

PRELIMINARY REPORT
TO THE
CITY OF PHILADELPHIA
DEPARTMENT OF STREETS
ON A
PRIMARY HIGHWAY
IN THE
MANAYUNK AREA
UTILIZING THE RIGHT OF WAY
OF THE
MANAYUNK CANAL

NOVEMBER 7, 1955

ALBRIGHT & FRIEL, Inc.
CONSULTING ENGINEERS
PHILADELPHIA, PA.

BUREAU OF SURVEYS & DESIGN
ROOM 902A

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TABLE OF CONTENTS

	<u>Page</u>
GENERAL.....	1
INTRODUCTION.....	2
HISTORY OF MANAYUNK CANAL.....	3
EXISTING CONDITIONS.....	4
TRAFFIC STUDIES.....	5
THE PROPOSED PRIMARY HIGHWAY IN THE MANAYUNK AREA.....	6
DEVELOPMENT OF CONTIGUOUS VENICE ISLAND AREA....	10

PLATES

1. General Plan Showing Proposed Future Extension into Montgomery County.
2. General Plan Showing Proposed Highway in Main Street and the Manayunk Canal.
3. Aerial Photograph - Shawmont Avenue to City Avenue Bridges (one copy only).

ALBRIGHT & FRIEL, INC.
CONSULTING ENGINEERS
3 PENN CENTER PLAZA
PHILADELPHIA 2, PA.

November 7, 1955

Mr. John A. Bailey
Acting Street Commissioner
Department of Streets
City of Philadelphia
Philadelphia, Pennsylvania

Subject: Preliminary Report on Primary Highway
in the Manayunk Area

Dear Sir:

Under date of April 6, 1955 this engineering firm was engaged by the City of Philadelphia to make a preliminary investigation for the utilization of a primary highway route in the right-of-way of the Schuylkill-Manayunk Canal. On October 27, 1955 instructions were issued by the Department of Streets for additional engineering service related to the proposed highway and embracing the utilization of Venice Island in Manayunk as a recreational area.

Our studies relating to the proposed primary highway in the Manayunk area are not as yet completed. To date we have made preliminary studies of the route of the proposed highway, we have obtained aerial topography of a section of the City of Philadelphia where the proposed highway would be located, we have made field instrument surveys of certain key points along the route of the highway primarily in the vicinity of Venice

Island, we have made preliminary traffic surveys and studies, we have planned--in a preliminary fashion--certain interchanges and we have plotted a preliminary profile along the route. Some grades have been fixed and bridge locations determined.

Our engineering work has advanced to the point where we are now in a position to submit this preliminary report but it should be considered as a preliminary progress report and not as final. Additional and further studies are being made. Our final report will be submitted on or before April 6, 1956 in accordance with the provisions of the contract for providing engineering service to the City of Philadelphia on the primary highway in the Manayunk area utilizing the right-of-way of the Manayunk Canal.

INTRODUCTION

This report presents in preliminary form the results of studies made to date for a primary highway route utilizing the right-of-way of the existing Manayunk Canal in the City of Philadelphia. The plan as outlined herein is subject to additional study and any of its features are subject to change upon completion of the final studies.

The proposed highway would serve the purpose of relieving congestion on Ridge Avenue in Roxborough and on Main Street in Manayunk. It would permit rapid movement of commuter traffic to and from the Central City area as well as expediting truck traffic to and from the industrial areas of the City.

With its proposed future extension to the Pennsylvania Turnpike in Montgomery County, it will provide a direct route from there into the City.

The general route of the new highway is shown on the accompanying plates. It would follow the existing Main Street from its intersection with Ridge Avenue to Lock Street. From there it would utilize the right-of-way of the Manayunk Canal as far north as the upper locks near Flat Rock Dam. Beyond this point it would follow open country until it met the proposed westward extension of Cathedral Avenue. The Cathedral Avenue extension would connect with Ridge Avenue. A future extension of the proposed highway would go through open country in Montgomery County and connect with Route 422 at Hickorytown near the Norristown interchange of the Pennsylvania Turnpike.

HISTORY OF MANAYUNK CANAL

The Manayunk Canal, whose right-of-way would be utilized as a portion of the route of the proposed highway, is part of a canalization project covering the Schuylkill River from Philadelphia to Port Carbon. This project was undertaken in the early part of the nineteenth century by the Schuylkill Navigation Company and it was completed in 1824. It consisted, in some reaches, of locks and dams constructed in the river to form navigable pools. In other reaches, sections of canal with necessary locks were constructed adjacent to the river. The Manayunk section of the project is an example of the latter.

This section starts at Flat Rock Dam with a set of locks. The drop in the locks is about two feet. Then a canal section runs parallel to the left bank of the Schuylkill River. The lower end of this section, where the canal re-enters the river, is at Lock Street, near Shurs Lane, in Manayunk. At this point there is a drop of about 20 feet to the river. A double set of locks was constructed at this point to accomplish this drop.

The lock walls were built of masonry. The gates were of timber and manually operated. The locks were 110 feet by 18 feet, with six feet of water over the sills.

An industrial section became built up along the canal on the island between the canal and the river. This was stimulated in part by the availability of water from the canal and of head between the canal and the river.

With increasing competition from the railroad, use of the canal decreased until it became abandoned. The last coal barge was locked through Fairmount Dam in 1917. The last barge of any type was locked through in 1928.

EXISTING CONDITIONS

Since 1928 the canal as such has been out of operation. Some portions of it have been converted to other uses. The Manayunk section has been maintained with its lock gates closed. A lock tender is on duty at all times at the upper set of locks. By operating the feeder gates at this location, he maintains the water level at its normal elevation. Some canal water is

still used by industries on the "island" but this use is being replaced by other sources of supply.

The lock walls for the Manayunk section are in good repair. The wooden lock gates are badly deteriorated. During the flood of August 19, 1955, a large hole was torn open in the lock gate at the upper end. This threatened to cause loss of control at that point and endangered the industrial plants along the canal. This danger has been relieved by driving piling just upstream of the lock.

Some of the industrial plants on the island have been abandoned and have deteriorated to the point where little more than foundations remain. This is particularly true of the area south of a point mid-way between Green Lane and Leverington Avenue. Here there are three buildings still in use. All of the rest are in ruins, including one which was destroyed by fire in September 1955. North of this point are several modern plants which are in very active use, most prominent of which is the plant of the Container Corporation of America.

TRAFFIC STUDIES

Studies have been made to analyze existing conditions and to forecast future conditions with the proposed highway in operation. Extensive use has been made of data obtained from the report of the "Philadelphia-Camden Area Traffic Survey" made in 1947. This was a comprehensive "origin-destination" survey made for Philadelphia, Camden and surrounding suburban

areas. In addition, traffic counts have been made by Albright & Friel Inc. Data from traffic counts have also been obtained from the Traffic Engineering Department of the City of Philadelphia and from the Planning and Research Division of the Pennsylvania Department of Highways.

Results of the studies indicate that most of the through traffic on Ridge Avenue would be diverted to the proposed highway, thus leaving Ridge Avenue clear for local traffic. Main Street south of Green Lane is now congested, partly as a result of heavy truck traffic coming across Green Lane Bridge from the Schuylkill Expressway. It is expected that most of this traffic will either be diverted to the proposed highway or will continue south on the Schuylkill Expressway when that highway is completed and when the Roosevelt Boulevard extension is completed.

It is expected that by 1980, or twenty years from its estimated completion date, the proposed highway would carry traffic equal to its practical capacity. This is based on the assumption that the highway will be a four-lane divided highway and that access will be controlled. Speed of traffic on Ridge Avenue is extremely slow, so that the new highway would result in large benefits from savings in time and from more economical operation of vehicles.

THE PROPOSED PRIMARY HIGHWAY IN THE MANAYUNK AREA

As far as is feasible, the proposed highway will follow standards recommended by the American Association of State

Highway Officials for a modern high-speed highway. In general, there will be four 12-foot lanes, the directions being separated by a divider four feet wide. Shoulders eight feet wide will be provided.

For the section south of Lock Street, the present plan calls for improving Main Street within its existing 60-foot right-of-way. This is desirable because, for a substantial portion of this section, there are commercial and industrial establishments on both sides of the street, making condemnation costs high. The existing 34-foot pavement would be widened to accommodate four lanes. This would result in narrower sidewalks. It would be necessary to prohibit all parking and stopping on this highway. Off-street parking lots would probably be necessary. Loading and unloading from the highway would have to be prohibited.

This plan has several objectionable features since its capacity would be lower than that of other sections of the highway. It is planned to make alternate studies of this section, with consideration being given to the feasibility of taking property on one side, thus permitting design to higher standards.

In the section of the highway which would utilize the right-of-way of the canal, it is proposed that generally the highway will be located entirely within the existing canal right-of-way. However, it is proposed that the entire property on Venice Island be purchased as far north as a point mid-way

between Green Lane and Leverington Avenue. This would permit adequate clearances for the highway at points where the present right-of-way is restricted. It would also remove unsightly structures from the route of the highway and would permit development of the Island as a recreational area.

From a point near Flat Rock Dam, proceeding northward, the highway would rise on a long grade from the level of the canal approximately to the elevation of Umbria Street. It will be necessary to bridge over both the Reading Railroad and the Pennsylvania Railroad in this area. The alignment will be arranged to avoid conflict with transmission towers of the Philadelphia Electric Company in this area.

The highway would then follow open country, it being located between the Pennsylvania Railroad the Philadelphia Electric Company transmission lines. A bridge would be provided over Shawmont Avenue. Just before crossing Port Royal Avenue, it would go between the towers inland from the transmission lines to join with the alignment of the proposed extension of Umbria Street. It would follow this alignment to the point where it connects with the proposed extension of Cathedral Avenue.

The Cathedral Avenue extension would serve as the means of connecting the proposed highway with Ridge Avenue on a temporary basis. It is proposed that in the future the highway be extended northward into Montgomery County to connections with Ridge Avenue, Germantown Pike and the Pennsylvania Turnpike.

Access to the proposed highway will be controlled, with a minimum number of intersections being provided. At the southern end, where Ridge Avenue and Main Street intersect, it is proposed that a ramp over Main Street be constructed to take care of southbound traffic on Ridge Avenue. This will eliminate hazards and delays from traffic crossing at an angle of almost 180 degrees.

At the entrance to the Fairmount Steel Company, it would be necessary to provide access. An intersection would be needed with Shurs Lane. At this point there are a large number of left turns from southbound traffic on Main Street. This will be a critical intersection and will have to be carefully studied. An intersection will also be required at Lock Street where the proposed highway leaves the existing right-of-way of Main Street and goes into the canal.

The next access point will be in the vicinity of Leverington Avenue. This will permit traffic to and from Leverington Avenue, Flat Rock Road, Green Lane and other streets in the vicinity to use the highway.

After the highway leaves the canal at the northern end, it would have an intersection with Umbria Street. The feasibility of an intersection with Port Royal Avenue has not yet been determined. The final connection would be where the highway merges into the Cathedral Avenue extension.

DEVELOPMENT OF CONTIGUOUS VENICE ISLAND AREA

If property on the Island between the canal and the Schuylkill River were purchased, it would provide an opportunity to develop the area for recreational purposes. The area that could be used would extend from a point mid-way between Green Lane and Leverington as far south as the lower locks. This area is known as Venice Island.

The land on the Island is rather flat, except for a strip about 50 feet wide adjacent to the river, where there is a drop of about 15 feet. The area available for development is about $9\frac{1}{2}$ acres. It is about 3,200 feet long and 130 feet wide.

The Venice branch of the Reading Railroad, a single-track freight line, would have to be re-located slightly in some places to accommodate the proposed highway. It would run adjacent to the highway. Fencing would be required over the entire length to separate the railroad from the recreational area.

The assessed valuations (1955) of the occupied properties on the Island are as follows:

Wood Manufacturing Co. (immediately north of Lock Street)	\$ 43,100.
Antonio Colantorio (vicinity of Rector Street - Two buildings, one of which was destroyed by fire in September 1955. Figure includes assessment before fire.)	45,800.
Westfield River Paper Co. (vicinity of Levering Street extension)	76,600.

Majestic Discount Co. (P.R.R. bridge to Levering Street extension. Buildings abandoned.) \$ 52,100.

Vacant land (approximately 3 acres @ \$7,000.) 21,000.
\$238,600.

A study by the Philadelphia Planning Commission (Philadelphia City Planning Commission, "Relationship of Price and Assessed Value of Real Estate Sold in Philadelphia, 1943-1953". Public Information Bulletin No. 3-E.) shows that in 1953 commercial property in the 21st Ward sold for 1.35 times the assessed valuation, and vacant land for 1.57 times. Using a factor of 1.40, indicates that all the properties on Venice Island might be purchased for about \$335,000.

ACCOMPANYING PLATES

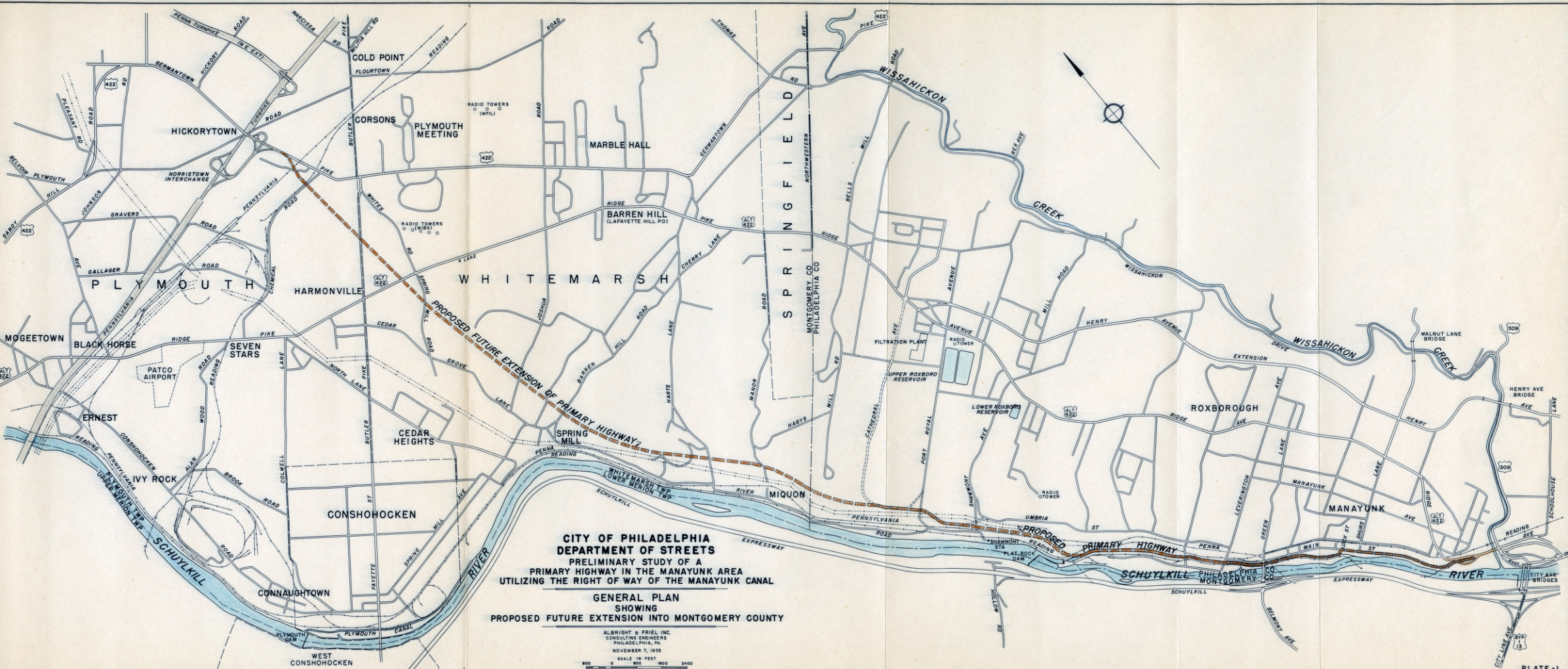
1. General Plan showing Proposed Future Extension into Montgomery County.
2. General Plan showing Proposed Highway in Main Street and the Manayunk Canal.
3. Aerial Photograph - Shawmont Avenue to City Avenue Bridges (one copy only).

Respectfully submitted,

Francis B. Friel
FOR ALBRIGHT & FRIEL INC.

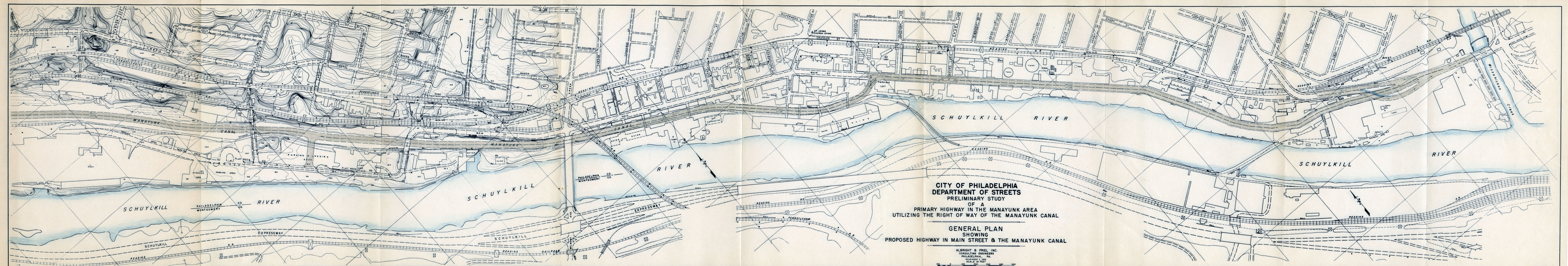
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CITY OF PHILADELPHIA
DEPARTMENT OF STREETS
 PRELIMINARY STUDY OF A
 PRIMARY HIGHWAY IN THE MANAYUNK AREA
 UTILIZING THE RIGHT OF WAY OF THE MANAYUNK CANAL
GENERAL PLAN
 SHOWING
PROPOSED FUTURE EXTENSION INTO MONTGOMERY COUNTY

ALBRIGHT & FRIEL, INC.
 CONSULTING ENGINEERS
 PHILADELPHIA, PA.
 NOVEMBER 7, 1928
 SCALE IN FEET
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**CITY OF PHILADELPHIA
DEPARTMENT OF STREETS
PRELIMINARY STUDY
OF A
PRIMARY HIGHWAY IN THE MANAYUNK AREA
UTILIZING THE RIGHT OF WAY OF THE MANAYUNK CANAL**

**GENERAL PLAN
SHOWING
PROPOSED HIGHWAY IN MAIN STREET & THE MANAYUNK CANAL**

ALBRIGHT & FRIEL INC.
CONSULTING ENGINEERS
PHILADELPHIA, PA.
NOVEMBER 7, 1935
SCALE IN FEET

