

ARCHAEOLOGICAL SURVEYS

IMLAY AND CONOVER STREETS
IN THE RED HOOK SECTION
BROOKLYN, NEW YORK

for

Mason & Hanger-Silas Mason Co., Inc.
under their contract No. 213085

with

Department of Water Resources
City of New York

by

Ralph S. Solecki, Phd.
597 Piermont Road
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Nov. 14, 1976


597 Piermont Road
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Mr. August Matzdorf, P.E.
Area Manager
Mason and Hanger-Silas Mason Co.
437 Madison Avenue
New York City, New York, 10022

Dear Mr. Matzdorf,

I am enclosing my report on Project 2a, Archaeological Surveys Red Hook WPCP. I have spent the time I have allotted myself (5 days) on this archaeological survey, including field time, research time, and write up time. As I have indicated to you in my resumé, I do not see anything of archaeological or historical nature which will be adversely affected by the proposed cut for the pipeline.

Very sincerely yours,


Ralph S. Sorecki, Ph.D.

Archaeological Surveys Red Hook WPCP - Summary

In resumé of my library and field researches, I find that the pipe line which is proposed to cut through Conover and Imlay Streets (Project 2A) will have no adverse affect on the archaeology or history of this area. Specifically, this area had never been occupied by any group of prehistoric or historic Indians to the point of actually living there, nor was it occupied by early or even late settlers of Brooklyn for the simple fact that the land lay under water at times. It was part of a marshy island, and as such, was uninhabitable. It was not until the land was filled in toward the middle of the 19th century, with the construction of the Atlantic Docks, that streets and avenues were laid down and paved. The paving was originally done in about 1850, and the lines of the streets essentially followed the same lines mapped during this period. Deep cuts for the pipeline will encounter a fill covering of about five to seven feet, then sterile marine sands of various configurations and compositions.

In my estimation, a Stage Two survey will not be necessary, since to all indications the cut will only reveal sterile soil below the overlying fill, and will not uncover any significant archaeological or historical evidence.

Ralph S. Solecki

Historical Research Red Hook Project 2A

From original government surveys made in 1766 by Lt. Ratzer in the plan of the Village of Brooklyn and Part of Long Island, no inhabitations are shown in the area of our concern. South and east of the present Atlantic Basin was wet, marshy land with several islands. Two islands included within the present environs were Gerretson's and Remsen's Island. From other surveys made in 1776-1777, salt marshes and shorelines are indicated. The present areas of Imlay and Conover streets south of the present Hamilton street were below high tide level, hence all the land surface had to be filled in. According to the more detailed property map showing the estate of Maths. and Nichols. Van Dyke of the 6th ward of the City of Brooklyn, filed April 25, 1836, Conover street ended north of Dikeman street at a channel, and beyond that point, no street lines are indicated. The low water line cut across about the line of continuation of where Conover street would extend. Imlay street (not indicated on the map) would appear to lie between high water line and the low water line. In the Martin's map of younger date, Imlay street is still not shown, but other streets had been laid down on the map. It shows Conover street extending straight across, and Ferris street (west of Conover) is indicated as forming the shoreline between Delevan to Hamilton Streets. The shoreline (presumably high water mark) appears to conform to the earlier 1836 map, with the line drawn between Van Brunt and Richards Streets. Conover and Imlay Streets (the latter not shown) were underwater between Hamilton Street south to Wolcott Street.

Due in large measure to the energies of one individual, Colonel Daniel Richards, the rural character of South Brooklyn was broken in 1840. Under his direction, the newly organized Atlantic Dock Company (which was incorporated for this purpose) began to construct pier and terminal facilities where the Atlantic Basin is today. This company, which was incorporated in 1839, began the task of changing the landscape with the building of the Atlantic Docks in 1841. In March of 1848, Colonel Richards petitioned the city government to open thirty five new streets in the area of the docks. According to the New York Port Authority Publication, progress was evidenced by the construction of seven hundred buildings in the Sixth Ward or South Brooklyn in two years, 1848-1849. More extensive improvements were made in South Brooklyn in following years (1850-1851) with the addition of 12 large warehouses to the Atlantic Docks. These buildings were each five stories high, and measured some 38 feet by 180 feet in ground plan, made of stone. Indicative of the striking changes made in the area, the streets were paved with cobble stones during this time.

The Brooklyn Farm Plan covering the dates 1840 to 1849 graphically witnesses the transfer of lands to the Atlantic Dock Company. According to this map, the line of Commercial Wharf (which is Conover Street extended between William (now Pioneer) and Summit Streets) lies just beyond the edge of the low water line, and Imlay (not shown) and William (Pioneer) Streets fall seaward of the high water line. This corroborates the earlier maps. The high water line roughly follows the course of Van Brunt Street.

On the Butt map of 1846, the Atlantic Dock Basin is shown to have an area of 43 plus acres and was 25 feet deep at low water. Continuing with their improvements, Col. Richards and others were authorized in 1856 to build docks, wharves, bulkheads, piers and basins on the land under water in front of their lands. On the 1856 map, Imlay Street had been called Hudson Street.

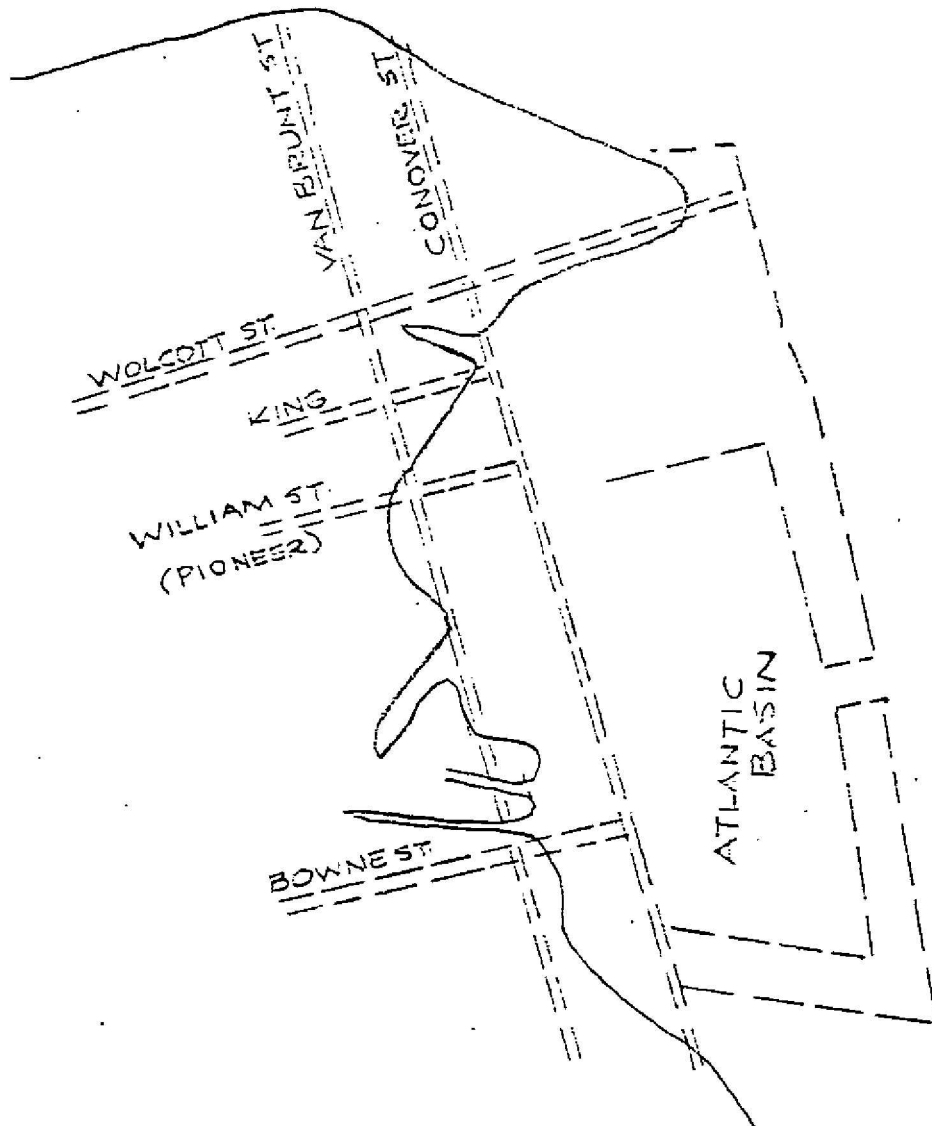
According to Robinson's Atlas of 1886, William Street (now Pioneer) ran into a channel between Gerretson Island on the north and land belonging to Van Dyke to the south. This had to be filled in, but for any construction activity in the vicinity of Pioneer Street, it would appear that the presence of this old channel should merit special attention. According to the map, a six inch pipeline was shown laid down in Imlay, Pioneer (William) and Conover Streets. The Atlantic Dock Co., Franklin Storehouses, and Commercial Stores are shown between Pioneer (William) Street and Bowne Street, and between Commercial Wharf and Imlay Streets. The area is shown built up with storehouses, factories and a few residential buildings plus empty lots. Instead of being called Ward 6, the new appellation of this area is Ward 12, Section 2 (see also the Atlas of Brooklyn, Vol. 1, 1916). Double railroad tracks are shown on the 1916 map extending between Pioneer and Verona Streets on Commercial Wharf. Pioneer street has superceded William Street, which is in brackets. The warehouses in the area are the New York Dock Co., lying between Pioneer and Commerce Avenues, and Montgomery Dock and Atlantic Co. between Bowne and Commerce.

According to the Port Authority booklet, there was a tremendous volume of trade in grain in the Atlantic Basin during the 1870's. The New York Dock Co.

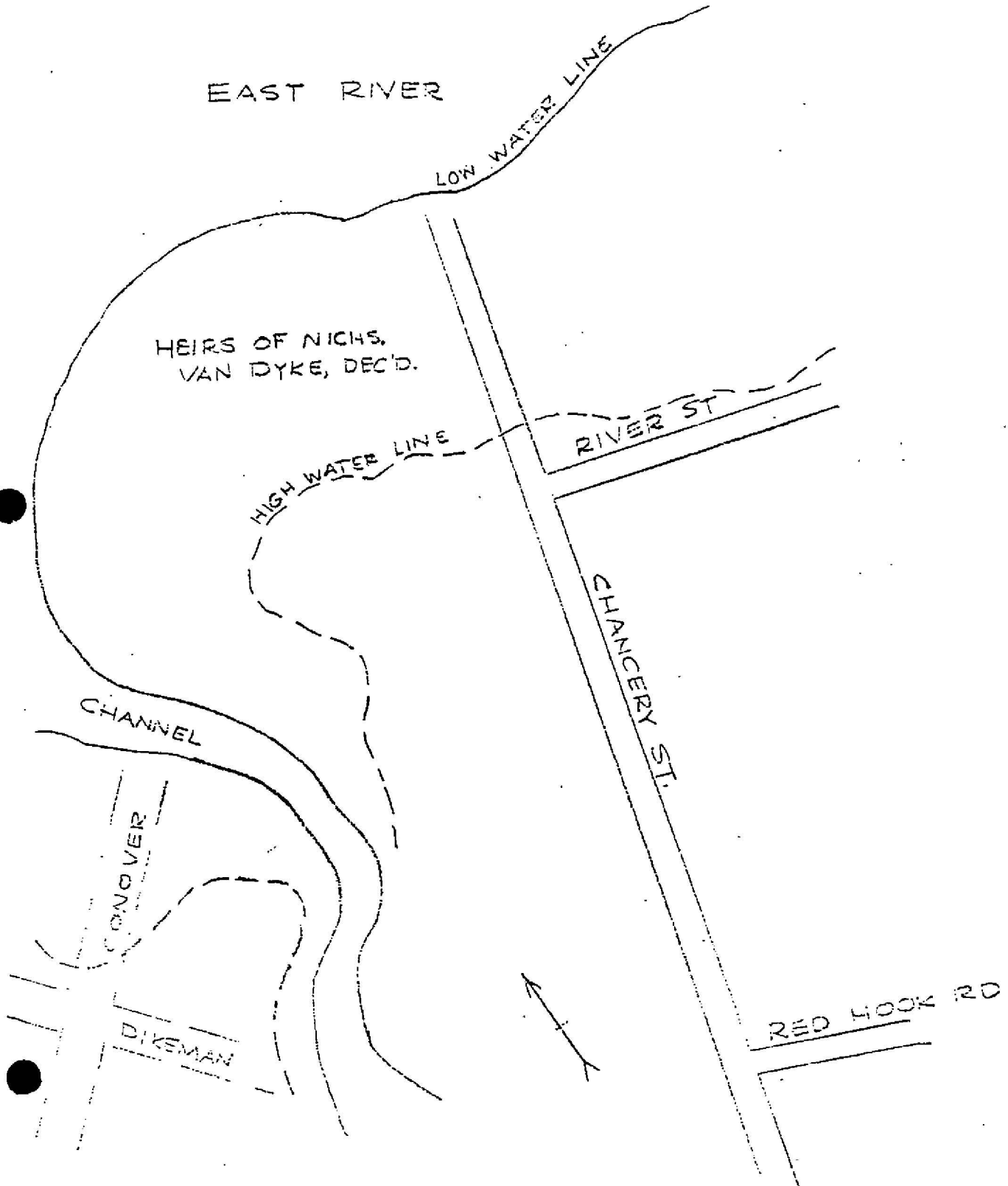
organized in 1901, handled a large share of the business on this waterfront.

The history of the streets involved is interesting from the point of the pavings. In the Brooklyn Compendium compiled by Dikeman in 1870, Conover Street is mentioned as being laid down between Van Brunt and Ferris Streets. It had been surveyed and improved and corrected by Herbert and R. Tolford to 1835 from Hamilton Avenue to Gowanus Bay. In the same book, Commerce Street was laid down between Seabring and Delevan Streets in 1835. According to the History of Paved Streets, compiled by Leevan M. Burt (1943), Conover Street was paved from Pioneer to Dikeman in 1851. The surface was repaved with granite blocks on six inches of concrete between Pioneer to Sullivan Streets in 1921. Conover Street was given a replacement surface of asphalt on six inches of concrete between Sullivan to Wolcott Streets in 1920. Conover Street with a width of 60 feet was opened in 1850 running from William Street to the water line. Imlay Street with a width of 50 feet was opened in February, 1851. Imlay Street was paved with stone blocks in 1852, and was repaved in 1904.

FROM BUTT'S MAP - 1846



MAP AFTER - MAYS (April 25, 1826)



Archaeological Surveys Red Hook WFCF Project 2A

Field Investigations:

The observations made here are the results of two field trips to the area of the proposed pipeline construction Project 2A. The first, which I made on November 1st, was for preliminary appraisal and to familiarize myself with the area situation. This was a simple walk-over of Conover and Imlay Streets. The second, which I made on November 13th, was both a site and a photographic mission. During the course of this survey, I exposed one film-pack of 16 sheets of Tri-X film in a 4x5 inch press camera, and three rolls of 120 Fanchromatic film in a reflex camera.

Although the sewer construction at its southern end is to begin at Sullivan Street on Conover, I noted that there was an abandoned excavation at Wolcott Street and therefore began my field observations at that point. I examined and photographed the cut for any evidence of subsurface clues to the geological and archaeological nature of the area. The soil is very sandy, confirming the geological borings detailed in the Geological Profile A-B of Contract 2A. No evidence of stratigraphy was seen in the cut, which is shored up, and contains water. The soil at the sides of the cut is a light sandy silty soil, and light brown in color. There were no indications of marine shells or any archaeological traces. The street which is asphalt paved, has a number of potholes, and there is a bad one at the corner of Sullivan and Conover. Conover Street appeared to be fairly well traveled.

Between Sullivan and King Streets, looking north on Conover, the asphalt paving continues. On the west side are four 4 story apartment residences and three low 1 story commercial buildings. One of the apartment houses is boarded up and two are abandoned with broken windows. One apartment house is presently occupied near the corner. On the east side of the street is a parking lot and three 1 story garage type buildings.

Between King and Pioneer Streets on Conover, looking north, is a warehouse on the west side and an adjacent warehouse yard. On the east side of the street at this point is a corner 4 story apartment house at the south end, and a single boarded up apartment house on the north end of the street. There are two burned out and one 1 story garages in between. While I was in the vicinity, a fire broke out on the roof of one of the garages. Conover Street between King and Pioneer is paved with granite blocks.

I then drove along on Commercial Wharf past the abandoned Marine Warehousing Corp. building (the old New York Dock Corp. building), to the end of this street to Bowne Street, where the railroad tracks makes an easterly turn to Imlay on Bowne. At this intersection I measured one of the paving blocks on Imlay Street, which is paved with these granite stones south down to Pioneer Street. The blocks measure about 12 inches long by ca. 4.5 inches wide.

Looking south to Commerce Street on the west side of Imlay Street is a long 6 storied commercial building which is faced with concrete. On the east side of the same block are two abandoned buildings, both commercial, of which one is one story high, and the other is two stories high.

Between Commerce to Verona, looking south on Imlay Street, the street is cobbled in continuation of the same style of surfacing as at the northern end of Imlay Street. On the west side of the street is another element of the 6 story commercial buildings. On the east side of the block, evidently less attractive as commercial enterprise value, is one abandoned burned out apartment house 3 stories high, one storage yard with metal cargo containers, and one abandoned 1 story garage building. It was the roof of this building which somehow caught fire during my inspections in the vicinity and two fire trucks responded to put out the blaze.

I observed some soil which I examined and photographed around a freshly placed telegraph pole. The soil looked to me like a marine beach soil, the resultant from a kind of quiet water condition, since it was a sandy, silty soil, containing no gravels.

Between Verona and Pioneer Streets, there is a four story apartment house on the east side of Imlay Street, as well as two 1 story commercial buildings, one 2 story structure (also commercial) one empty lot, and one abandoned boarded up 2 story commercial building with a keystone at the arch bearing the legend "1900" on it. This building is at the corner of Pioneer and Imlay Streets. On the west side of Imlay Street there is a continuation of warehouse buildings, with one abandoned four story brick structure of vintage age which I believe to be the original New York Dock Co. warehouse dating from about the 1850's. It is partially burned out, and indicating its disuse there are some green sprigs sprouting out from cracks about the middle of the building at the upper stories.

Steel plates cover the street intersection at Pioneer and Imlay Streets in order to allow vehicular traffic to pass through. I checked the abandoned cut between Van Brunt and Conover Streets on Pioneer Street on the north side Pioneer. This cut contains stagnant water about four feet below the level of the street, actually marking what I think may be sea level. There are various foreign materials present in the cut, including tires, boards, paper, etc. The cut is shored up at the sides, but there is enough soil thrown out on to the street for an assessment of the character of the soil. It is a light brown silty sand, containing numerous pieces of foreign material such as old masonry brickwork, cobblestones and other chunks of non-native matter.

In the course of my inspection I did not see any archaeological or historical material which warranted further investigations. The only bit of interest was the old warehouse on the corner of Imlay and Pioneer Streets, which presumably dates from the mid - 19th century. None of the structures will be affected by the pipeline construction.

References Consulted

1. Map of Gowanus Bay Showing the Lines Described by the Commissioners for the Preservation of the Harbor of New York from Encroachments. An Act to Authorize Daniel Richards to Construct and Build Docks Passed April 19, 1856, Chapt. 203 Map, Surveyed June 1856.
2. City Compendium of the City of Brooklyn, 1871.
3. Map filed April 25, 1836. Maths. and Nichs. Van Dyke, Sixth Ward of City of Brooklyn.
4. The Civil, Political, Professional and Eccliastical History and Commercial and Industrial Period of the County of Kings and the City of Brooklyn, New York from 1683 to 1884. Henry Stiles, edit. Vol. II, New York. W. W. Munsell and Co. Publisher 1884.
5. City of Brooklyn, Jamie Kelly 1886.
6. Port Communities. The Port of New York Authority. Port Promotion Division. PC 111 12/62 A-90597.
7. Pictorial History of Brooklyn, Brooklyn Daily Eagle 1841-1916. Oct. 26, 1916. 75th Anniversary.
8. Memoranda Relating to Pierhead and Bulkhead Lines in Kings Co. The Borough of Brooklyn. Edwin P. Clark. Title Guarantee and Trust Co. 1910.
9. Brooklyn Farm Plan, Kings County Clerk, File No. B32.
10. Robinson's Atlas of the City of Brooklyn. E. Robinson and R. H. Pidgeon. E. Robinson, Publisher, New York, 1886.
11. Atlas of the Borough of Brooklyn Vol. 1, Sections 1 to 14. Published by E. Belcher Hyde, Brooklyn, 1916.
12. Hooker's Map of the Village of Brooklyn, 1827.
13. Plan of Brooklyn and Part of Long Island 1766 and 1767. B. Ratzer, Lieut.
14. Map of the City of Brooklyn Showing all of the Streets and Avenues as permanently fixed With the Size of the Block. Alexander Martin, Surveyor, 1839.

Ralph S. Solecki

References Consulted (Continued)

15. Map of the City of Brooklyn and Village of Williamsburgh, Showing the Size of Blocks and Width of Streets as laid out by the Commissioners, the Old Farm Lines, Water line and all recent changes in Streets. By Richard Butt, Surveyor, 1846.
16. History of Paved Streets in Brooklyn. Compiled by Leevan M. Burt, Annotated Volume at the Department of Transportation, Worth Street, N. Y. C. March 1943.
17. A History of Long Island. Peter Ross, Vol. 1, Lewis Publishing Co., New York, 1903.
18. Bruijkleen Colonie (Borough of Brooklyn) 1638-1918. Eugene L. Armbruster, New York.
19. History of Brooklyn, Vol. 1, H. R. Stiles.
20. History of Kings County, J. Munsell.

Institutions and Offices Visited

1. Library, St. Francis College, J. Kelly Inst.
2. Library, Long Island Historical Society.
3. Library, Columbia University.
4. County Clerk's Office, Brooklyn.
5. Brooklyn Borough Hall, Office of Topographical Engineers.
6. Department of Transportation, New York City, Worth Street.

Ralph S. Solecki

The Photographic Record on Contract 2A

November 13, 1976

Rolleiflex 120 - Roll No. 1

- No. 1 - Looking North on Conover Street from the corner of Wolcott and Conover, from a point south of the street intersection.
- No. 2 - Looking North on Conover Street from the sidewalk on the west side of the street intersection, to the south of the intersection. Excavation to the center left side of the view.
- No. 3 - Looking North oblique on Conover Street, intersection of Wolcott and Conover. Street excavation in foreground of view.
- No. 4 - View of excavation at northwest corner of intersection of Wolcott and Conover Streets, looking to east and south.
- No. 5 - View inside of street excavation northwest corner of intersection of Wolcott and Conover Streets, showing shoring of excavation and rubbish inside the cut.
- No. 6 - View north from intersection of Wolcott and Conover, on Conover Street. The excavation at the northwest corner of this intersection is in the left foreground. The street is asphalted. The west side of the street is shown in this view.
- No. 7 - View of the school looking north on the east side of Conover Street, northwest corner of Wolcott and Conover Streets.
- No. 8 - View looking north on the east side of Conover Street just south of the intersection of Sullivan and Conover Street, taken from the sidewalk.
- No. 9 - Same view as No. 8, adding top of pole to the view and top of the apartment house, three story abandoned and boarded up, to the view.
- No. 10 - View looking north on Conover Street from the west side just to the south of the intersection of Sullivan Street and Conover (from the s. w. corner), showing the fenced lot, and the structures on the east side of the street. The street is asphalted.

Ralph S. Solecki

Photographic Record - Contract 2A

Rolleiflex 120 - Roll No. 2

- 1A. Street corner intersection on King and Conover, looking north on Conover, from southeast corner. Warehouse on west side of Conover.
1. Looking north on Conover toward Pioneer Street. Meeting of cobble stones with asphalt at Conover intersection with King Street. View taken from corner on n.w. of intersection. Burned out commercial buildings across the street.
2. Looking south on Conover from corner northeast of intersection King and Conover Streets.
3. Looking south on Imlay Street at Bowne and Imlay Street intersection. View taken from point on northeast corner of intersection. Street is paved with granite blocks.
4. Looking diagonally south on intersection of Bowne and Imlay Streets, from northeast corner.
5. View looking across intersection of Bowne and Imlay Streets from northeast corner.
6. View as No. 4, showing detail of paving blocks, encompassing profile of commercial buildings on west side of street.
7. View looking south on Imlay Street, corner of Commerce and Imlay Streets, taken from the northeast corner of intersection. Commercial buildings on right or west side of street, 6 stories high.
8. View looking north on Imlay Street, near the intersection of Commerce and Imlay, with 6 story commercial buildings on west or left side in view.
9. View from northeast corner of Commerce and Imlay, looking south down Imlay Street.
10. Same view as above, but angled more down the street. Two last vehicles on either side of the street are fire engines responding to a burning roof on low commercial building on left side in picture.

Ralph S. Solecki

Photographic Record - Contract 2A

Rolleiflex 120 - Roll No. 3

1. View looking south on Imlay Street from corner intersection of Verona and Imlay Street toward Pioneer Street. Commercial buildings on right are evidently original buildings constructed on the site.
2. Detail around newly placed telephone pole between Pioneer and Verona Streets on Imlay, showing character of the sandy soil.
3. View of facade on building at northeast corner of intersection of Pioneer and Imlay Streets, building on Imlay Street. Above the entry way is a keystone block with the date "1900" cut into it, indicating the age of the building, now abandoned.
4. View of one of the original New York Dock Co. buildings in the district at the corner of Imlay and Pioneer Streets, on Imlay Street, looking west. Building has been abandoned, and green plants are growing from cracks in the walls at the central vertical row of windows.
5. View looking southwest toward warehouse of New York Dock Co. (originally) showing detail of ground floor at corner of Imlay and Pioneer Streets.
6. View looking south on Imlay Street toward the intersection at Pioneer Street, showing cobble paving, street excavation and heavy steel plates covering street excavation over roadway.
7. View of the old New York Dock Co. warehouse looking to the northwest from the intersection of Pioneer and Imlay Streets.
8. View of the same building as above, taken from across the street at Pioneer and Imlay Streets, from southeast corner of intersection. In the left foreground is the shored up street excavation on Pioneer Street.
9. View looking northwest along Pioneer Street from the intersection of Pioneer and Imlay Streets, showing end of old New York Dock Co. warehouse, and the shored up street excavation running the length of Pioneer Street.
10. View looking north up Imlay Street from the intersection of Pioneer and Imlay Streets, showing cobbled paving, shored up excavation on the left, and steel plates in place in the street.
11. View taken from steps in photograph No. 9, at intersection of Imlay Street and Pioneer Street, looking north and east toward Van Brunt Street. Boarded up commercial building bearing legend "1900" at left. Excavation running length of street.

Ralph S. Solecki

Press Camera Views - 4 x 5 inches.

- Photos Nos. 1-4. Taken from corner of Wolcott and Conover, facing north on Conover.
- Photo No. 5. View north on Conover at corner of Sullivan and Conover.
- Photo No. 6. Looking east on Pioneer from the southwest corner of King and Conover.
- No. 7. Looking south on Conover from the corner of King and Conover.
- No. 8. Looking north on Conover between King and Pioneer.
- No. 9. Detail of cobble stones corner King and Conover.
- No. 10. View north on Conover toward Pioneer from corner of King and Conover.
- No. 11. Looking south on Imlay, from Bowne Street intersection with Imlay.
- No. 12. Ditto above.
- No. 13. View north on Imlay from Pioneer intersection with Imlay.
- No. 14. View north on Imlay ditto above.
- No. 15. View of excavation cut at Pioneer intersection toward Conover (west).
- No. 16. View of cut at Pioneer looking east toward Van Brunt.

Area of views taken from the same position as those taken with the Rolleiflex.

PHOTOGRAPHS

Rolleiflex Photographs were included in two copies of the report transmitted to the Department of Water Resources.

If photos are required with this copy of the report, please notify John Custer (212) 371 - 3820.

ADDENDUM TO
ARCHAEOLOGICAL SURVEYS
IMLAY AND CONOVER STREETS
(CONTRACT 2A)
IN THE RED HOOK SECTION
BROOKLYN, NEW YORK

for
Mason & Hanger-Silas Mason Co., Inc.
under their contract No. 213085
with
Department of Water Resources
City of New York

by
Ralph S. Solecki, Phd.
597 Piermont Road
Demarest, New Jersey 07627

December 15, 1976

C O N T E N T S

Text

Figure 1 - Old Shoreline with Street System Superimposed

Figure 2 - Geologic Profile showing Depth of Cut

Supplementary Photographs (2 sheets)

Note: The following sheets from the Contract 2A plans
are transmitted with this addendum:

<u>Sheet No.</u>	<u>Date</u>	<u>DESCRIPTION</u>
3	6/76	Route and Key Plan
M2	6/76	Plan & Profile - Conover Street, Wolcott Street to Pioneer Street
M4	6/76	Plan & Profile - Inlay Street, Pioneer Street to Verona Street
M5	6/76	Plan & Profile - Inlay Street, Verona Street to Commerce Street
M6	6/76	Plan & Profile - Inlay Street, Commerce Street to Bowne Street

ADDENDUM TO
ARCHAEOLOGICAL SURVEYS

IMLAY AND CONOVER STREETS
(CONTRACT 2A)
IN THE RED HOOK SECTION
BROOKLYN, NEW YORK

According to the Atlas of Long Island (1873) Beers, Comstock and Cline, with the exception of the tip end of an island which hits Imlay Street between Commerce and Bowne, that section of the proposed sewer cut between Bowne and Pioneer (William on the old maps) on Imlay Street and that section lying between Pioneer and Sullivan on Conover Street lie in an area which had been originally under water (see Fig. 1, attached). I examined and photographed three locations where I could examine the soil and fill along the route of the proposed sewer cut. The first point (Loc. 1 on Fig. 1, Photographs 1, 2, 3, 4) at the northwest corner of Conover and Wolcott Streets (one block to the south of the terminating point of the proposed sewer cut), I observed clean sand in the side of the excavation, which was shored up (see photograph No. 3). I paid particular attention to the open trench (Loc. 2 on the Fig. 1, see photographs Nos. 5,6,7) running between VanBrunt and Conover on Pioneer Street, because there were several points where I could see the side of the cut between the shoring, and investigated the soil that was thrown out on the street from this cut. The soil was heaped up next to the shoring. This soil corroborated the borings, showing a mixture of fine and coarse sand. There were some cobble stones in the fill, evidently thrown out from the earlier paving (this street was originally paved about 1850), plus some chunks of brick masonry. I observed water in the trench at about four feet below the street level. It is my understanding from the project

engineers that this water level fluctuates with the tide. Indeed, Conover Street originally ran right next to the Atlantic Basin (its extension is Commercial Wharf, which is now separated by about two hundred feet from the present basin). To attempt to make a test cuts in this area would necessitate pumping out the water. The third point where I was able to examine the soil fill was around the implanting site of a telephone pole (photograph No. 8, Loc. 3 on Fig. 1) on Imlay Street between Pioneer and Verona. The soil was clean sand.

Thirty one geological borings were made in the line of the proposed sewer cut down to a maximum depth of 52 feet with an average depth of about 45 feet (Fig. 2). The proposed sewer cut will be approximately 10 feet wide and from 15 feet to 17 feet deep. The geological profile constituted from the borings indicates that from top to bottom the stratigraphy can be divided into four major soil horizons. At the top (a) is the miscellaneous fill; below that is (b) the gray organic silt and included miscellaneous fill penetration; below that is (c) the loose to medium compact M-F silty gray/brown sand, and below that is (d) the zone of sands and silts. Zone (b) was presumably the original marshy surface in this area.

The depth of the cut is at -9.93 feet at the southern end of the proposed sewer cut at Sullivan and Conover, and -12.32 feet at the northern end, or the intersection of Bowne and Imlay. This cut will go through soil horizon (c), the loose to medium compact M-F silty gray/brown sand, which is probably part of the Pleistocene Age deposits left from the Wisconsin glaciation (Myron Fuller, Geology of Long Island, New York, Washington 1914).

The present street surface varies in elevation between 2.5 to ca. 5.5 feet above the ground water line (presumably sea level

at this point), with a higher street elevation toward the southern part of the projected cut. The average street elevation is about 4 feet above the water line. The miscellaneous fill (a) horizon measures between 4 feet to 9 feet in thickness, with an average thickness of about 6.5 feet. This thickness depends upon the variations of the depths of the original surface (b) topography. The fill is nearly divided above and below the water line, with appreciably more below this line in some spots.

Considering the thickness of the present street surfacing, or about 1.5 feet overall for the thickness of the paving stone plus the underlying surface preparation, the miscellaneous fill horizon (a) is reduced appreciably in depth. Recalling that the streets had been originally paved about 1850, and again in the 1900's, the total street surfacing could amount of about 3 feet, reducing the amount of dumped fill by that amount. But it is not certain if the older paving blocks were removed and the new paving replaced or not. The factor of soil compaction is reducing the original thickness of the fill through heavy traffic or settling is not known.

No marine shells or other tell-tale evidence which could be related to archaeological evidence of occupation was noted in the observed fill from the cuts, and none appears to have been recorded in the geological borings.

According to Reginald Pelham Bolton (Indian Paths in the Great Metropolis, Heye Foundation, New York, 1922, pp. 137-8, Map VIII A), the closest Indian village site to the area of our concern is in the old Tenth Ward at Warren and Hoyt Streets at the head of Gowanus Creek at the place called "Werpoes" in Colonial times. There was reportedly a native cornfield which was bounded on its western side by the Indian trail which later became Red Hook Lane (ca. 1640). There

appears to have been a small occupation of Indians on the east side of Red Hook Lane at Henry Street and 3rd Street, five blocks east of Imlay and Conover Streets. This whole area of old Brooklyn was the domain of the Canarsee Indians (see R. Pelham Bolton, New York City in Indian Possession, Heye Foundation, New York, 1920, pp. 271, 313, 358-9). So far as I could ascertain from the literature, the Red Hook district was part of the Canarsee Indian territory, and this was sold to the Dutch piecemeal along with the other parcels of land.

Concerning more recent historic resources, the documentary evidence consulted indicates that there were no wharves or docks established in the area before the Atlantic Docks Company was organized toward the middle of the 19th century. Bulkheads and piers were evidently placed about this time one block west over from Imlay Street, on Commercial Wharf Street. The streets (Imlay and Conover) were paved on shallow fill about 1850 as part of the Atlantic Boat basin construction. The water depth, as reconstructed from the profile sheet, varying from at maximum 5 feet to 0 feet would have precluded any handling of large draft vessels. Indeed, no ferries etc have been reported for the area. In addition, the shore line was irregular, and marked by marshes with creeks.

The fill, not of great depth, which brought Imlay and Conover Streets in the area of the projected sewer cuts, does not appear to be of historic significance, or contain matter of historic significance so far as I could see in my investigations.

On the basis of my observation of these three locations, in my judgement, I was satisfied that there was little chance of finding prehistoric occupations in the area to be traversed by the projected

sewer cuts. Furthermore, the fill that I had examined by the side of the open trench on Pioneer Street did not appear to have any historical importance as far as I could determine.

On the basis of these examinations plus the situation of the proposed cuts with relation to the old shore line, it is my opinion that the proposed sewer cut will have no adverse impact in this part of Red Hook, Brooklyn. The soil profile compiled from borings along the route of the sewer in my judgement corroborates this conclusion.

Ralph S. Solecki, Phd.

MAP SHOWING THE OLD SHORELINE IN THE RED HOOK SECTION OF BROOKLYN WITH THE STREETS SUPERIMPOSED
ON THE ORIGINAL LAND FORMS. THIS MAP WAS REPRODUCED FROM "ATLAS OF LONG ISLAND, NEW YORK FROM RECENT
AND ACTUAL SURVEYS AND RECORDS" UNDER THE SUPERINTENDENCE OF F.W. BEERS PUBLISHED BY BEERS, COMSTOCK
AND CLINE, 36 VESEY STREET, NEW YORK 1873

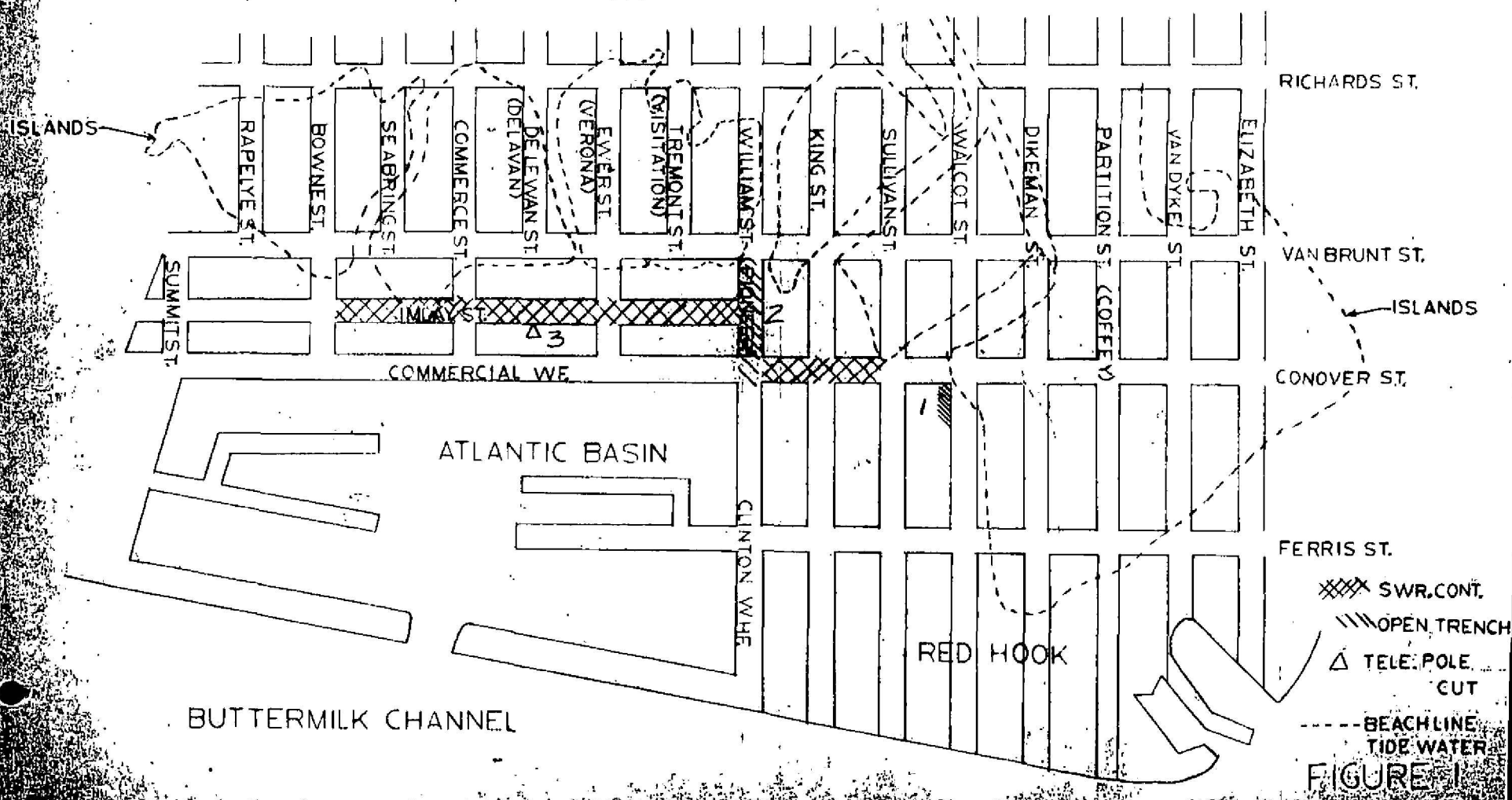


Fig. #2 not copied

SUPPLEMENTARY PHOTOGRAPHS

Location No. 1

Wolcott and Conover Streets



Photo No. 1

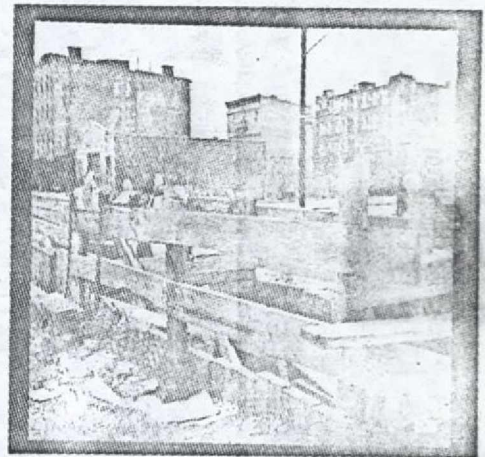


Photo No. 2

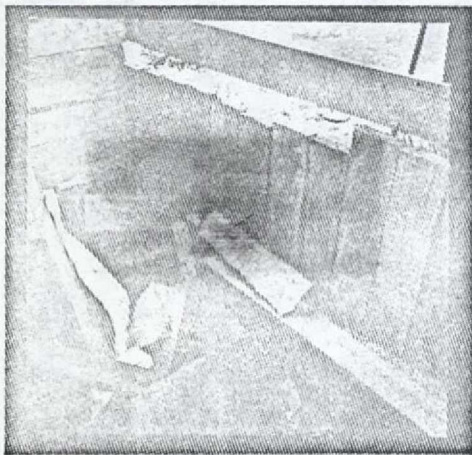


Photo No. 3

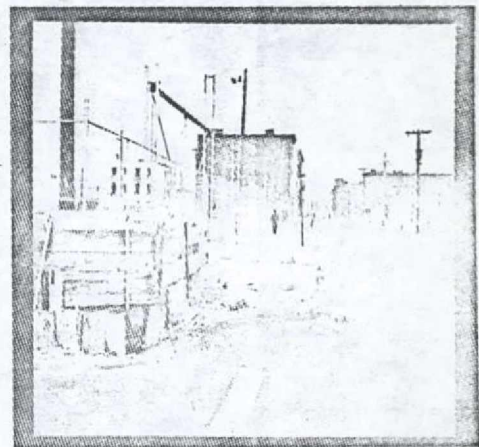


Photo No. 4

SUPPLEMENTARY PHOTOGRAPHS

Location No. 2

Pioneer Street

VanBrunt to Conover

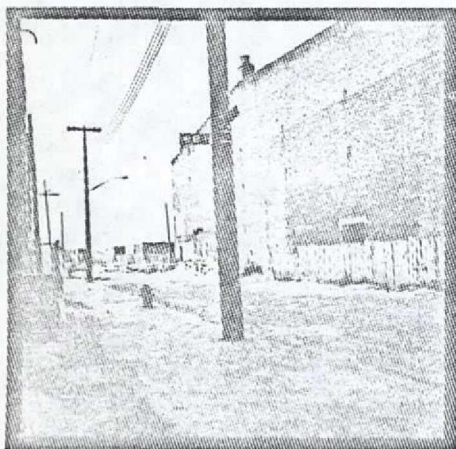


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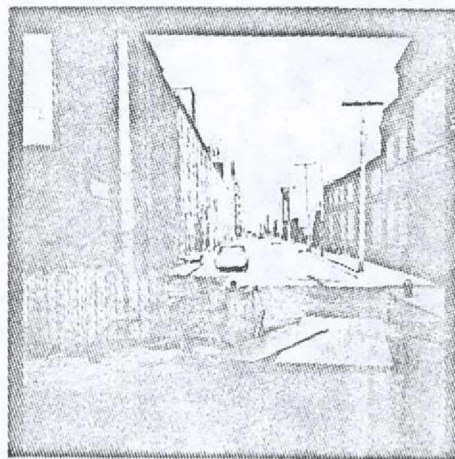


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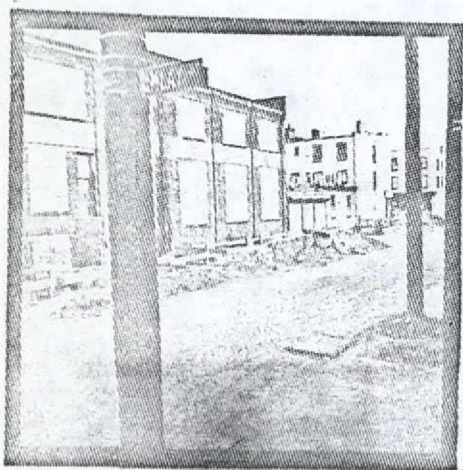


Photo No. 7

Location No. 3

Imlay Street

North of Pioneer

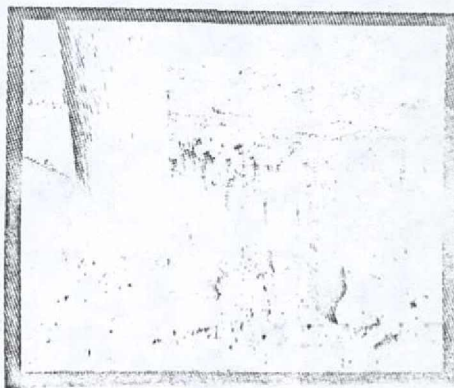


Photo No. 8



ENVIRONMENTAL PROTECTION ADMINISTRATION

DEPARTMENT OF WATER RESOURCES

MUNICIPAL BUILDING, NEW YORK, N. Y. 10007

Telephone: 566-3340, 41

CHARLES SAMOWITZ, P.E.
Commissioner

4200

JAN 10 1977

Mr. Daniel A. Sullivan
Chief
New York & Virgin Island Section
Environmental Impacts Branch
United States Environmental
Protection Agency, Region II
26 Federal Plaza
New York, New York 10007

Re: WP-152
Red Hook W.P.C.P.
C-36-394-01
Stage I Archaeological
Survey

Dear Mr. Sullivan:

Att: Mr. Richard Walker

Transmitted is one copy of the Biographical Supplement to
Archaeological Surveys, Inlay and Conover Streets (Contract 2A)
in the Red Hook Section of Brooklyn, New York.

Copies of this supplement are being transmitted to Stephen Raiche
of the New York Section Office of Parks and Recreation and Mr.
Robert G. Hampston of the New York State Department of Environmental
Conservation.

A copy of this letter is being transmitted to Mr. Richard L. Caspe,
P.E., of the United States Environmental Protection Agency, Region
II.

If any additional information is required, please call Mr. Carl
C. Lingard at 212-566-0438.

Very truly yours,

JOSEPH T. MILLER, P.E.
Assistant Commissioner
Director, Water Pollution Control

Enc.

Copy to: Mr. Robert G. Hampston, P.E.
Chief

Region 1-2 Project Section
Bureau of Sewage Programs
New York State Department of
Environmental Conservation
50 Wolf Road Albany New York

BIBLIOGRAPHICAL SUPPLEMENT

TO

ARCHAEOLOGICAL SURVEYS

IMLAY AND CONOVER STREETS
(CONTRACT 2A)
IN THE RED HOOK SECTION
BROOKLYN, NEW YORK

for

Mason & Hanger-Silas Mason Co., Inc.

under their Contract No. 213085

with

Department of Water Resources
City of New York

by

Ralph S. Solecki, Ph.D.
597 Piermont Road
Demarest, New Jersey 07627

January 7, 1977

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