have a path of destiny that they must follow. We refer to this as their journey after life. In this way, we feel that the dead are around us and hover over us as
we hold ceremonies or dances. We believe that the dead have power and it is dangerous to neglect the spiritual needs of the dead.

The protection of the human remains and associated graves, sacred burial sites and related objects from the graves of the Haudenosaunee are the responsibility of each generation of chiefs, clan mothers, and faithkeepers. We believe that the remains, the associated burial objects and the actual soil in which they rest is sacred. There is no acceptable excuses to justify the desecration of this sacred burial.

Violation of Our Spiritual Rights

Removing the remains from their eternal resting place is a great desecration to both the dead and the living. The disturbance, destruction, and theft of the dead is a violation of the religious and spiritual welfare of the Haudenosaunee.

As long as the human remains are disturbed, there will be spiritual consequences to our people. The desecration of the graves of our ancestors, no matter what the age of the burial, is a violation of our religious freedom.

Permits issued by the State of New York or any other local government, to allow anyone
to violate the sanctity of the graves of our ancestors can no longer be tolerated. In the past, our ancestors buried many objects along with the body with the belief that in the afterlife,
you will need all of those things that you need in this life.

All types of objects have been associated with burials, including decorated clothing, glass beads, shell beads, silver combs, tools and weapons, ceramic and metal cooking pots, wampum belts, strings of wampum, and a variety of personal items. The removal of these objects from the grave is a theft from the dead.

Violation of Our Human Rights

The remains of our dead are not "archaeological resources" that are subjects of study. They are human beings who once lived on this land. They had real lives and feelings. They had
spiritual expectations about their final resting places. To look at Native Peoples as objects rather than people is a gross violation of our human rights.

All graves and burial sites, Native or not, deserve respect. Our dead relatives deserve the basic human right to a dignified burial. We do not believe in the use of permanent headstones to mark graves of our ancestors and state law makes a difference between cemeteries and unmarked burials.

Our burial sites deserve to be considered hallowed ground, whether they are

marked or not. There has been a double standard in dealing with our people and non-Native remains. Non-Native grave sites are often afforded more protection than Native burials.

Despite the efforts of state agencies to identify Native grave locations, construction permits are issued nonetheless. Our dead deserve the same right to an eternal resting place as all other races and religions.

Violation of Our Treaty Rights

The unearthing of the remains of our ancestors from their eternal resting place is also a violation of the promises made to the Haudenosaunee under the terms of the Canandaigua
Treaty of 1794. By that treaty, the United States, including the State of New York, promised not to "disturb" the Haudenosaunee in the free use and enjoyment of their lands.

We have been on record protesting the desecration of our graves. The continual destruction of Native graves, the stealing of the Native remains and the looting of burial objects causes us serious mental, emotional, and spiritual harm.

Our people are continually upset by these events and we have been forced to adjust our spiritual traditions to accommodate outside developments. The desecration of our dead violates the mutual respect promised by the United States as they pledged a firm and permanent friendship between our peoples.

The treaty also promised to remove the cause of complaint that upsets our peace. We therefore make it clear that the desecration of the graves of our ancestors causes great harm to our people and the United States and State of New York have an obligation to protect the general welfare of our people as promised in the legally binding treaties.

4.7 Protocol for Handling Discovery of Human Remains

	Known Burials	Unidentified Burials
When to contact?	**Intentional excavation** At the earliest time in decision-making process.	**Inadvertent Discovery** Upon discovery.
Which Nation to contact?	If find is within existing Nation boundary, contact that Nation's Cultural Resource representatives. If the find is within the traditional land use area (fifty mile radius from the current nation territory, contact the closest Nation's Cultural Resource Representative. If the find is within the aboriginal territory of each nation, as shown on the attached map, contact the Nation within that territory. For finds located within fifty miles on either side of the boundary lines shown on the map, contact the Cultural Resource Representatives of both Nations.	
Who to contact?	Haudenosaunee Cultural Resource Representatives HSCBRR	Haudenosaunee Cultural Resource Representatives HSCBRR
How to contact?	Contact list is provided.	
Information Required	Brief description of the find or potential find; site map and any information on the known cultural history of the area and summary of nearby archaeological findings.	
	Nation will send a representative to review the site.	Company must hire a Native American on-site observer.
Next steps	***Non-disturbance of burials is preferred.*** If after proper consultation, the remains must be removed, we prefer to have them reburied close to their original location as possible, provided the future sanctity of the grave can be assured. ***No remains should be removed without proper cultural protocols.*** If no safe local burial ground can be offered, the Haudenosaunee will reclaim the remains for reburial at an undisclosed location. The local government /state agency/developer must pay all of the costs for such reburial. All objects associated with the original burial must be reburied as well. All of the soil in the immediate area of the burial should also be placed in the new grave.	
Time Frame	30 to 45 days	As soon as possible