2471x
Geismar
1993

Stage 1b Field Testing
The Harlem River Yard Transportation
and Distribution Center Site
(Block 2260 Lot 62 and Block 3543 Lots 1 and 2)
Bronx, New York

Prepared for TAMS Consultants, Inc.

Prepared by Joan H. Geismar, Ph.D.

April 1993

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ABSTRACT

Stage 1b testing was undertaken at The Harlem River Yard Transportation and Distribution Center Site (Block 2260 Lot 62 and Block 3543 Lots 1 and 2), Bronx, New York, on February 11, 17, and March 10, 1993. Limited testing was done in two locations, Area G1 and Area G2. In Area G2, it verified that foundations of the home of Gouverneur Morris II had been destroyed, and indeed removed, probably during earlier grading. Area G1 was tested for evidence of the 18th century home of the Honorable Gouverneur Morris (Gouverneur II's father) and the Ranachqua Site, a Native American site. While no evidence of any Native American use or occupation was found, and a rock fill was documented, testing revealed two seemingly parallel stone foundation-like elements purposely cut into rock outcrops or bedrock in the northern part of the test area. Limited access prevented these features from being delimited or identified. In addition, a single cut boulder was noted in the southwest corner of this same test area at a depth of 3 ft. below the surface. This also could not be investigated and, like the cut rock outcrop or bedrock, remains unexplained.

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Graphics: Amy Geller

Photos as credited

INTRODUCTORY SUMMARY

On February 11, 1993, after a conversation with Mary Ivey of the New York State DOT Environmental Bureau, and following a field plan dated February 2, 1993 (Exhibit 1), but modified to accommodate existing conditions described below, a three-day field testing program (Stage 1b field testing) was undertaken at the Harlem River Yard site in the Bronx. It was carried out under the direction of Joan H. Geismar, Ph.D., assisted by Shelly Spritzer and Barbara Davis. A representative from TAMS Consultants, Inc., either Ted Yen or James J. Coyle, were on the site for at least part of each test day.

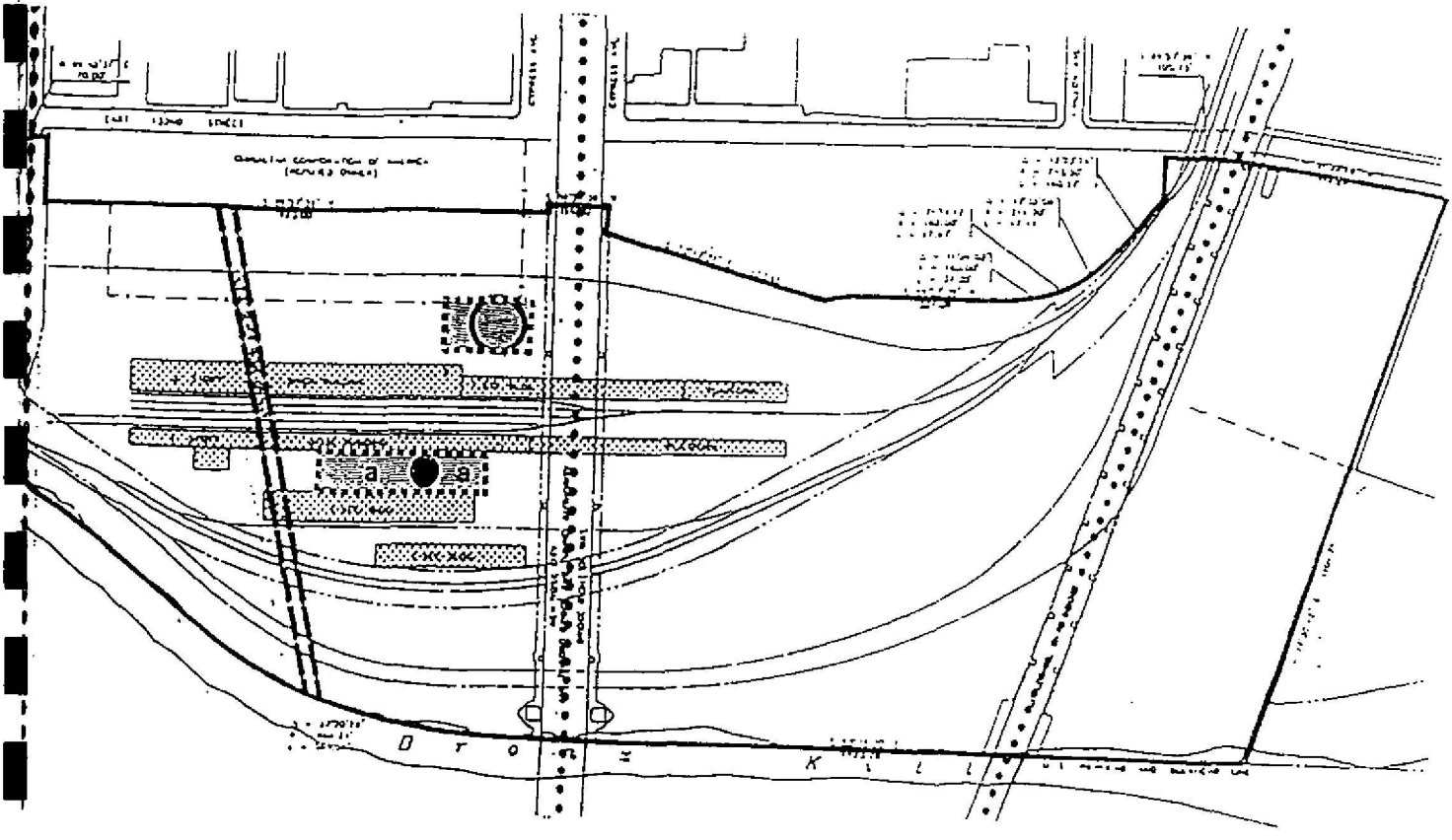
Prior to testing, a backhoe and hammer were used to break up the concrete paving covering both test areas (e.g., Exhibit 2). At the beginning of the testing program, the backhoe was used to transfer the concrete to a truck for removal (Exhibit 3), and monitored backhoe testing began. Its main goal was to determine if there is any archaeological evidence of 18th century foundations for the Honorable Gouverneur Morris's mansion. This building was reconstructed in 1799 on older foundations, and is documented on two 19th-century survey maps (Randel 1816; Findlay 1850 in Robinson 1888) illustrated in the Stage 1a documentary report (Geismar 1992:74, 75). A second concern was to determine if there was any evidence of the Native American Ranachqua Site in the vicinity of this foundation. And finally, the third concern was to verify the destruction by grading of the home of Morris's son, Gouverneur II. It should be noted that the former location of Gouverneur II's home is identified by maps, photos, and written accounts. What is not clear is whether this building and the home of his father, the Honorable Gouverneur Morris, were one and the same structure that was modified in the 19th century (see Geismar 1992:73-80). If any part of the son's house foundation survived the grading of the knoll on which it stood, its date of construction might be determined through artifacts recovered from builders' trenches or by some other means. This was information that would help determine whether or not there were two Morris houses east of St. Ann's Avenue as shown on the surveys rather than one as it appears in the literature.

The two test areas were designated Test Area G1, the proposed site of the Honorable Gouverneur Morris's mansion and possibly the Ranachqua Site, and Test Area G2, the former site of the home of Gouverneur II. In Test Area G1, six pits (one of them with an extension) or trenches were opened in a 48 by 62-ft. test area that later was extended by a 60 by 15-ft. corridor, while in Test Area G2 one long (115-ft.) trench was excavated (Exhibit 4).

Conditions were markedly different in the two test areas: Area G1 became inundated during testing and contained rock rubble and large rock outcrops or bedrock, while G2 comprised a sandy soil with areas of silt, that was relatively dry but somewhat unstable. Two large glacial boulders were encountered in the test trench in Area G2 (see Exhibit 13). Both test areas were virtually devoid of artifacts, but Area G1, which mainly comprised a rock-rubble fill just below the concrete, contained more debris--some brick fragments, some bottle glass, and a lamb bone to name a few--than Area G2. Area G2 was identified

HARLEM RIVER YARD Existing Conditions (based on TAMS 1989) with Potential Areas of Sensitivity and Proposed Test Areas Indicated (2/93)

1



proposed test area (concrete to be removed)

property line

match line (St. Ann's Ave.)

standing structure

sewer easement/utility ROW

bridge

X Lewis Morris Manor (?) site (approx.)

Gouverneur Morris II house site (approx.)

Hon. Gouverneur Morris Mansion site (?) (approx.)

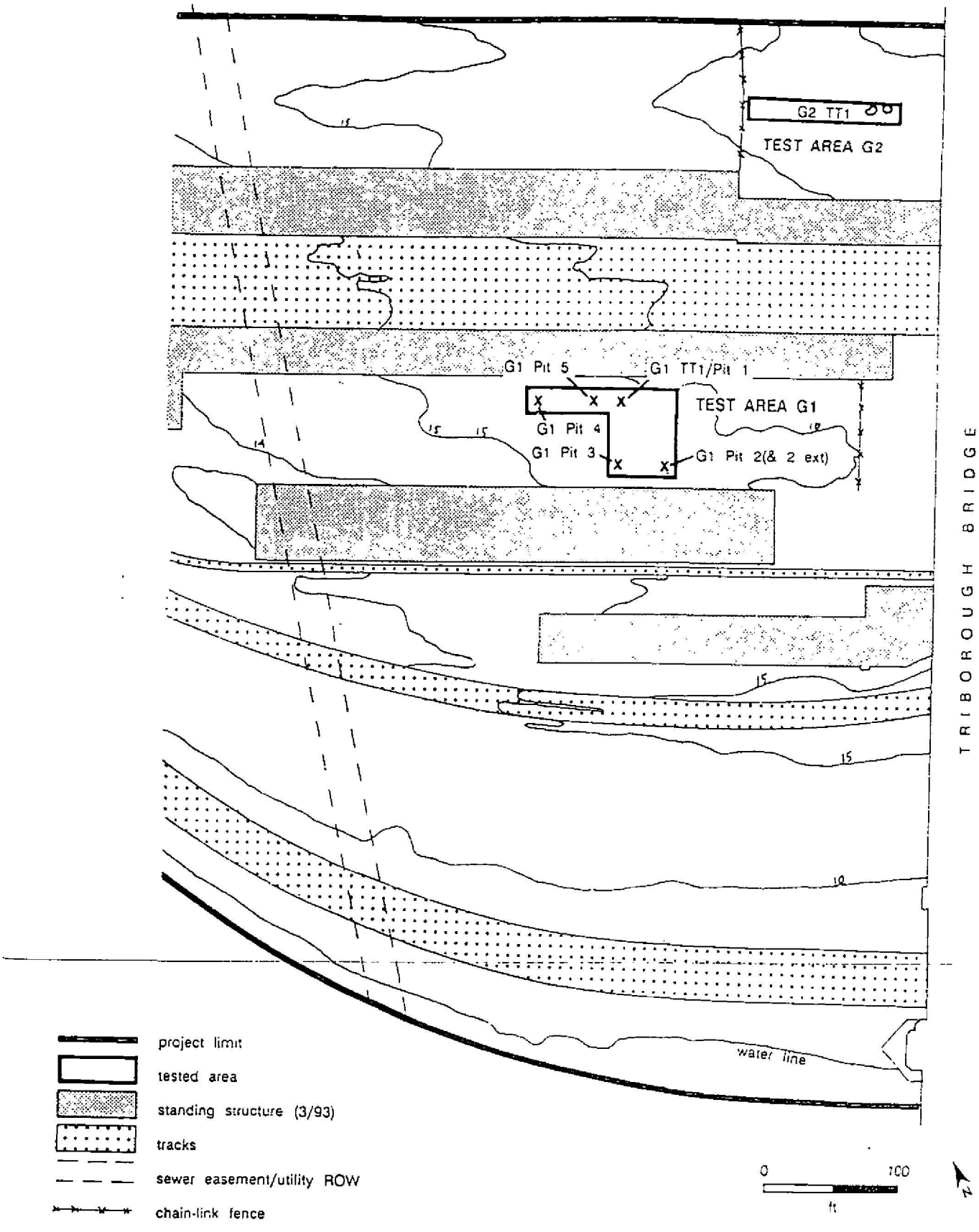
a Ranachqua Site area

0 400

ft.

2 View looking west across Test Area G1 where the backhoe used for testing is visible in the center rear. A trailer truck is parked nearby; truck access made it necessary to limit the test area. (photo Geismar 2/11/93)

3 Removing broken concrete in Test Area G1. View is looking east toward the Triborough (near background) and the Little Hellgate (far background) bridges. (photo Geismar 2/11/93)



(contour lines as indicated, based on map of Existing Conditions, TAMS Consultants, Inc. Dwg. 5, 5/19/92)

as a glacial till with its upper soil horizons removed. The sole test trench in this area (G1 TT1) was virtually artifact free.

Because of bad weather and the planned absence of the writer, the three field days were not consecutive (February 11, 17, and March 10 were spent at the site). During that time rain, melting snow, and natural groundwater levels caused Area G1 to be inundated, a condition that was undoubtedly made worse by the tidal action of the nearby Bronx Kill. Two attempts at pumping were unsuccessful (one was with a pump that was too small, the other with a larger pump that could not function in the mud). The resulting water and mud conditions made it difficult to interpret what was observed in this test area. Moreover, continually rising water made it impossible to enter the trenches or pits to hand clear with shovel or trowel.

A difference was noted between what was found during testing and what is recorded in the only available soil boring pertinent to Test Area G1: the boring log indicated a rock or boulder at 2 to 3 1/2 ft., then 4 ft. of gravelly sand or silt, yet another rock or boulder at 7 1/2 to 9 ft., and top of rock at 11 1/2 ft. (Soil Boring DAC-561; see Appendix). The test trench, expanded into a pit dug in the vicinity of the boring as indicated on the boring plan,* revealed a concentration of rock fill to about 5 ft. where a large rock outcrop, glacial boulder, or bedrock was encountered. Water was also reached at this depth. None of the rocks in this fill appear to be dressed, but a foundation-like strip cut into the bedrock was observed in the initial trenching and was remembered as similar to, but larger than, one subsequently found in G1 Pit 4 and later identified from photos as a man-made feature (Hornstein 1993:personal communication; see discussion below and G1 Pit 4). Another cut rock was also noted under the western limit of G1 Pit 3, but this one was free-standing (see G1 Pit 3).

As noted above, the relatively large test area originally proposed for Area G1 had to be modified; this was to avoid interference with commercial tenants who currently use part of the proposed test area for loading and unloading large trailer trucks. The resulting reduction in the test area prevented testing the limits of one of the two man-made foundation-like features encountered in the northwestern part of the test area that was cut into the rock. At the time, neither measurements nor photos were taken of the first of these features, the one found in G1 TT 1/G1 Pit 1, since it was expected that it would be traced further and recorded. This turned out to be impossible because of the water condition that developed. However, the second, apparently similar but smaller stone feature later uncovered in G1 Pit 4 was photographed (see Exhibit 12) when it was located in a corridor that extended the northern part of the test area to the west. It appeared that this feature paralleled the one found in G1 Pit 1, but this has not been confirmed, nor has the size, function, or age of either feature been established. While their limit may be determined through further testing, their use and age conceivably may never be known.

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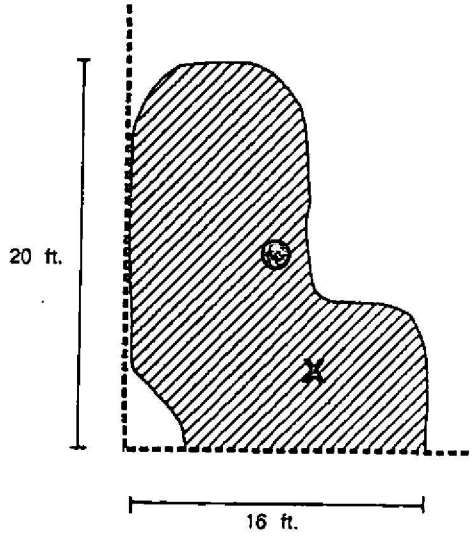
* A hole drilled through a flat boulder in G1 Pit 3 suggests that Boring DAC-651 may actually have been drilled in this area and not as shown on the boring plan (see Exhibit 6). This would explain the discrepancy in subsurface conditions found during testing.

The third cut rock, actually a boulder over 2 ft. high and 4 ft. long, was observed partially submerged in water along the western edge of G1 Pit 3 in the southeastern part of the test area. This boulder, located 3 ft. below the ground surface at the eastern edge of the test unit where most of it was still under intact concrete and fill, may have been part of the rubble fill, but it also may have been a component of a building foundation or other weight-bearing feature (see Exhibit 8). Since so little of it was uncovered, it is impossible to evaluate its significance.

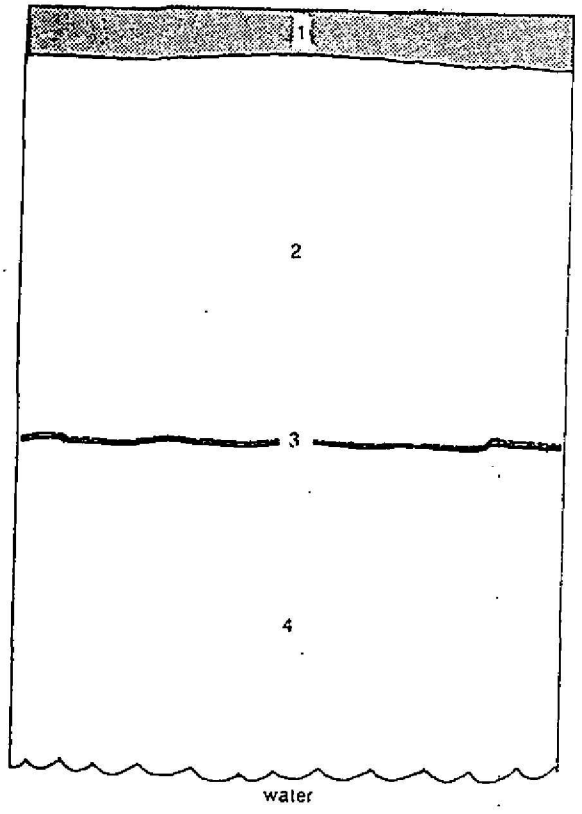
FIELD METHODS AND FINDINGS (see Field Map and Location Plan, Exhibit 4)
Area G1

G1 TT 1/G1 Pit 1. On February 11, after clearing concrete pavement previously broken up to facilitate removal, a backhoe was used to open a test trench (G1 TT 1). This was located in the northwest corner of a rectangle of approximately 62 by 48 ft. that initially comprised Test Area G1 after it was modified to accommodate the activities of a commercial tenant. Rock and boulder-laden fill was found under the concrete paving to a depth of about 5 1/2 ft. (5.66 ft.) when a rock outcrop or bedrock was reached. Since a boring mapped in this vicinity (see footnote 1 and Exhibit 5) had suggested a series of boulders separated by soil to a depth of 7 1/2 ft., this rock outcrop was completely unexpected. It was in this trench that the first foundation-like feature mentioned above was found cut into the rock. An attempt was made to determine the areal extent of the rock outcrop, and the trench became an irregularly shaped pit (G1 Pit 1) that was approximately 16 by 20 ft. and covered the entire northwestern corner of the test area (Exhibits 5 and 6). Further testing determined that the rock outcrop dipped from approximately 3 ft. to just over 5 1/2 ft. in a southerly direction.

G1 Pit 2 and Extension. Testing then moved to the southeast corner of the test area where backhoe excavation revealed very different subsurface conditions. Here rock and soil were found above a layer of asphalt or creosote lying approximately 4 1/2 ft. below the surface (Exhibit 7). This fill level also contained a few embossed brick fragments (one of them appeared to be a "ROSE" brick), the fragmented top of a ceramic bottle, and an animal bone later identified as the femur of a small but mature sheep (Ovis/Capra) by Barbara Davis--probably a remnant of someone's lunch or dinner. This pit, designated G1 Pit 2, was excavated to about 9 1/2 ft. It was then extended northward (G1 Pit 2 ext.) to define the extent of the asphalt or creosote layer and to determine if it could be a former surface or roadway, but it appeared to be only a random deposit. Beneath this, some isolated rocks and several flat boulders were encountered, seemingly yet again a fill. In addition, several worked stones were observed, one from the G1 Pit 2 extension identified as a curbing stone; another recovered from about 2 1/2 to 3 ft. below the surface was a window lintel, but both came from the level above the asphalt or creosote and were also apparently part of the fill. None of the rocks and boulders found below the asphalt appeared to be cut or worked. As testing proceeded, water became a problem (Exhibit 8), but excavation resulted in a pit of approximately 10 by 15 ft.



6 Test Area G1 Pit 1 at the end of excavation; the view is to the southeast. Note water in the bottom of the pit and tumbled boulders. Bedrock and outcrops seen in the excavation are now obscured by the water. (photo Geismar 2/11/93)

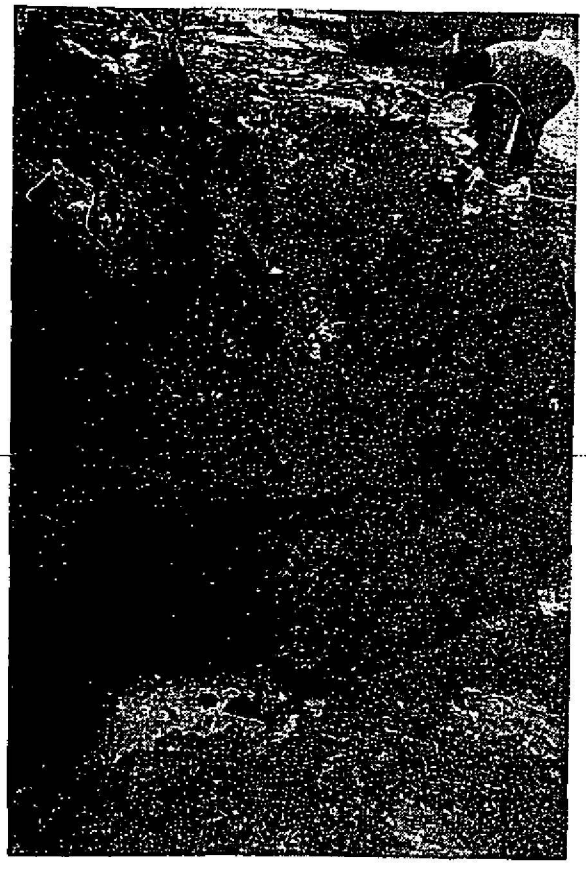


1 cement pavement

2 rock with some artifacts

3 asphalt or creosote deposit

4 rock and boulder fill

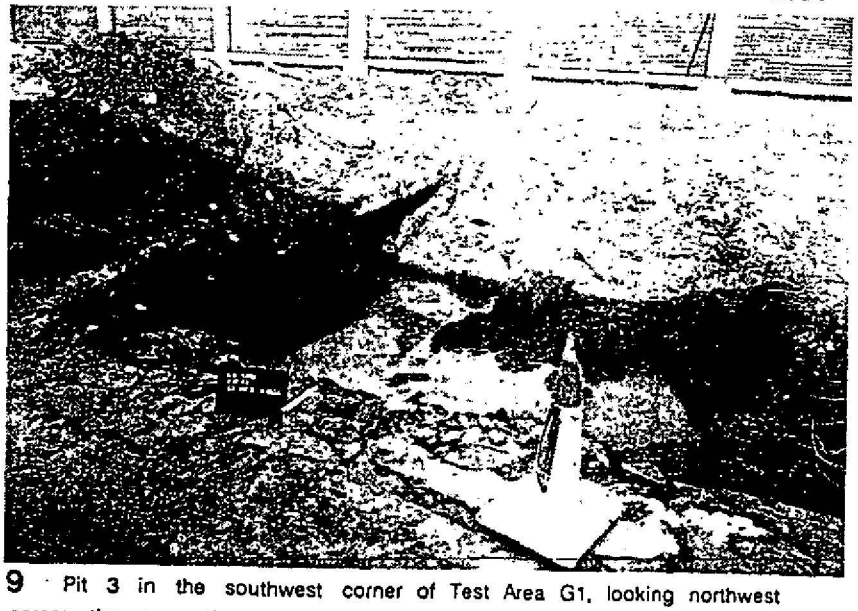


8 Test Area G1 Pit 2, south wall. A layer of asphalt or creosote is visible about 4 1/2 ft. below the surface (arrow) and the water that ultimately inundated much of the excavation can be seen at the bottom of the pit. (photo Geismar 2/11/93)

G1 Pit 3. While it had been the intension to reopen G1 Pit 2, weather conditions--severe cold and wind--and water in the excavation made field work on this second field day (February 17) quite difficult. When a water pump proved inadequate, this previously-dug pit was abandoned and a 16 by 22 ft. pit (G1 Pit 3) was placed in the southwestern corner of the test area.

Subsurface conditions in this pit were different from those found in either Pits 1 or 2. Many large boulders were encountered immediately under the concrete, but only one appeared to be worked or cut or could possibly have been a foundation stone. This large, flat rock protruded from the western edge of the test area, about 3 ft. below the concrete, but most of it was situated beyond the test area under unbroken pavement. Since this part of the test area could not be expanded westward without interfering with the operation of the aforementioned tenant still on the site, the possible function of this stone has not been identified.

Once again, water was a problem. The pit was photographed (Exhibit 9) and testing in Area G1 was suspended with the expectation that it would be resumed when we returned with a more efficient pump. A ten-day hiatus was planned. During that time, a corridor of pavement was to prepared to extend testing in the northern part of Test Area G1. This corridor was to be placed so that it would not interfere with the operations of the site's commercial tenant.



9 · Pit 3 in the southwest corner of Test Area G1, looking northwest across the excavation and test area. A large, flat boulder that appears to be cut on its east face, its only visible surface, is located in the west wall of the excavation (arrow). Note water at the bottom of the pit. (photo Geismar 2/17/93)

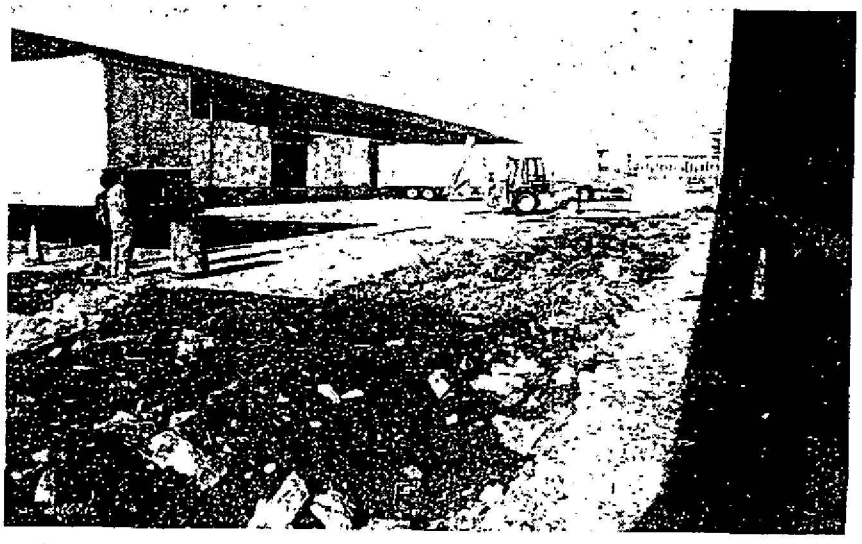
Area G2

At this point, testing moved to Test Area G2 where approximately 120 ft. of pavement had been prepared for removal in an east-west direction. The backhoe operator, Kevin Maloney, assisted by Michael Furer, transferred the broken concrete to a truck and it was removed from the test area. Excavation began, proceeding from west to east.

While this was in progress, a mishap occurred that involved a dump truck used by a construction company working under the nearby Triborough Bridge, and work had to stop for the day. Because of the circumstances, no record was made of the excavation begun in this area, although Kevin Maloney, the backhoe operator, reported that he had excavated to about 8 ft. in unstable sand in the most westerly portion of the trench. This was backfilled and excavation temporarily halted till early March.

Area G1

Testing resumed on March 10. The concrete had been broken up as planned and a 60 by 15-ft. corridor had been readied for testing in Test Area G1 (Exhibit 10).



10 Western side of Test Area G1 with pavement in the extended test corridor broken for removal. The large trailer trucks that were a concern during testing are clearly visible. The view is to the west. (photo Geismar 3/10/93)

G1 Pit 1 was reopened, and water was immediately encountered. A sump hole was dug in the eastern part of the pit, but unfortunately the larger pump used to attempt dewatering did not function properly (Exhibit 11), and water continued to fill the excavation. Another

11 Attempting to create a sump in Test Area G1 where Pit 1 was originally excavated. Unfortunately, the pump did not function properly and could not draw water from the rest of the test area as intended. The large hose is an water outtake hose from the pump. (photo Geismar 3/10/93)

pit, later designated G1 Pit 5, was opened just west of G1 Pit 1, but it was too inundated to reveal very much about subsurface conditions and it was abandoned.

G1 Pit 4. This 15 by 18-ft. pit was located at the extreme western end of the 60 by 15-ft. test corridor. While this excavation was initially dry, water was anticipated to be a problem. A rock outcrop was encountered about 2 1/2 ft. below grade, and once again part of it had been cut to create a strip of rock with an east and west face and a flattened surface similar to the cut rock seen in G1 Pit 1. This feature appeared to be smaller than the one found earlier, but, since it continued under the pavement to the south (Exhibit 12), its extent is unknown.

12 Test Area G1 Pit 4. View is looking south across the pit. A small section of stone (arrow) that may be a foundation of some sort is cut into the shallow rock outcrop or bedrock and apparently extends under the pavement to the south. Note water on the left seeping into the excavation. (photo Geismar 3/10/93)

It was a question whether this foundation-like feature was natural or something accidentally fashioned by the backhoe, but neither seemed likely. An attempt was made to consult with a geologist to explain what this cut rock represented, but the two who were contacted, Dr. Sidney Hornstein of the American Museum of Natural History and a staff geologist from TAMS Consultants, Inc., were both unavailable. Based on photographs and a verbal description, it was later determined by Dr. Hornstein that this cut rock it was definitely not a natural occurrence nor could it be an effect of the backhoe, but that it was a man-made feature.

As expected, water began to fill the excavation (see Exhibit 12); it was photographed and was to be filled later in the day. With this, testing once again moved to Test Area G2.

Test Area G2

Test Trench (TT) G2 1 was reopened, and excavation proceeded from west to east. Here a sandy soil was encountered that contained little or no artifactual material. The trench was ultimately 115 ft.

long and its depth ranged from 5 1/2 to 9 1/2 ft., most of between 6 1/2 to 7 ft. As noted previously by the backhoe operator, an unstable sand was found in the western part of the trench, and water seeped in. Rock outcrops were, or bedrock was, found at about 9 ft. below the surface in this end of the trench. As excavation proceeded eastward, various stones, rocks, and small boulders were encountered, with their frequency increasing as the excavation moved eastward. At a point 70 ft. east of the western end, a concentration of rocks was noted at a depth of 2.8 to 3 ft. below the surface, and a large glacial boulder was encountered 24 ft. further east. A second boulder was exposed 11 ft. further east, and dense silt was noted between the two (the more westerly boulder was 2 ft. below the ground surface, the more easterly 1 1/2 ft. below it). The trench extended 10 ft. beyond this second boulder, and here the excavation was only taken to 5 1/2 ft., the shallowest point in the trench. A surface soil horizon was missing throughout the trench (Exhibit 13).

13 Test Area G2 TT 1 looking west. A sandy soil with some stones, rocks, and the two large glacial boulders shown here was uncovered in this 115-ft. trench located where the home of Gouverneur Morris II stood until 1905. (photo Geismar 3/10/93)

As noted above, artifactual material was notably sparse in this trench. During the course of the excavation, only three small brick fragments, one wire nail, and three thin brick-like sherds with a raised mid-line were noted in the backdirt, and a slate fragment with an incised line with dots at each end (⟵) was saved. A ceramic fragment, possibly part of a cup handle, was found in backdirt from the eastern part of the trench at a depth of about 6 1/2 ft. Although this small fragment suggests a fill, it may be an intrusion from above.

The paucity of brick and total lack of wood or window glass is notable since this 115-ft. trench, dug to a depth ranging from 5 1/2

to 9 1/2 ft., crossed the mapped location of the large house belonging to Gouverneur Morris II. This test verifies that past grading of the knoll where this structure once stood destroyed all evidence of the house and its foundations.

CONCLUSIONS

Stage 1b archaeological testing of the Harlem River Yard Transportation and Distribution Center Site verifies the elimination of traces of the structure and foundations of the home occupied by Gouverneur Morris II. It also did not uncover any evidence of the Ranachqua Site in Test Area G1 where it was possible that components of this Native American site might have been found.

With respect to the Honorable Gouverneur Morris mansion, no definitive features or artifacts were found where this house may have stood. While filling and extensive disturbance were documented, two man-made features, perhaps running parallel to each other, were apparently cut into shallow rock outcrops in the northern part of the test area (Test Area G1). Just when and for what purpose these foundation-like features were fashioned remains unknown, and, indeed may be unknowable. On the other hand, test conditions--weather, water, and limited access--were such that these features could not be traced, nor is it known if there are any others like them or if they represent some sort of patterned construction. What appears to be a free-standing cut stone located on the southwestern periphery of the test area at a depth of 3 ft. has also not been fully investigated. However, the proposed construction in this area of the site is such that these features would not be affected since (1) most of the area excavated will be covered by a parking lot, (2) approximately 3 ft. of new fill will be placed over this area, and (3) the flower market structure to be built in the area will be constructed on piles and not on conventional foundations that need to be excavated. If an alternative method of construction that requires excavation is ultimately chosen, the issue of subsurface disturbance will be reinvestigated.

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(2/76)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
SOIL MECHANICS BUREAU
SUBSURFACE EXPLORATION LOG

REGION 11
COUNTY Bronx
PIN S 935.56
PROJECT Harlem River Yard
SOIL SERIES
COORD. LOC.
DATE START 3-6-85 DATE FINISH 8-7-85

HOLE DAC 561
LINE Mainline Sta.
STA 170+25 (Reloc.
OFFSET 480'L
SURF. ELEV. 12.33
DEPTH TO WATER 4'

CASING O.D. 3½" I.D. 3" WEIGHT OF HAMMER - CASING 300 LBS. HAMMER FALL - CASING 18"
SAMPLER O.D. 2" I.D. 1 3/8" WEIGHT OF HAMMER - SAMPLER 140 LBS. HAMMER FALL - SAMPLER 30"

BELOW SURFACE	BLOWS ON CASING	SAMPLE NO.	BLOWS ON SAMPLER 0/.5	.5/1.0	1.0/1.5	1.5/2.0	DESCRIPTION OF SOIL AND ROCK	MOIST CONT %
0		J-1	10				Br., silty fine SAND (M-NPL)	8
1	10			18				
					18			
2	14	J-2	16				Br., silty fine SAND, gravelly w/root hairs (M-NPL)	9
				40				
3	30						Boulder	
	90							
4			50/1"					
	40							
5		J-3	43				Br., fine gravelly SAND w/mica (M-NPL)	15
	44			50				
					29			
6	37	J-4	30				Br., gravelly SILT, sandy w/mica (M-NPL)	19
				45				
7	53				105			
8	84						Boulder	
9	51							
		J-5	36				Br., silty SAND, gravelly w/mica (M-NPL)	16
10				19				
					18			
		J-6	16				Br., sandy SILT, gravelly w/mica (M-NPL)	15
	Csg			40			Top of Rock @ 11'6"	
					50/1"		8X	
			50/1"					
	Spud	C-1 11'6" to 16'6"						
		Length of Run 60"						
		Rec.				80%		
		# of pcs.				13		
15								
							Bottom of Hole @ 16'6"	

Source: DOT Borings, 1985. Full Freight Access Program, South Bronx-Oak Point Link. Contract IA. Initial Stage, Harlem River Yard Intermodal Terminal, Bronx County. Capital Project I. D. No. 59356. Andrews and Clark, Consulting Engineers, 1986.