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Budd Wilson

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# The Nature and Scope of Archeological Observation

**Budd Wilson**

## INTRODUCTION

The purpose of the Paterson, N.J. Salvage Archeology Project was to identify and salvage historical artifacts at the site of construction of a storm drain and drain tunnel servicing N.J. Route 20 and Interstate Route 80 through Paterson's S.U.M./Great Falls National Historic Industrial District. During negotiations between the funding agencies--State and Federal Highway Departments--and the salvage authority--Great Falls Development, Inc.--director-archeologist Edward S. Rutsch pointed out that important historical artifacts were just as likely to be found along the drain right-of-way outside the then boundaries of the Historic District as they were within. In fact, the continued construction of Route 20 was slated to cut across an historic transportation route, traversed by early highways, the Morris Canal, and the Erie Lackawanna Railroad. He argued that an "archeologist-observer" should be supported to observe construction outside the District bounds. Therefore, the final salvage services agreement provided for an archeologist-observer, empowered "to observe the excavation phases of the drain construction and the construction of the Route 20 Section 2B project." Furthermore, "If any historical objects are uncovered," he was to "remove them as quickly as is reasonably possible to the temporary storage location."

Ideally, the position of archeologist-observer is unnecessary. Placing an archeologist on a construction site in a position to retrieve objects at the expense in time and materials of the investor, contractor, or laborer is folly. However, it can be the only considered alternative when the archeological resources have not been considered during the planning stages, especially when a proper framework exists to review the impact against such resources. In this case, the environ-

mental impact statement did not properly review the archeological resources. Since neither the historical nor the archeological potential was known, an archeologist-observer was requested.

The purpose of this report is twofold: to relate the experiences of an "archeologist-observer" in the relatively new field of highway salvage archeology, and to contribute to a primer for others working in this area. Some may consider it foolish to attempt such a task after just one experience, but a job as unusual as this one should be documented. The only thing that did not happen was injury or death.

## ARCHEOLOGICAL OBSERVATION

The archeologist-observer developed methodology, rapprochement, and routine on-the-spot as the job progressed. He wore a hard hat at all times and carried a small knapsack containing camera, tape recorder, clipboard, trowel, whisk broom, etc. He usually carried an entrenching tool or shovel as well.

Historical objects were bagged, put into the knapsack, or cached in order to be picked up later by vehicle (no funds were allotted for use of a vehicle). The observer walked the entire length of the project twice daily, a total of about eight miles. He recorded features by photography and drawings. He did not attempt to save any feature within the right-of-way. Stratigraphy was noted in most areas by observation only; more detailed description of the stratigraphy was kept around features.

The site was laid out in large grids according to the city blocks. Artifacts and features were noted within these by using the excellent central system set up for the construction of the highway. There was no attempt to set up a smaller grid system. Inasmuch as the project was a salvage operation, very little attempt



Figure 4-1. View of the Lackawanna Station during clearing and demolition stages. The Morris Canal was located under the railroad bed. (Courtesy G.F.D. Archeology Project, Budd Wilson.)

was made to collect artifacts that were not associated with features or that had been greatly broken or moved by machinery.

The observer realized from the beginning that he needed the workmen's cooperation to get the maximum amount of data from the ground. Lying before the bulldozer would only prove his insanity to his already skeptical audience. He therefore spent much time talking to operating engineers and laborers, explaining the reason for the work and the importance of recording the history and archeology of an earlier working-class population.

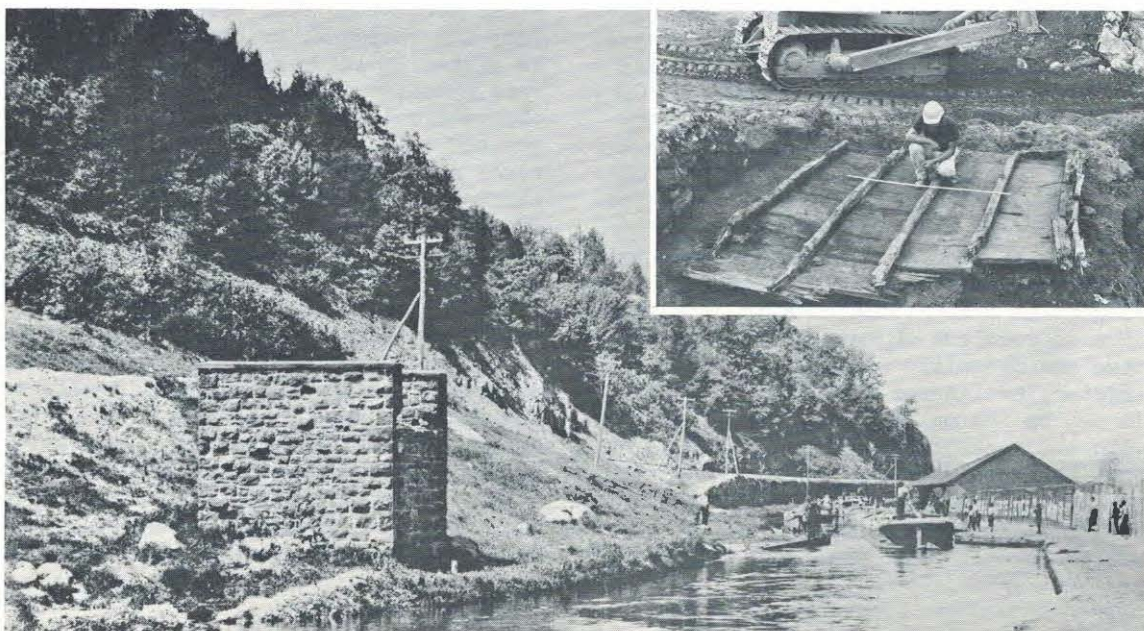
### FEATURES

Although it is not the primary purpose of this report, it would be a mistake not to relate something about the features that

were found. The area within the right-of-way had been a transportation corridor as well as a residential and heavy industrial site. A trail, the Morris Canal, and two railroad systems preceded the construction of the highway (see Figs. 1-1 and 4-1). The residential area was called "Dublin," indicative of the major Irish migration into the area in the 1850's. The industrial complex started near the river in the 1790's and moved southward, engulfing the residential area.

Within the right-of-way, all three aspects of culture were found. The railroad bed still existed, a canal bridge went nowhere, and stone foundations jutting from the ground indicated the location of former houses. Several late industrial buildings were still standing.

Figure 4-2. Section of the Morris Canal below Garret Mountain, at the south end of Pine Street. Inset: Canal boat found in the bed of the Morris Canal, adjacent to the concrete bridge north of the station. (Courtesy of the Paterson Museum; inset by Jerrold Stefl of the G.F.D. Archeology Project.)



The most important archeological finds were a remnant of a canal boat in the Morris Canal and a series of privies in several adjacent Dublin backyards. The boat is the only known example from the Morris Canal, and is similar to those canal boats shown in photographs taken in the late 19th and early 20th centuries (see Fig. 4-2). The privies contained all types of domestic material (see Fig. 4-3). The most notable artifacts were three complete clay tobacco pipes, *ca.* 1850 (Fig. 4-4). One can well imagine the problems of explaining the excavation of a privy to construction workers.

## PROBLEMS

Many difficulties arose from the vagueness of the contract, the heretofore unknown position of archeologist-observer, and the mutual lack of understanding between archeologist and contractor regarding the parameters of their respective jobs. Basic archeological problems remained small, whereas the archeologist became the hobgoblin of the construction company.

The wording of the contract conjures a picture of the archeologist-observer rather like a squirrel on a bluff. By raising his paw against bulldozers, pay-loaders, and pans--no doubt with a trembling tail--this squirrel has the awesome authority to stop construction equipment, sneak down to retrieve objects, and take them to his nest.

**Excavation.** The first major problem occurred when the observer visited the site before work actually started. "Excavation" has different meanings for contractors and archeologists. For a contractor, excavation occurs after demolition and clearing. If the archeologist

Figure 4-3. Rear of the houses on Mill Street, behind which the privies were located. (Courtesy G.F.D. Archeology Project, Jerrold Stefl.)

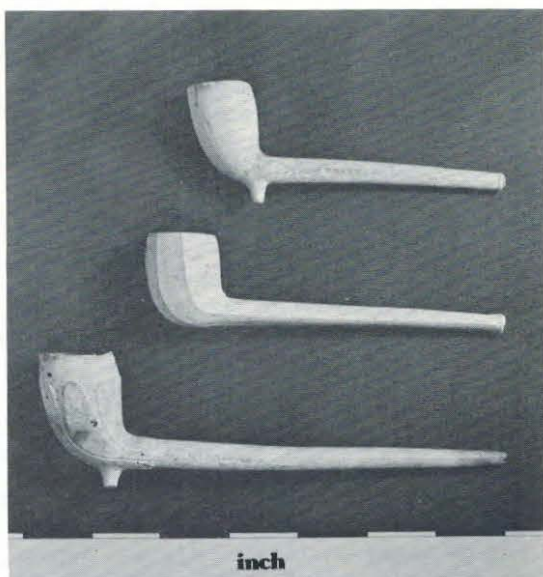


Figure 4-4. Three complete tobacco pipes found in the privies behind the Mill Street houses. (Courtesy G.F.D. Archeology Project, Lynda de Victoria.)

had waited to begin until the contractor's excavation phase had ended, the entire archeological resource would have been lost.

With some major persuasion, coupled with the fact that he had wandered into an important meeting, the archeologist was permitted to observe during demolition and clearing.

The word "excavation" caused further complications because features and/or artifacts had to be located by machinery. It seemed mystical to some that the observer knew where objects would be found (having done some historical research). Since the contractor's excavation had to occur before the archeologist could investigate an area, many locations within the right-of-way that were not actually disturbed by the contractor's machinery could not be checked, although historical documentation proved them to be house sites. However, on several occasions an operator was requested to move beyond the exact area or to dig a little deeper.

The word "excavation" caused still another problem when the labor unions went on strike. There was no excavating; thus, there was no work for the archeologist-observer. Such periods, if prolonged, could cause changes in the archeologist's diet.

**Operations.** Although the archeologist-observer had worked in construction and had studied civil engineering, he was not fully aware of road-building operations.

Sometimes as many as 30 pieces of equipment in a two-mile stretch made it almost impossible for the archeologist to cover the entire job. At times it became necessary to use a van. Consequently, much of the work became cursory, with in-depth studies being done in areas where large concentrations of artifacts were found. The archeologist-observer requested to know, but was never informed, where the equipment was going to operate, the number of operations scheduled, or the length of time an operation would take.

Construction equipment by design seldom works in a manner that is beneficial to the archeologist. Bulldozers push, payloaders dig, and pans scrape. All leave evidence of what has just been lost. Bulldozers ripple a wall several feet in front of them; payloaders dig and deposit into trucks a waterfall of cultural material; and pans make dust of brick and stone walls, removing objects to other locations.

Overtime for the operators of equipment became a problem when the contractor fell behind schedule. The work day was increased an hour, and some Saturdays were also worked. The archeologist-observer was not permitted to increase his hours accordingly. However, for a short time that a tunnel crew was working two shifts, a second archeologist-observer was employed. Once the tunnel had entered geological debris and bedrock, this second position was halted. The daytime position continued because other daytime operations did also.

Noise. Noise was a major problem, mostly created by the payloaders. One day when two were working on either side of an excavation, the observer had to stop work until one of them ceased to operate. Demolition by a 7-ton wrecking ball was also hard on the eardrums. Blasting was done in bedrock, but since all cultural material had been removed from the blasting areas, it was not necessary to be nearby.

Dust. Dust is a major problem on a construction site. Many times during the summer a special truck sprayed the area where the men were working. The difficulty to the archeologist-observer was in using cameras and tape recorders. Dust was such a problem that it was necessary to stop using the tape recorder after less than a month. Since the site had to be recorded photographically, special care was given to the camera. All the archeologist-observer's equipment was his own.

Weather. Inclement or cold weather often stops construction work. Fortun-

ately, there was only one rainy day during the summer. During the winter, the project closed down except for the tunnel. Had the tunnel operation not been continuing, the archeologist-observer would have been out of work.

Contract. The contract proved to be a major problem before the work was over. As any archeologist knows, his excavation phase is only one part of the time needed to complete a project. No time was requested for research, analysis, conservation, or preparation of a report. However, over 10,000 artifacts were not expected to be found.

During the winter, when only the tunnel operation was in progress, some research was done and some artifacts were cataloged. This work was accomplished because the tunnel, not yet in bedrock, did not necessitate fulltime observation.

The archeologist-observer was told that for the Federal Department of Transportation to support his position, he would have to find artifacts on a daily basis. He did not. The observer was not questioned further, but he was prepared to have an excuse and even a daily log of artifacts.

When a major feature was found--i.e., the Morris Canal boat--it was necessary to use volunteer help because the archeological crew working in the Historic District could not work under another category in the contract--i.e., that of archeologist-observer. Excavation of the boat would have taken three times as long if volunteers could not have been used.

Although not in the contract, the construction company on several occasions assisted the archeologist by removing overburden, moving artifacts, and requesting special uses of power equipment within the right-of-way. Major problems developed when the archeological work within the Historic District curtailed construction of the drain tunnel; politeness then developed into verbal feuds. Fortunately, by that time the work of the archeologist-observer was over.

## PEOPLE

Although some people were "problems" and as such should be discussed in that section, their reasons were most often justified considering their jobs, and it is best not to discuss them. There were never any what might be considered personality conflicts with anyone on the job. The archeologist had a ponytail under his hard hat. However, there existed an undertone that reached audibility when construction people found out that the ar-

cheologist could actually stop the job. During major archeological excavations, there was plenty of other adjacent work for the machines to do. It was never necessary to stop the job, or any part of it, for more than a few minutes.

Several types of people were involved in the road building: planners, designers, engineers, state and construction company laborers and operating engineers, and the ever-present sidewalk superintendents, including young boys. The most important were the state inspectors, who actually reported artifacts and features in areas that the observer could not cover.

Almost without exception, people showed an interest in what was happening. Most had some knowledge about what was found and several had first-hand knowledge about the area. True, most people believed the observer to be a bottle collector. It was hard to explain that broken bottles are as important as complete ones. Although it was explained that the property belonged to the State and that therefore objects found on it were owned by the State, many artifacts were stolen. Over 400 ft. of 12-in. pipe was recorded to location and sent off to the junkyard for coffee money. Bottles, copper wire, and a wrecked 1971 Buick were taken.

A large portion of time was spent in explaining the function and scope of the archeologist-observer's job to workmen and bystanders. Several brought objects from home, and possibly from the site, for identification. Much oral history was obtained from these people. A Russian

marveled at the 18-cu. yd. capacity of the pan; in Siberia, he had to move 3 cu. yd. per day to get a meal. An Italian best understood the importance of archeology; he grew up in Rome. A Portuguese was well aware that his ancestors preceded French and English colonists in North America.

Men on the job wore yellow hard hats if laborers, blue if operating engineers, red if mechanics, green if supervisors, and silver if professionals. The man who flew in by helicopter once a week wore a gold helmet. The observer wore yellow until someone sprayed it purple.

## CONCLUSIONS

The real importance of the Paterson Salvage Archeology Project might well be that archeologist and engineer have a better understanding of each other's work--that henceforth archeological resource input might occur during the planning stages of road building. The importance of the artifact assemblages or of individual artifacts can only be evaluated after more complete study is done. Their importance to the history of the period, or to its processes, will be the topic of yet another report.

A major breakthrough has been the realization that the functions within a city can be understood by archeologists as well as by engineers and planners, and that dirt is not the domain of the immigrant laborer alone. In archeology, we all wear yellow hard hats.