

UNIVERSITY OF PENNSYLVANIA



THE BELMONT OIL REFINERY,
FAIRMOUNT PARK, PHILADELPHIA.

A STUDY FOR ADAPTIVE REUSE
of
BUILDINGS AND SITE

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INTRODUCTION

This project deals with a group of buildings known collectively as the "Belmont Refinery". These buildings are located in Fairmount Park and are on west bank of the Schuylkill River just off West River Drive and above Columbia Bridge. The intent of this project is primarily to preserve all the buildings on the site by proposing a relevant and well considered re-use for each building. The proposals made for each building have been made after consideration of various alternatives, using the accepted methods of research in compiling a report of this nature.

The project is being undertaken as a studio project in the graduate program in Historic Preservation at the University of Pennsylvania, and all four members of the team are either students in the program or another program in the Graduate School of Fine Arts at the University.

This site is one with a long history going back to the first European settlement along the Schuylkill River. The oldest building on the site, the Boelsen cottage, is also believed to be the oldest building in Philadelphia, the first records of its existence dating back to 1680.

The second phase of development of the site concerned the construction of one of the earliest oil refineries in the United States having been built in the 1860's. Several of the buildings associated with this industry still remain on the site. In 1870 this industrial phase ended with establishment of Fairmount park which has had control of the site ever since, the only subsequent development being the construction of a large stable building in the 1930's as a W.P.A. project.

Today the site is one which reflects the diversity of the history of Philadelphia, and although none of its buildings are of particular architectural note, they are still significant in the broader sense of reflecting the development of the city of which they are part.

The complex of buildings comprising the Belmont Refinery developed and evolved over time to accommodate new and changing uses. The resultant physical inventory today, consists of a diversity of building types-including residential, industrial, and equestrian with several architectural treatments in various states of physical condition.

The preservation priorities are twofold: to establish a preservation plan for the entire site and preservation objectives for each building.

The preservation priority for the entire site consists of

providing an overall preservation plan that preserves as many buildings as possible and establishes a framework for reuse in which the "memory" of former uses at the site is recalled and carried over in the new plan .

The preservation objectives for individual buildings consist of the following:

1. Museological restoration of the Boelson Cottage

As the Boelson Cottage may well be the oldest house in Philadelphia, it should be preserved as a residence, using a museological approach.

2. Oil Refinery and ancillary structures

As the Oil Refinery is presently facing demolition, the preservation objective for this building is to provide a reuse which is both economical and appropriate. It is estimated that the cost of preserving this building is one million dollars. In the new plan, the buildings which originally comprised the Belmont Oil works- the Oil Refinery, the Cooper Shop and Cottage are preserved by providing for their reuse as restaurants/banquet hall. This use potentially provides sufficient income to save the Oil Refinery and pay the costs for its preservation. The Refinery, which is an important structure in Philadelphia's industrial history, is preserved with minimal intervention to the existing building fabric. The facade is brought back to its original state and new interior walls are sensitively introduced into the building fabric. As part of the preservation objectives for this group of buildings a theme has been established for the interior decoration of the restaurant which will recall the buildings former use as an oil refinery. The interior decoration will consits of wall murals, which retell the history of the refinery, and industrial objects, once used at the refinery, as art and sculpture.

3. WPA Stables

The preservation objective for this building is to preserve the original structure with minimal intervention to the building fabric. This approach is taken as the building's historical importance will increase with time. The reuse of the WPA Stables as a health club provides a use which is economical and requires minimal intervention to accomodate it as the former and proposed uses make use of interior space in much the same way.

Adaptive Use Recommendations

The adaptive use recommendations consist of reuse of the Oil Refinery and ancillary structures as a restaurant and banquet, the reuse of the WPA stables as a health club and the reuse of the Boelson Cottage as a house museum. These recommendations are the result of an adaptive use analysis in which fifteen alternative uses were considered and ranked on fourteen different criteria. The criteria included site and building issues and each use was ranked for its suitability given existing conditions

Strategies for Implementation

The adaptive use proposal is one that is economically viable. The restaurant and stable buildings can generate enough income to pay for construction loans within a ten year period.

II SUMMARY OF PROPOSAL

Overview

The former Oil Works site in Fairmount Park presented some unusual and challenging conditions for adaptive reuse analysis;

- o Three different types of historic buildings.
- o Four daily directional changes in the traffic flow during the week, creating difficult access-egress problems.
- o Excellent views of the Schuylkill River.

Summary of Proposed Building Use.

Building	Proposed Use
Boelson Cottage (c1682)	Historic House and Landscape.
Oil Refinery (1865)	Restaurant (1).
Oil Refinery Office (1865)	Reception for Restaurant (1).
Cooper's Shop (1865)	Restauant (2).
WPA Stables (1938)	Physical Fitness Club.
New building additions	Kitchen and storage.

Proposal.

Boelson Cottage is perhaps the oldest surviving building in Philadelphia, and deserves restoration as a small museum. An area of landscape adjacent to the cottage will also be restored so that visitors may see an interpretation of a late 17th century settlement.

The Oil Refinery, Refinery Office and Cooper's Shop will form the nucleus of a restaurant facility. A new building addition will join the Refinery and Cooper's buildings to provide for kitchen, storage and a second means of access to the three story building, to include an elevator. The office building will be relocated to the southern tip of the refinery providing an entrance and reception to the first restaurant.

The two restaurants will provide different types of eating. The first, located in the Oil Refinery will cater for business lunches and regular dinners. The third floor has space for banquets and meetings. The second restaurant is located in the Cooper's Shop, and will be more casual in nature, serving a "gourmet burger" type of menu. Combined seating for both

restaurants will be approximately 300. Both restaurants provide additional outside seating areas.

The WPA Stable building will be converted to a physical fitness club, with a membership of about 350. Internal space lends itself well to such use, and will include body-building and weight-reduction equipment; aerobics floor; sauna; tanning; changing rooms and fruit/juice bar.

III. LANDSCAPE HISTORY OF BELMONT OIL WORKS

The Belmont Oil Works is located on West River Drive just below the falls of the Schuylkill. Until the erection of the Water Works's Dam, the upper portion of the river was navigable. The Schuylkill is a major tributary of the Delaware and forms the early transportation of the Delaware Valley. Until the early 1600's the lands in the Delaware Valley was unknown to the Europeans. It was not until Henry Hudson sailed into the bay of the Delaware that this area became known to men of the sea. From that time on the Delaware Valley was home to people of European descent.

The human history of the Delaware Valley predates that of European settlement. The Native American who greeted the European was of the Leni-Lenape nation who had lived in the area for at least 1000 years. They were a loose confederation of Algoncian speakers who were spread throughout the Delaware river basin. The ancestors of the Lenape migrated from Asia into the New World approximately 16,000 to 20,000 years before the present. They formed a Woodlands Culture based on the cycles of the earth. What became known as the Pennsylvania woodland was actually a finely manipulated landscape formed by occasional use of fire. As a result the understory of the woods was parklike in quality to facilitate easy travel through the woods as well as to encourage grazing of large game species.

The Leni Lenape lived in semi-permanent villages. They were primarily agriculturalists growing corn, squash and beans. They had food surplus and supplemented these foods with winter hunting parties. In the off growing season, the Lenape would repair to traditional hunting ground for the winter.

This human ecology resulted in a well managed forest system where people were in balance with thier surroundings.

Contrasting to this system was the European landscape. This landuse was based on clearing the forest for open field agriculture. The Boelsen House, thought to be the oldest in Philadelphia, predating William Penn, was a house in the "wilderness". The Boelsen House with its stratigic location on the Schuylkill indicates a link to the fur trade, European trade and is the first step in pushing the Indians off the land.

Scholars generally accept that the Dutch and Swedes were on the Delaware in order to establish trading posts with the Indians. The fight for control was centered around the river systems of the Delaware Valley. The Boelsen House was located

basically as far up the Schuylkill as possible as well as being directly across from Peter's Island. This Island was an early river crossing and a ferry is shown on early 17th century maps. Moreover Linstroms map, an early 17th century Swedish map shows a fort located somewhere on the east shore.

The history of the Dutch and Swedes is a series of changing positions on the rivers in the Delaware Valley. The Boelsen House is our material link to the landscape before Penn. This landscape was one of water and ships, trading posts and forts. It was short lived yet has had lasting influence on American cultural patterns. The log cabin is just one case in point. This year marks the 300th birthday of this short live colony of New Sweden and the Boelsen House is our link to this short lived past.

The Boelsen House is an example of what is commonly referred to by architectural historians as a hall and parlor floor plan. The hall and parlor is derived from an older house form dating back to the middle ages. The "single cell" is just as the name applies, a small one room cabin. In this house all family interactions took place in the one room. The science of privacy was non-existent. This was a food production area, an eating, sleeping and sitting room. There were no room specific functions. As material wealth of the lower classes improved so did the floor plan. The hall and parlor was the result. One room for production of food, and general gathering while the other room often took on more of a ritual role, a special room so to speak. This room could be a dressed up parlor, or a sleeping room. None the less the room was not used to the extent that was typical of the hall.

The Boelsen House is a classic. It is built on the hall and parlor floor plan by duplicating the single cell or cabin. The Boelsen House recalls the folk traditions of the north with its use of the gambrel roof. Photo documentation suggests the the house remained a farmstead well into the 18th century. Pictures replete with out buildings, kitchen gardens and pleasure garden speak of the lands ability to support an above average living.

Remaining today is solely the main house with its distinctive roof. Little of the previous landscaping is extant. Windows have been changed, land recontoured, yet the house remains perched on the rock outcrop that removed it from the flooding of the river. In short the Boelsen house in itself, requires more intensive study accompanied by an archeological dig. What remains below the earth may be of more interest and knowledge than that which is remaining above. Together, the Boelsen House and Oil Works are a fascinating link to the past and are indeed worthy of preservation.

HISTORY OF SITE

As has already been pointed out in the introduction to this report, this site has a very long history dating to a few years before the establishment of the city of Philadelphia. The first person known to have lived on the site was Jan Boelsen, a settler of either Swedish or Dutch origin who was the builder of what is correctly known as the "Boelsen Cottage", but otherwise referred

to as "Tom Moore's Cottage" or "The Pigs Eye" This cottage formed part of a much larger land grant of 100 acres granted to Boelsen in November 1678 after he was requested to vacate the land upon which he was at that time living. Sometime shortly after this, probably in 1680, the cottage, a centre chimney gambrel roof structure, was built, the first record of Boelsen being taxed on his new property being in 1681. In 1699 Boelsen sold the property to a David Merick and records of Merick's sale of the property in 1717 reveal that by this time the property was a large and thriving farm which probably include buildings which are now part of Belmont Mansion. In 1742 the property was sold to the Peters Family who for many years resided in Belmont Mansion. The Boelsen Cottage is probably the oldest house in Philadelphia and for that reason is a significant structure.

The second phase of development of this site concerns the construction of the Belmont Petroleum Refinery in 1865. This refinery is not to be confused with the Belmont Oil Works which was owned by William Elkins and located at the corner of Lancaster Avenue and 50th Street. The Belmont Petroleum Refinery was owned by the partnership of four men, the most prominent of them being Misters Newhouse and Nusbaum. This refinery was probably among the first of its kind in this country and is one of the oldest still in existence. The oil refinery was a fairly large undertaking consisting of eight buildings, of which the largest, the Treating house, and two smaller buildings, the cooper's shop and offices remain. Hexamer's general survey map of 1868, (see Map) the only detail historical map of the site, shows a highly developed site with, in addition to the buildings on the site, a large number of storage and processing tanks, and a railway track which probably gave the factory access to the Reading Rail road line which passes just west of the site. The refinery was a shortlived operation, and shortly after its establishment the Pennsylvania State Assembly voted to grant funds for the establishment of the park along the Schuylkill River, the intention being to protect the city's water supply from the industries which operated along the river. Accordingly \$85,000 was paid out to the owners of the refinery which closed down in 1870.

Instead of demolishing the buildings, as was done in the case of most other industrial buildings in the newly established park, the Park Commission converted the refinery buildings in office space which were used in various capacities by the Park Commission and its various departments until 1974. In the interim period only one other new structure was built on the site, that being the stable or barn which was built as a W.F.A. project for use by mounted park police in the 1930's. This structure probably replaced the main refinery building or stillhouse which stood on the site where the barn is presently located.

Since 1974 most of the buildings on the site have been vacant and in the period since that time several of those buildings associated with the refinery have been demolished, some as

recently as 1987. Today only the Stables are used on a regular basis as a storage facility for the park's maintenance section, and the Boelsen House is currently on loan to PennDOT. The other three structures on the site are vacant and in a state of advanced neglect and decay. The importance of the buildings lies not so much in their architectural significance as in the context in which they were used and the time in which they were built. Both the Boelsen Cottage and the Petroleum Refinery were among the first of their building type and use in this area and for that reason, though very different, each is in its own way is an important and significant. Probably the most unique quality of this site is its many layers of history and its ability to reflect the development of the valley of the Schuylkill River from the earliest to of times up to the relatively recent New Deal projects of the 1930's. This factor alone should be sufficient motivation for the preservation of the site and it is doubtful that any any other single area of the park is as well equipped to reflect the history of the Park.

IV ASSESSMENT OF BUILDINGS AND SITE Current Conditions and Use.

Boelson Cottage

Occupied and generally in good condition. Presently used as a field office for the reconstruction of the Schuylkill Expressway. The first floor receives full use while the second floor sees occasional use for storage purposes.

Oil Refinery

Unoccupied since 1975 and now in a state of advanced deterioration. The building is surrounded by a safety-fence to prevent entry. A structural engineer's report of November 1987 suggests imminent collapse of the south-west corner.

Oil Refinery Office.

Unoccupied, boarded-up and deteriorating. The porch has a noticeable sag in the middle. Overgrown with vegetation.

Cooper's Shop.

Unoccupied, boarded-up and deteriorating. Condition of the interior is unknown.

WPA Stables.

Partially occupied, and in generally sound condition, but shows signs of maintenance neglect. Currently used by City Maintenance personnel for storage.

Condition of Site .

The site is in a general state of neglect. The area between West River Drive and the buildings is in a fairly neat condition, covered with grass, mature trees and other vegetation although grass edges are ill-defined and worn. All plantings appear uncontrolled. On the more level ground to the north-west of the line of buildings, there are a number of foundation remains from buildings since demolished. Piles of rubble and debris litter

the site, and on the western perimeter below the railroad tracks, thick vegetation entangles trees, some of which are dead. To the rear of the site stands the north wall a building since demolished, to which is attached a small lean-to shed/office and gas-pump used for refuelling Fairmount Park vehicles. North of this are some tall wire fences surrounding empty lots. The raised plateaux next to the railway tracks is own

ed by Conrail,
and used by weekend gardeners for growing vegetab

IV. Evaluation of Integrity

All the buildings with the exception of the lean-to office have remained almost devoid of alterations since construction.

Boelson Cottage.

On the south end of the building, a single-story clapboard, shed addition houses a small kitchen and bathroom, the only toilette facility in the building. The interior appears largely intact.

Oil Refinery Office.

On the north end of the building, there is a single-story clapboard addition. The interior of the building was not open for inspection, but plans indicate that the walls are non-structural.

Oil Refinery.

The single-story extension on the south end of the building has been changed and added to over the years with at least three stages of alteration. The only part which appears original is the south-east wall and it's short return to the west. Changes have been made using concrete masonry units (CMU) and clapboard over wood frame. Inspection of the interior was not possible, but from photographs in the engineer's report (1987) the layout and finishes are original to the building, although in an advanced state of deterioration.

Coopers Shop.

Early in the life of the building, an addition was added to the southern end, and constructed in such a way that it blended with the first part although window and door heights and widths are smaller. The interior could not be viewed, but is assumed to be largely unchanged.

WPA Stables.

Both the interior and exterior of the building appear to be in original condition. A utilitarian structure, much of the "mechanics" are open to view such as the iron columns on the first floor, and the heavy timber trusses on the second floor.

VI Adaptive Reuse Alternatives

The successful transition from existing building uses to new ones begins with analysis. The first step of analysis involves generating a wide of range of alternative uses. The second step is an evaluation of each use on a set of criteria. For this project, fifteen uses were considered and ranked on fourteen different criteria related to the site and buildings. The fifteen uses considered were the following:

restaurant	office	apartments
banquet hall	retail	condominiums
athletic club	food market	manufacturing
private club	equestrian center	night club
day-care center	hotel	museum

The fourteen criteria selected for analyzing proposed uses include site related issues such as site access, parking, catchment, demand, adjacent uses, public access, and building related issues as open space, fenestration, ceiling height, spatial layout, image, capital costs, building codes and historic compatibility. The se issues are briefly discussed below.

Site Access

Each use was ranked on how accessible it would be given the existing limitations of site access from West River Drive. Proposed uses which worked well with existing traffic flows were ranked compatible and those uses which worked against existing traffic flows were ranked incompatible.

Parking

Each use was ranked on how well it fit the site given the amount of parking each use requires by code and the amount of parking which exists and can be accomodated on site. Proposed uses were ranked compatible if they could make use of the existing parking on site, moderately compatible if they could fit on the site if new parking was introduced, and incompatible if they required more than 200 parking spaces. The physical limitation of the site is 200 parking spaces.

Catchment

Catchment refers to the geographical area of influence; how far from the site people are willing to travel for specific uses. Catchment also concerns the issue of competing uses or facilities in the study area.

Demand

Demand refers to whether or not there is a market for the proposed use in the vicinity of the site. Uses were ranked compatible is there was a high demand for the use and incompatible if there was little or no demand for the use. Demand is also influenced by the number and quality of comperable uses in the vicinity ofthe site.

Adjacent Use

Adjacent use refers to how compatible a proposed use would be at

the site given adjacent land and building uses at the site and given the context. Recreational uses, housing and museums were all ranked highly compatible as the context of the site is recreational and there are existing houses and museums on site or nearby. Retail uses were ranked incompatible as there was not enough housing on site or nearby to support these activities on a day long basis. These activities can only be supported at peak hours and on weekends and as such they probably could not be economically viable at this location.

Public Access

Uses which can be access by the general public were ranked highly compatible and uses which are exclusive were ranked moderately compatible or incompatible, depending on how exclusive the use was considered to be. Because Fairmount Park is a public facility and the monies for this project may include public funding, public access was given a higher weighting factor in the analysis than most of issues considered.

Fenestration

The issue of fenestration is whether or not the proposed uses can be fit into existing buildings given existing fenestration. Uses were ranked compatible if their programs could be fit into existing buildings without changing existing fenestration, moderately compatible if changes to the fenestration were necessary but not drastic, and incompatible if the uses required changes in the building fenestration which would also alter the buildings character.

Ceiling Height

The issue of ceiling height is whether or not the proposed uses can fit into existing building given existing ceiling heights. Alternative uses which could fit into existing buildings without any change in ceiling height were ranked compatible and uses which required significant changes in ceiling structures were considered incompatible as such changes would alter the character of the building and may not be historically appropriate.

Spatial Layout

The issue of spatial layout is whether or not proposed uses can make use of existing building layouts. Uses were ranked compatible if their program could fit into existing buildings without requiring new walls to be introduced. Uses which were ranked incompatible were those which required a completely different spatial arrangement to be introduced resulting in a drastic change in the building's character.

Image

Alternative uses which would contribute to a good image at the site were ranked compatible and those uses which would not were ranked incompatible. Image and sense of place are important concepts which should be reinforced in design.

Capital Costs

The issue of capital costs is an important one as proposed uses

The exact type and breadth of restoration must only be defined following further archaeological investigation. This may prove that earlier "restorations" were not entirely accurate, and decisions will then have to be made based on evidence as to the extent of the restoration. Treatment of the landscape will follow a similar methodology.

The Oil Refinery.

Only the exterior stone walls are to be salvaged. Interior stone vaults on the first and second floor are to be removed and all wood work, both structural and non-structural, will be similarly removed. Any materials of architectural value removed from the building should be kept and stored off site, under suitable conditions which preserve them for possible future use or display.

The stone walls will require structural consolidation, especially in the south west corner. Testing should be done on the exterior face of the building to determine the original finish, and repair or duplicate the findings. New floors are to be built at the same levels as the original, but using materials that allow for a clearer open space than presently exists.

The southern one-story flat-roofed extension is remodelled, and the newer components removed altogether from the west side. It is expected that only the east wall and a short southerly return can be salvaged. This part of the building is to be made into restrooms and foyer, therefore all internal walls and partitions must be removed. The roof is to be given a pitch the same angle and direction as the roof on the main building. The foyer will connect to the reception and entrance by means of a glass corridor which overlooks the central patio. In the north-west corner of the building connections are to be made to the new addition on each floor level.

Oil Refinery Office

Because of its small size, moving the office to the new location south of the refinery building, does not present too many technical difficulties, and may be accomplished using standard moving methods. On a new foundation, the office serves as the entrance for the restaurant. The present south-east window becomes a door in the new configuration. Interior partitions will be removed to allow for circulation space, reception desk and coat storage. Handicapped access will be provided by a ramp leading to a door, which is presently a window in the buildings' present north-east corner.

Cooper's Shop.

Interior partitions are removed, and the exterior masonry walls restored in the same manner as the Refinery building. The roof may need to be replaced. The two cupolas should be rebuilt to house HVAC equipment.

Bathrooms on the south-end are moved to the north end, which also accomadates staff entrance and restrooms. The major interior space is taken up with a dining area and centrally located bar. Connection to the kitchen is made through the east wall via a glass-enclosed corridor on the outside of the

building. This corridor also allows waiter access to the patio to serve food and drinks in clement weather. Patrons' entrance is located nearer the south end on the patio side.

New Building Addition.

The addition is necessary in order to accomadate sufficient facilities for the operation of both restaurants. It's design is not meant to duplicate the existing refinery buildings, but to use some of the existing features, proportions and design details. By so doing, the addition will not appeare disconnected or incongrous while being an addition. The existing buildings are so obviously "industrial" that the designers of the addition should be conscious of this. The following functions will be provided in the addition:

Kitchen.

Cooking, food storage and preparation, dish washing, wine and liquor storage, offices for the manager and head-chef.

Access Tower.

Passenger elevator to the 2nd and 3rd floors. Service elevator to the 2nd and 3rd floors. Fire-stair for 2nd and 3rd floors. Storage and condement area on each floor, and restrooms on the third floor.

Veranda

Added to the east and north sides of the lounge on the first floor, it is accessible from a door on the east side. It will provide a fine-weather area for those wishing to have a drink before meals. The veranda should remain unenclosed so that the principle facade of the refinery is as visible as possible. Tables and umbrella will be used seasonally, and stored in the building on the ground floor.

Patio.

Patrons visiting the restaurant located in the Cooper's Shop will have have access to a new patio area built between the entrance in the south and the kitchen wing to the north.

VII. Construction Schedule and Estimated Costs.

Schedule.

Simultaneous opening of the fitness club and restaurants will entail some phased construction. A rough schedule is as follows:

- (1) Demolition/removal of material from buildings where required. Stabilizing of the main Refinery building's south-west corner.
- (2) Excavation and digging of footings for all new construction, including the relocated refinery office. Locating all underground services. Jacking up of refinery office and relocating it south of the oil refinery building.

- (3) Construction new floors, roofs, kitchen and tower additions, and interior walls.
- (4) Restoration of existing structures and materials where applicable, and installation of new fenestration and finishes. Painting etc.
- (5) Construction of new parking lots, removal of the old approach road, landscaping and the construction of paths, patios and accessways.

Overview of Projected Costs.

Restoration Boelson Cottage:.....	\$ 150,000
Restoration of Cottage landscape:.....	\$ 2,000
Rehabilitation of WPA Stables @ \$150 psft.:.....	\$1,240,000
Renovation and new construction @ \$150 psft.:.....	\$2,315,850
Equipment and furniture:.....	\$ 553,657
Parkinglots and landscaping:.....	\$ 209,500
TOTAL:	\$4,336,007

Financing Strategies: Restaurant Complex

The strategies for financing this project have been worked out in detail and a balance sheet calculated according to tried and tested methods of budgeting for restaurants is provided in the appendix. It was felt with a project of this magnitude with an estimated capital requirement of just over three million dollars that a detailed examination of financing was required. The balance sheet reveals that if the restaurant complex is run as envisaged, that is with three diverse areas of operation, each catering to a different market, it will, without any funding other than an initial building loan be able to simultaneously run at a profit and repay the building loan in a maximum of ten years, this even in a projected worst scenario situation. Profits have been calculated assuming a best scenario situation and have then been reduced by 15% and 30 % respectively to produce two additional financial scenarios.

It is estimated that for the building loan to be repaid within ten years repayments will have to be just over half a million dollars per annum. Worst scenario profit estimates envisage that the business will only earn less than this amount in the first year of operation and almost three hundred thousand more than that amount by its third year.

Bearing in mind the large profit takings anticipated from this business two alternative approaches to the establishment of the restaurant complex exist. One of

these might involve scaling down the more expensive of the two restaurants by reducing its meal cost and making it a less exclusive undertaking. This could however be to the detriment of the second restaurant and bearing in mind the location of this site, there seems to be no reason why it should not be able to attract the clientele required to assure its survival on the levels projected in the balance sheet.

A second alternative, and one that might compensate for the fact that some might view this project as involving the use of public land for private gain, would be to write into the lease a clause stipulation that a certain percentage of any profit over and above that required to repay the building loan be paid to the park in addition to the usual rental. In this way the Park itself could derive more benefit from the site than merely having a derelict unused building put to good use. Such contracts are commonly used by many non-profit organisations usually to their great benefit.

Financial Strategy : Belmont Health Club

The estimated construction cost for the health club is 1.2 million dollars. Given the diversity of revenue producing activities at the club enough income can be generated to pay the costs of construction in addition to debt service well within a 10 year period and more probably within 7 years. (For Financial Summary, Pro-forma, see appendix).

IX. Implementation Strategies.

Board of Advisors.

A lease-agreement with Fairmount Park will keep the property permanently under the Park's jurisdiction and ownership. Reuse of the site and implementation of the project should be conducted under the auspices of a board of advisors which would remain after the building and construction phases were completed. The Board would be responsible for ensuring that a developer was chosen who was worthy of the goals of the Fairmount Park Commission. In addition, they would monitor the impact of the new facilities on the park, and ensure continued and correct use of the site.

Developers.

It is recommended that the developers of the site be tied by contract so that the two elements of the project (the Health Club and Restaurants) are implemented as one project to prevent only partial completion of the program.

Publicity.

Implicit within the project is the intent of financial profitability. An essential part of the success of the two ventures will be the public awareness gained through advertising and

publicity. A major portion of the clientele will be drawn from business and corporated sources and special attention may be aimed toward them during the lead in time prior to opening of the facilities.

Signage for the Health Club, Restaurant and the Boelson Cottage will be located on the west side of West River Drive, and be designed in such a way as to be visible and effective while not being out of character with the Park environs or the buildings themselves. While names for the businesses are conjectural at this time, it is suggested that names which evoke familiarity with the sites' past uses might be appropriate, for example;

Restaurant 1 (the Oil Refinery),	"The Old Refinery Restaurant."
Restaurant 2 (the Cooper's shop),	"Cooper's Restaurant."
Fitness Club (The WPA Stables),	"Belmont Health Club"

X. CONCLUSION

The recommendations made in this report and the uses proposed for the buildings on this site have all been made with a single ideal in mind, that is to save the site from destruction. Some of the buildings on the site are threatened with demolition in the near future and its hoped that in proposing alternative and economically viable uses for these very important buildings such a fate may be avoided. Destruction need not however only occur in the physical sense and in the diversity of these buildings there is a delicate balance which should be preserved.

Much has been said about the suitability of various uses with regard to the buildings in which it is planned they be put, and much thought went into considering proposals which, though they seemed ideally suited suited to the buildings in which it was envisaged they be placed, on further consideration were found to be incompatible with the site as a whole. This site is one which, as has been mentioned at many points in this report, is very diverse, and with its diversity creates numerous problems for the preservationist. It is made up of types of buildings which in most cases would not have been built in such close proximity to one another, but which, through this very same diversity give rise to the uniqueness of the site. In considering the proposals laid down in this report it was hoped to at the same time preserve this sense of diversity, and continue its existence on the site. It is felt that this can only be done by proposing a different use for each set of buildings, but at the same time ensuring that these do not clash with one another.

APPENDIX 1.

Alternative Use Analysis.

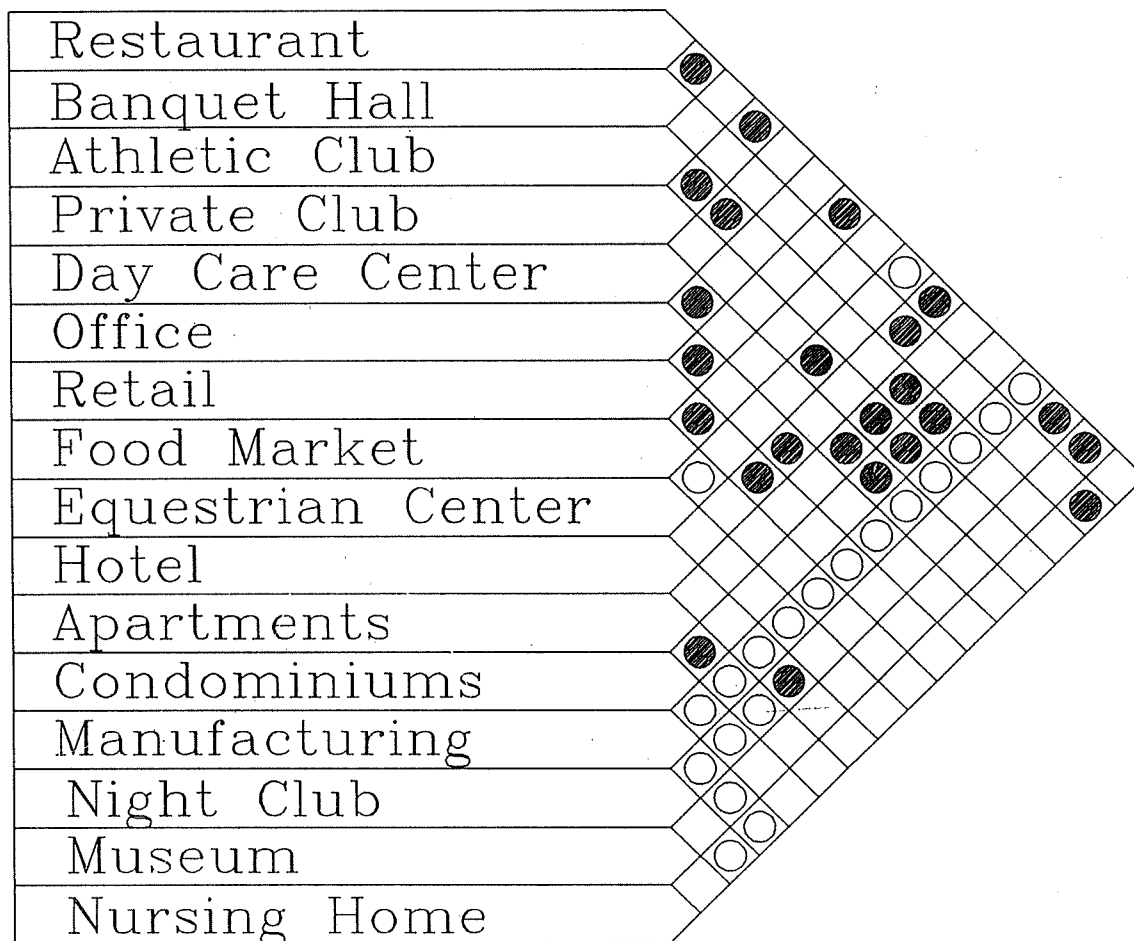
Weighting Factor	2.0	1.5	1.5	1.5	1.5	2.0		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.75		
	Site Access	Parking	Catchment	Demand	Adjacent Use	Public Access		Open Space	Fenestration	Ceiling Height	Spatial Layout	Image	Capital Cost	Building Codes	Historic Comp.		RANKING
Restaurant	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		53
Banquet Hall	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		54
Athletic Club	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		51
Private Club	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		45
Day Care Center	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		48
Office	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		28
Retail	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		35
Food Market	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		38
Equestrian Center	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		54
Hotel	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		10
Apartments	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		36
Condominiums	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		38
Manufacturing	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		42
Night Club	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		42
Museum	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		37

- Incompatible (Score = 0)
- Moderate Compatibility (Score = 2)
- Compatible (Score = 3)

ALTERNATIVE USE ANALYSIS

BELMONT OIL WORKS

Fairmount Park, Philadelphia



○ Negative Relationship

● Positive Relationship

MIXED USE COMPATIBILITY ANALYSIS

BELMONT OIL WORKS

Fairmount Park, Philadelphia

APPENDIX 2.

Finances: First Three Years.

FINANCES: FIRST THREE YEARS

RESTAURANTS:

- * Restaurant 1 is the restaurant to go on the first and second floors of the refinery building.
- * Restaurant 2 is the restaurant to go in the Cooper's shop.

FOOD:

Estimate of Meals Served:

Restaurant 1: (Capacity 80)

Day	Dinner		Lunch	
	%	Number	%	Number
Monday	50	40	50	40
Tuesday	75	60	75	60
Wednesday	100	80	100	80
Thursday	150	120	150	120
Friday	200	160	200	160
Saturday	250	200	75	60
Sunday	50	40	200	160

Meals per week = 700 @ \$35 each 680 @ \$25 each

Sales per week = \$24,500 + \$17,000 = \$41,500

Sales per annum = 41,500 x 52 = \$2,158,000

Restaurant 2: (Capacity 110)

Day	Dinner		Lunch	
	%	Number	%	Number
Monday	50	55	50	55
Tuesday	75	82.5	75	82.5
Wednesday	100	110	100	110
Thursday	150	165	150	165
Friday	200	220	200	220
Saturday	400	440	75	82.5
Sunday	100	110	200	220

Meals per week = 1,182.5 @ \$7 each 935 @ \$7 each

Sales per week = \$8,277.5 + \$6,545 = \$14,822.5

Sales per annum = 14,822.5 x 52 = \$770,770

ALCOHOL:

Both liquor and wine and beer sales are estimated as 16% or 0.16 respectively of total per annum food sales.

Restaurant 1:

Sales of food	2,158,000
Sales of liquor	345,280
Sales of wine and beer	345,280
Total sales per annum	2,848,560

Restaurant 2:

Sales of food	770,770	
Sales of liquor	123,323	
Sales of wine and beer	123,323	
+ 20% on liquor	24,665	for bar takings
+ 20% on wine & Beer	24,665	" " "
Total sales per annum	<u>1,066,716</u>	

COSTS:

Food:

Annual sales of food	2,158,000+	Restaurant 1
	770,770	Restaurant 2
	\$2,928,770	
Subtract 40% for costs	1,171,508	
Gross profit on food =	\$ <u>1,757,262</u>	

Alcohol:

Annual sales of liquor	345,280+	(Restaurant 1)
	123,323	(Restaurant 2)
	24,665	(Restaurant 2 bar)
	\$493,268	
Subtract 25% for costs =	123,317	
Gross profit on liquor	\$ <u>369,951</u>	
Annual sales on wine and beer	345,280+	(Restaurant 1)
	123,323	(Restaurant 2)
	24,665	(Restaurant 2 bar)
	\$493,268	
Subtract 40% for costs =	197,307	
Gross profit on beer and wine	\$ <u>295,961</u>	
Gross profit hence =	1,757,262+	(food)
	369,951	(liquor)
	295,961	(wine & beer)
	\$ <u>2,423,174</u>	

EXPENSES:

Expenses are calculated as 59% of the gross profit broken down as follows: Payroll 35%; Utilities 5%; Insurance 4%; Supplies, linen, laundry and cleaning 5%; Avertising 2%; Credit Card Collections 3%; Miscellaneous 5%.

Gross profit	=	2,423,174
Subtract 59% for expenses		1,429,673

Therefore: NET INCOME	=	<u>\$993,501</u>
-----------------------	---	------------------

If the above figure is income for third year of operation (ie it is estimated that it will take three years to reach full level of capacity) then estimated income for second year will be 80% of capacity and first year 65% of capacity. Therefore income for the first three years may be estimated as follows:-

Year 1	\$645,776
Year 2	\$794,801
Year 3	\$993,501

(These figures have been calculated assuming a best scenario situation. See "Alternative Scenarios" below.)

BANQUETING

Working on an average of 80 guests per function, in a hall with a capacity of 115, and charging \$20 per head for food, average earnings per function equal \$1,600.

Sales:

If gross food sales per function =	1,600
then liquor at 16% of food =	256
and beer & wine 16% of food =	256
Gross sales per function =	\$2,122

Costs per Function:

Sales of food	1,600-	
Costs of food	640	(ie 40%)
Gross profit from food	=	\$960
 Sales of liquor	256-	
Costs of liquor	64	(ie 25%)
Gross profit from liquor		\$192
 Sales of wine & beer	256-	
Costs of wine & beer	102	(ie 40%)
Gross profit wine & beer		\$154
 Total Gross Profit hence	=	960+
		192
		154
		<u>\$1,360</u> per function

Expenses:

Gross expenses	1,306-	
	771	(ie 59%)
Net income per function	=	<u>\$535</u>

Income for banqueting for first the three years has been estimated to be as follows: First year 1 function per week; Second year 2 1/2 functions per week; Third year 4 per week.

Therefore net income from banqueting for the first three years should be as follows:-

Year 1	\$27,820
Year 2	\$69,550
Year 3	\$111,280

(These figures have been calculated assuming a best scenario situation. See "Alternative Scenarios" below.)

ALTERNATIVE SCENARIOS FOR FIRST THREE YEARS OF OPERATION:

Best Scenario:

Year 1:	27,820+	(Income from banquets.)
	645,776	(Income from restaurants)
	\$673,596	
Year 2:	69,550+	
	794,801	
	\$864,351	
Year 3:	111,280+	
	993,501	
	\$1,104,781	

Average Scenario:

(Subtracts 15% from Best Scenario.)

Year 1:	\$572,557
Year 2:	\$734,851
Year 3:	\$939,064

Worst Scenario:

(Subtracts 30% from Best Scenario.)

Year 1:	\$471,517
Year 2:	\$605,046
Year 3:	\$773,347

BUILDING COSTS:

Fittings:

Square Footages: Public Spaces:

6,788+	Restaurant 1
2,460	Restaurant 2
9,248	Square Feet

Interior Decoration:

(At \$20 per square foot.)

9,248	x	20	=	184,960	
				50,000	Interior Decorators fee
				\$234,960	

Carpeting:

(At \$25 per square yard.)

1,027	x	25	=	\$25,675
-------	---	----	---	----------

Kitchen Equipment:

Estimated at	\$150,000
--------------	-----------

Place Settings:

Restaurant 1 and Banqueting:	195 places @ \$20 each =
195	x 20 = \$3,900

Restaurant 2:	110 places @ \$12 each =
110	x 12 = \$1,320

3,900 + 1,320 =	\$5,220 +	
	522	ie 10% for reserves

\$5,742

Furniture:

Chairs:	Cost	Number		
	150	420	Restaurants and banqueting	63,000
	300	40	Lounges	12,000
	150	60	Courtyard	9,000
	150	24	Terrace	3,600
				\$87,600

Tables:	Cost	Number		
	300	105	Restaurants and banqueting	31,500
	150	10	Lounges	1,500
	200	15	Courtyard	3,000
	200	6	Terrace	1,200
				\$37,200

Total Furniture	=	87,600+	
		37,200	
		\$124,800+	
		12,480	ie 10% for reserves
		\$137,280	

Total Cost of Fittings:

Interior Decoration	234,960
Carpeting	25,675
Kitchen Equipment	150,000
Place Settings	5,742
Furniture	137,280
	\$553,657

Building Operations:

Gross Square Footage = 15,439 x
@ estimated cost of \$150 per square foot
\$2,315,850

Landscaping:

Parking @ \$50 per square yard for 2,200 square yards =	110,000
Courtyard @ \$50 per square yard for 408 square yards =	20,400
Terrace @ \$50 per square yard for 81 square yards =	4,100
Landscaping of site =	75,000
	\$209,500

TOTAL CAPITAL COSTS

Fittings	553,657
Building Operations	2,315,850
Landscaping	209,500
	<u>\$3,079,007</u>

Annual Repayments:

Working on a building loan of \$3,079,000 at interest rate of 10%.

Using annuity payment formula:

$$PMT = \frac{PV (r)}{\left(\frac{1}{1+r} \right)^n}$$

Where: PMT = Annual Payment

PV = Present Value

r = Interest Rate

n = Number of Years

Repayment over 10 years = \$501,093 per annum

Repayment over 7 years = \$632,445 per annum

BELMONT ATHLETIC CLUB
INCOME PROJECTIONS APRIL 1988

	year 1	year 2	year 3
REVENUES			
Fees	\$183,750	\$192,938	\$202,584
Initiation Fees	\$52,500	\$7,875	\$7,875
Aerobics	\$78,000	\$81,900	\$85,995
Personal Training	\$70,000	\$73,500	\$77,175
Massage	\$49,000	\$51,450	\$54,023
Tanning	\$14,560	\$15,288	\$16,052
Juice Bar	\$1,000	\$1,050	\$1,103
Gross Income	\$448,810	\$424,001	\$444,807
EXPENSES			
Nautilus Equipment	\$30,000	\$5,000	\$5,000
Rowers, Treadmill, Cycles	\$7,500	\$2,500	\$2,500
Massage, tanning, misc	\$11,400	\$1,710	\$1,796
Subtotal	\$48,900	\$9,210	\$9,296
OPERATING EXPENSES			
Desk & Maintenance Staff	\$59,000	\$61,950	\$65,048
Trainers & Aerobics Staff	\$40,000	\$42,000	\$44,100
Management Salary	\$16,700	\$17,535	\$18,412
Health Insurance, Workmans Com	\$3,400	\$3,570	\$3,749
Payroll Tax(Sal x 12%)	\$13,884	\$14,578	\$15,307
Utilities	\$37,883	\$39,777	\$41,766
Telephone	\$4,450	\$4,673	\$4,906
Station, Postage, Office	\$4,450	\$4,673	\$4,906
Towels	\$1,300	\$1,365	\$1,433
Cleaning & Locker Room	\$3,340	\$3,507	\$3,682
Advertising	\$5,570	\$5,849	\$6,141
Insurance	\$5,570	\$5,849	\$6,141
Legal & Accounting	\$5,570	\$5,849	\$6,141
Maintenance & Repairs	\$11,100	\$11,655	\$12,238
Depreciation	\$19,800	\$20,790	\$21,830
Miscellaneous(inc juice bar)	\$11,400	\$11,970	\$12,569
Total Operating Expenses	\$243,417	\$255,588	\$268,367
Debt Service	\$158,581	\$158,581	\$158,581
Total Expenses	\$450,898	\$423,379	\$436,244
NET INCOME	(\$2,088)	\$622	\$8,563

Appendix 3.

Presentation Material:

Drawings, Plans and Model.

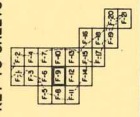


TOPOGRAPHIC MAP OF

FAIRMOUNT PARK

FAIRMOUNT PARK COMMISSION
CITY OF PHILADELPHIA

KEY TO SHEETS



DATE OF PHOTOGRAPHY MARCH 22, 1961

CONTOUR INTERVAL 2 FT.

SCALE 1"=400'

8 FOOT GRID BASED ON PENNSYLVANIA RECTANGULAR GRID SYSTEM

VERTICAL DATUM OF 1929

KEY

EXPRESSWAY

CONRAIL

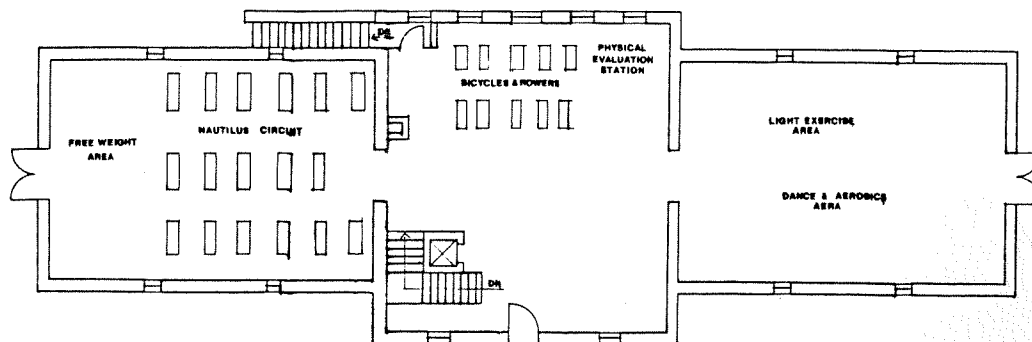
DIRECTIONAL CHANGE

CONRAIL LAND

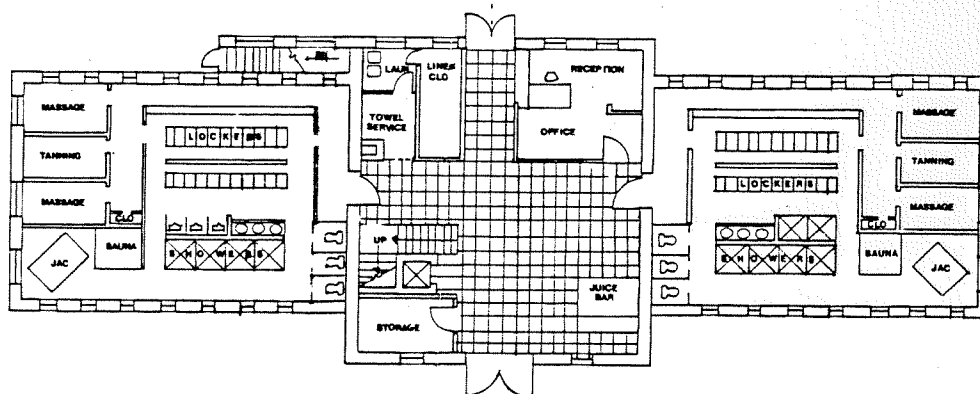
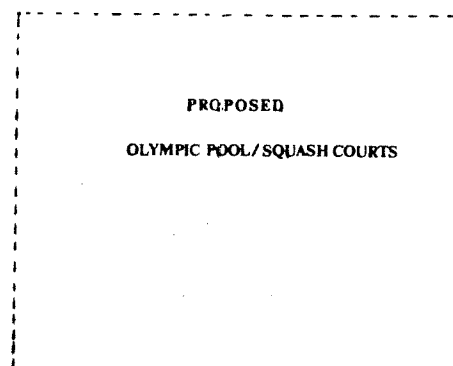


EXISTING CONDITIONS

BELMONT REFINERY
ADAPTIVE USE ANALYSIS



SECOND FLOOR PLAN



FIRST FLOOR PLAN

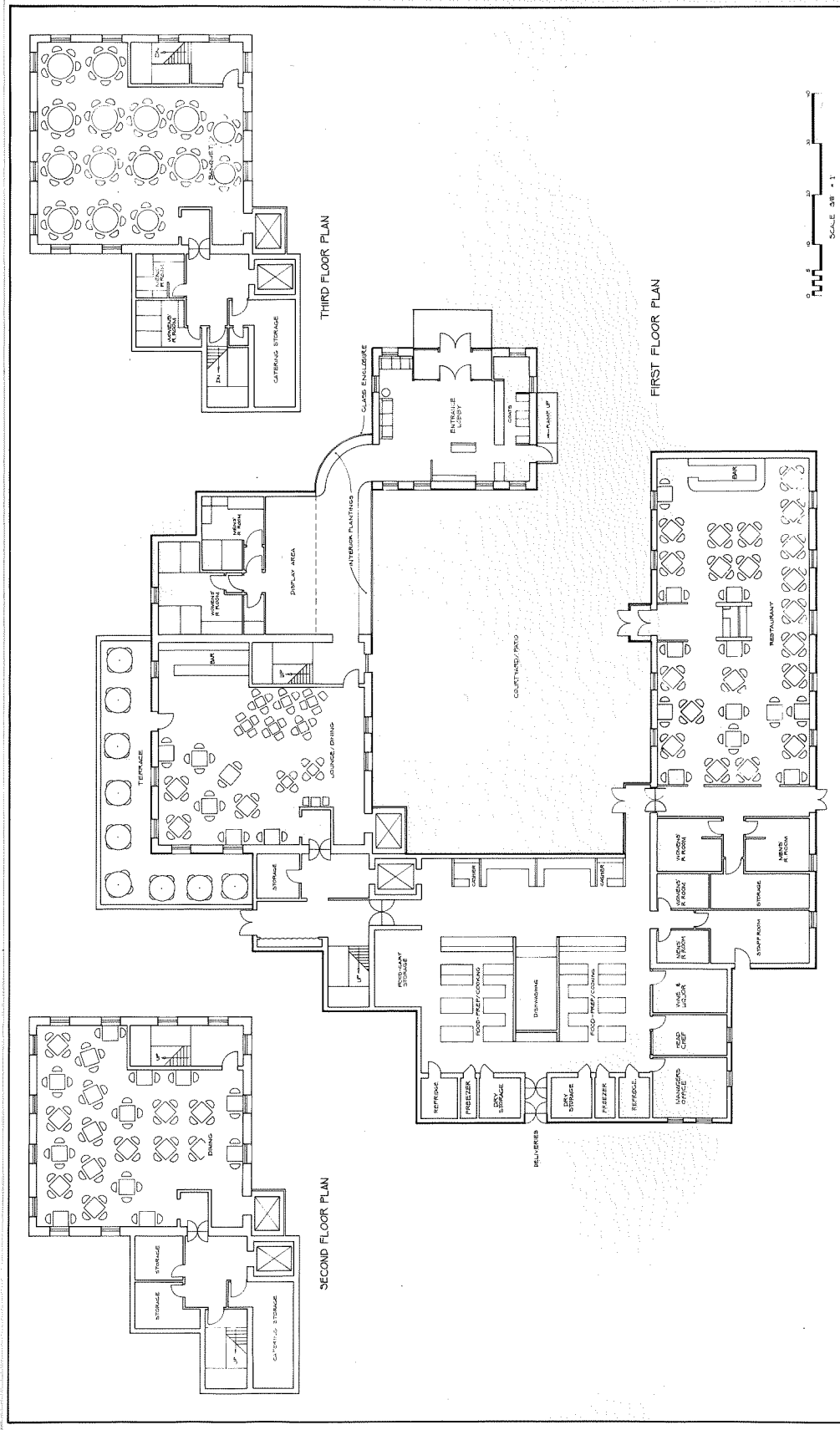
ADAPTIVE USE PROPOSAL BELMONT REFINERY

HISTORIC PRESERVATION STUDIO

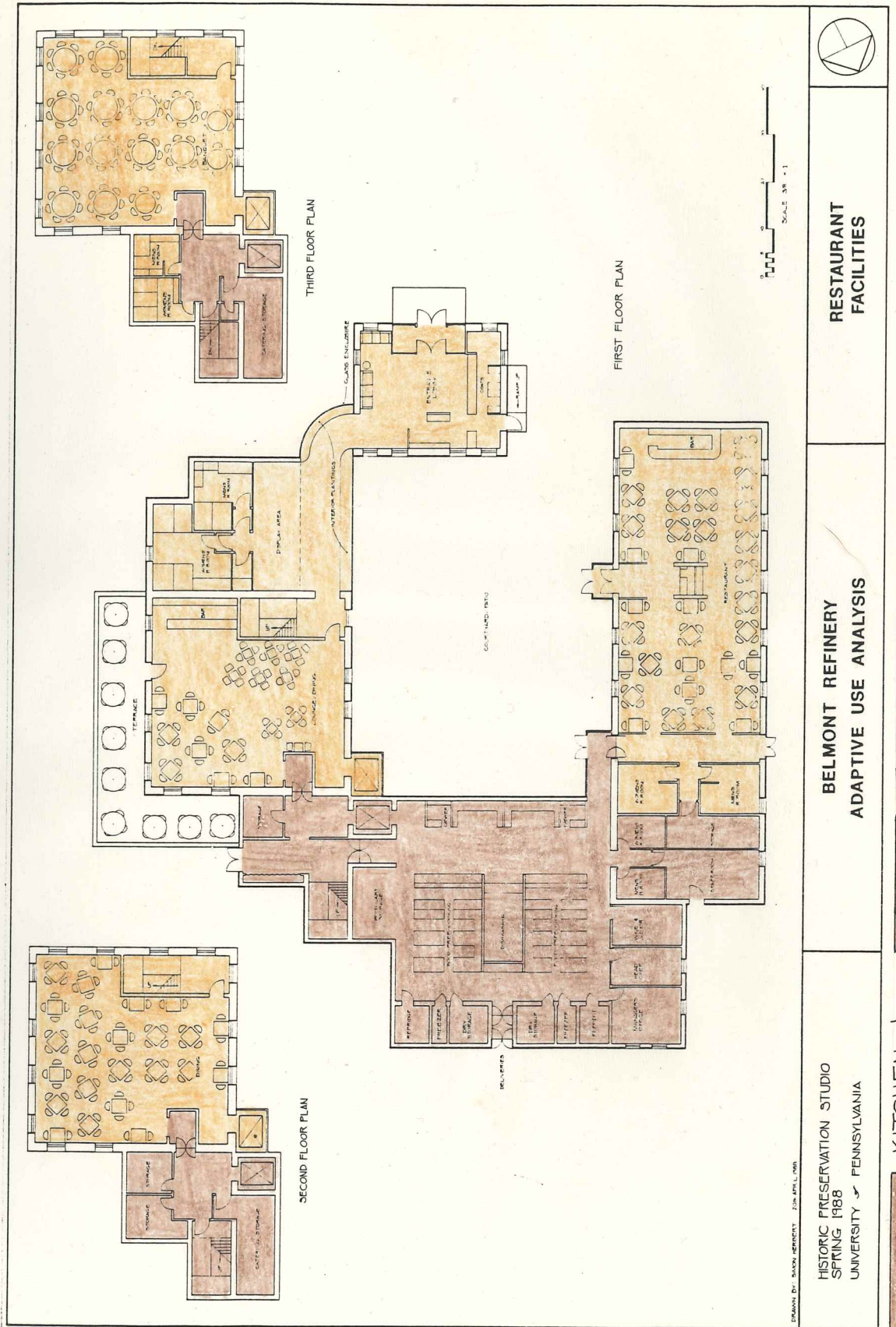
UNIVERSITY OF PENNSYLVANIA

SPRING 1988

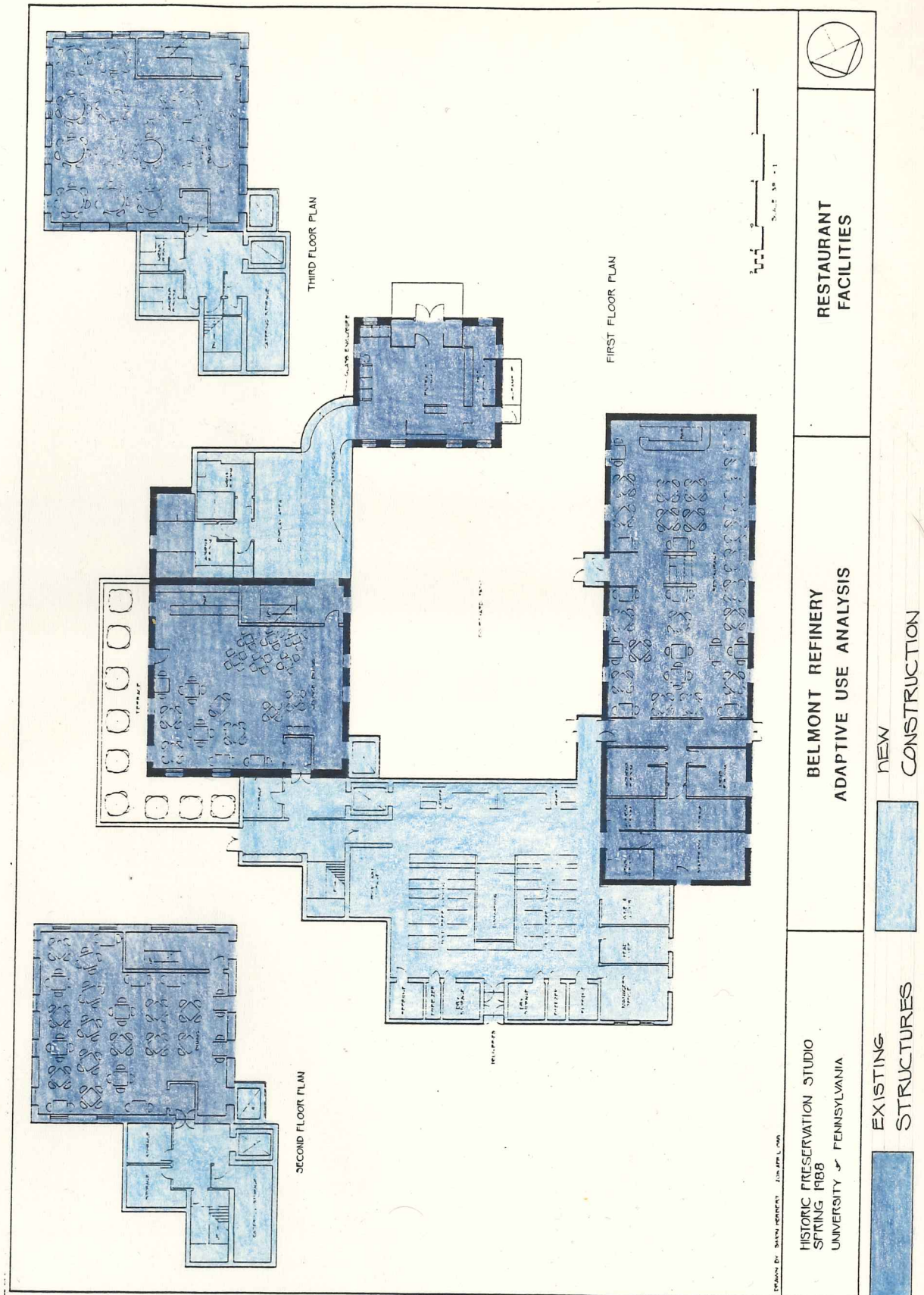




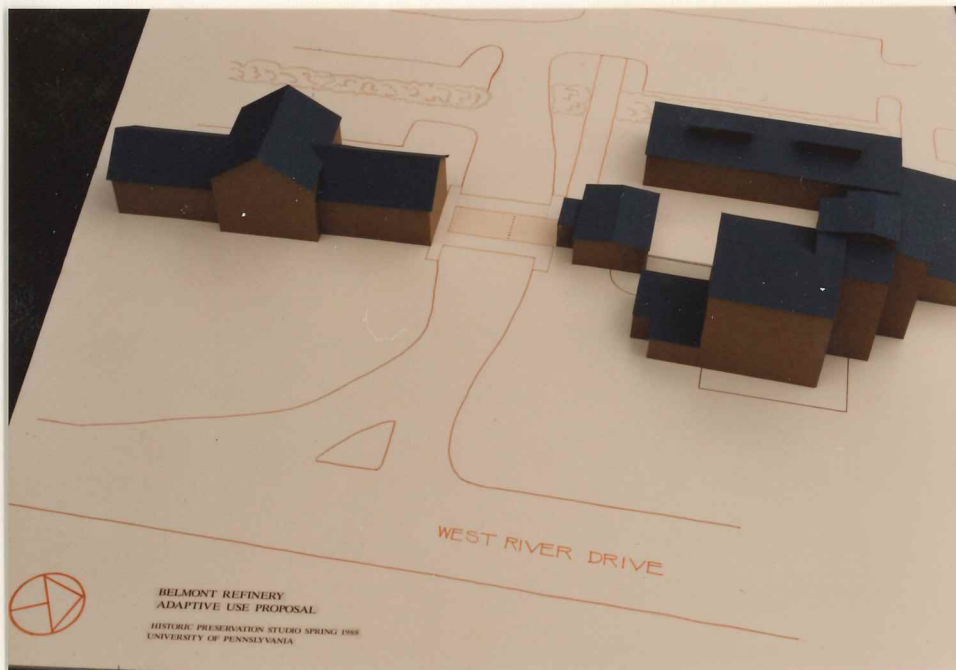
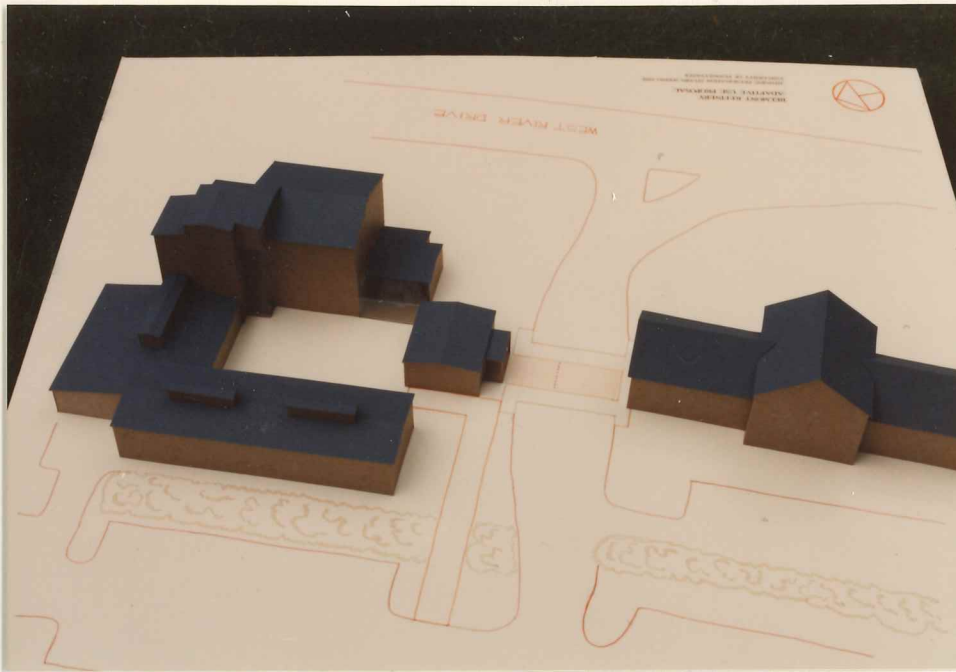
USE PLAN.



DESIGNED BY: SARAH HERRERT 20th APRIL 1988



PLAN OF EXISTING AND NEW STRUCTURES.

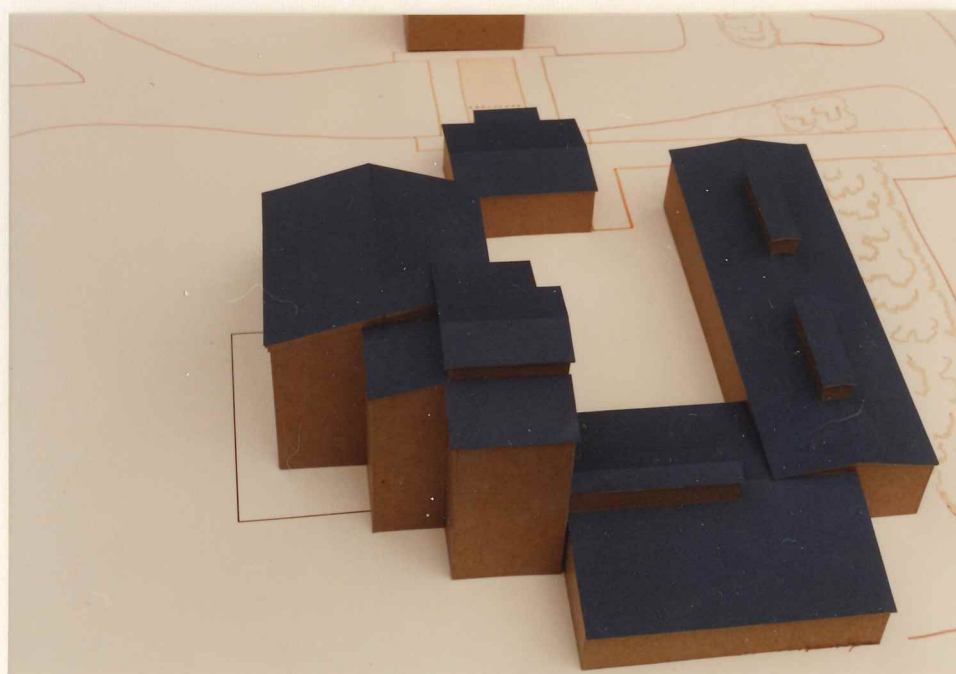
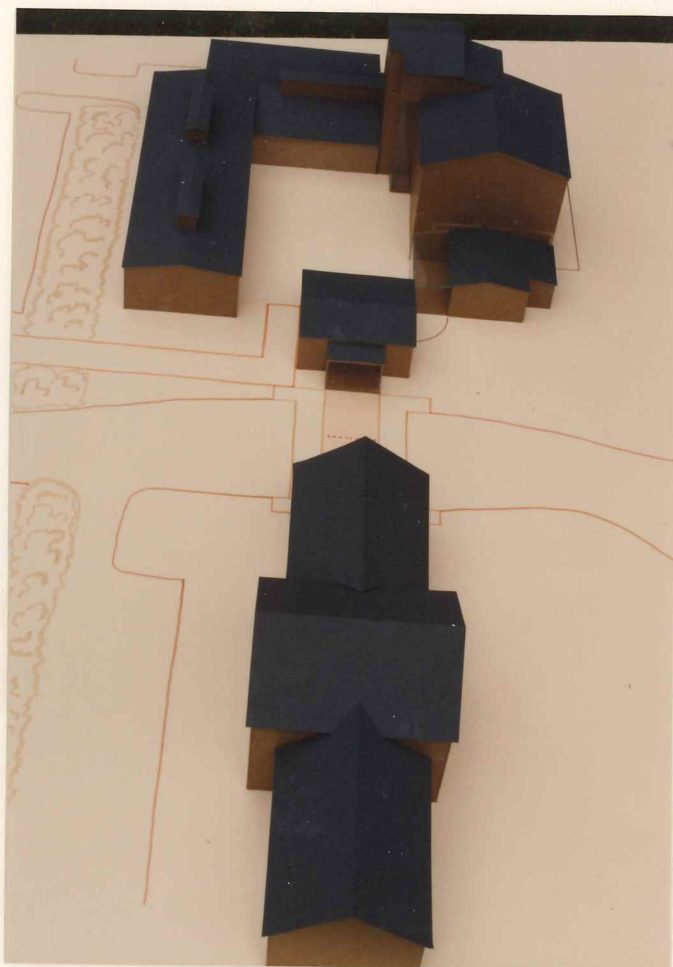


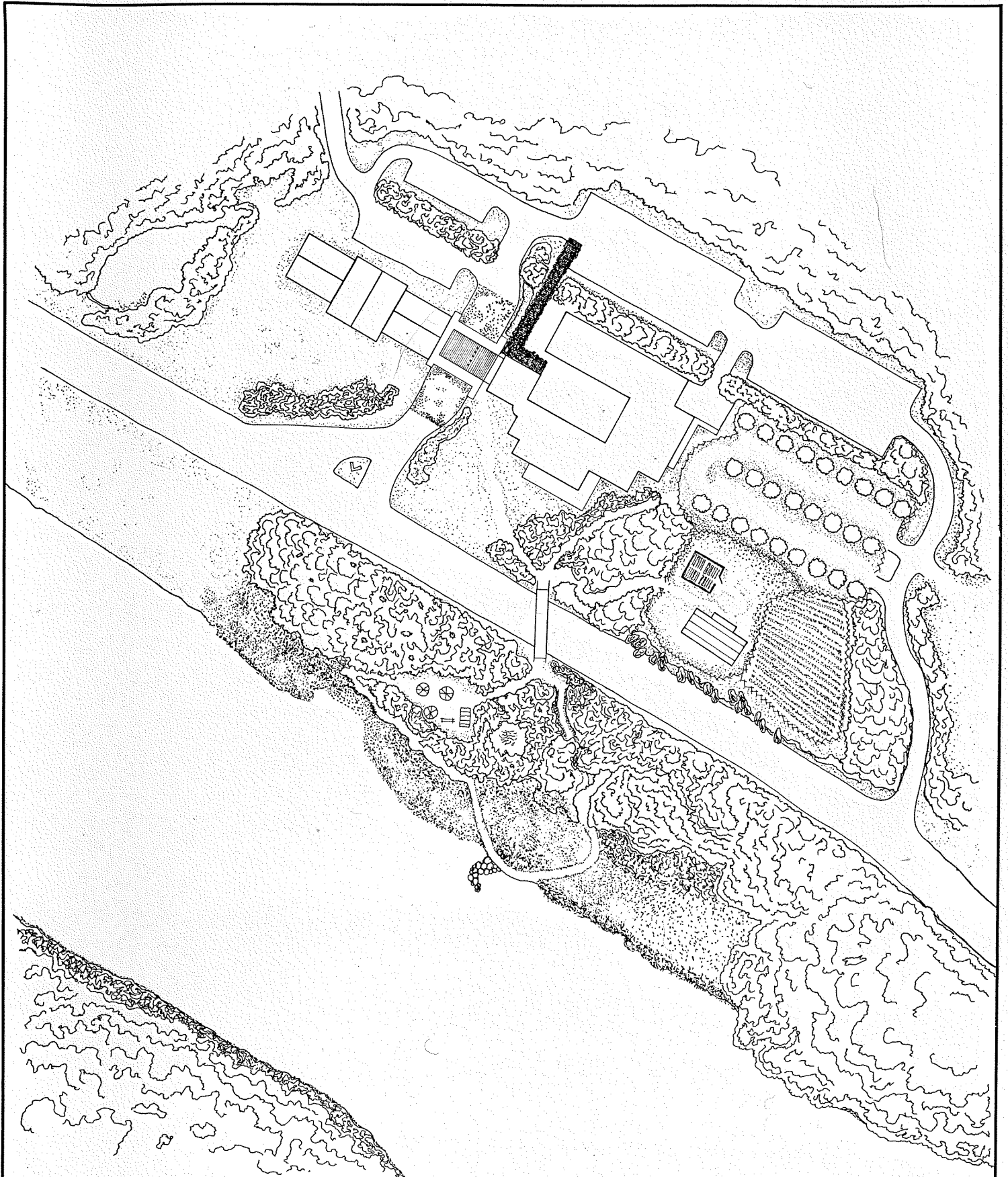
Presentation Model.

Two view which show the relationship of the buildings, and the new construction.

Presentation Model.

Details.



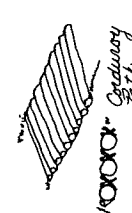
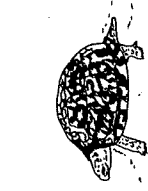
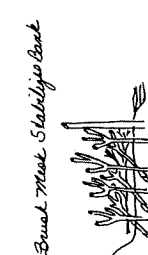
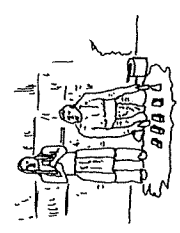
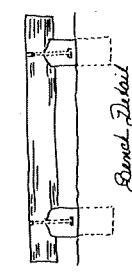
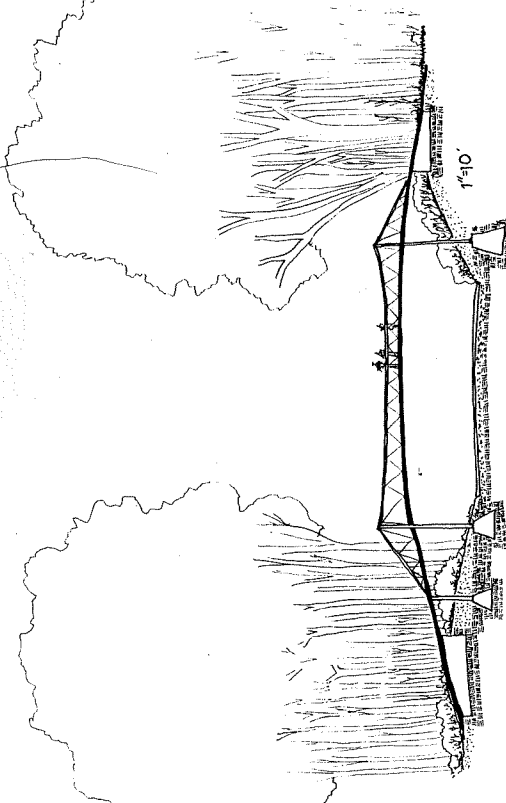
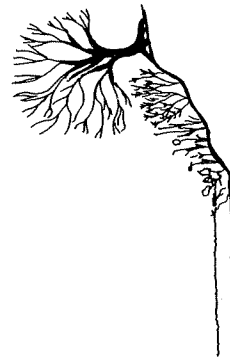
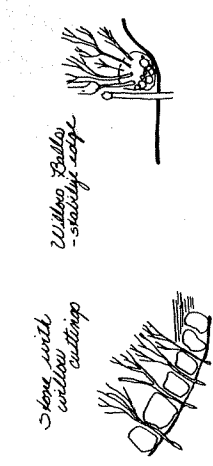
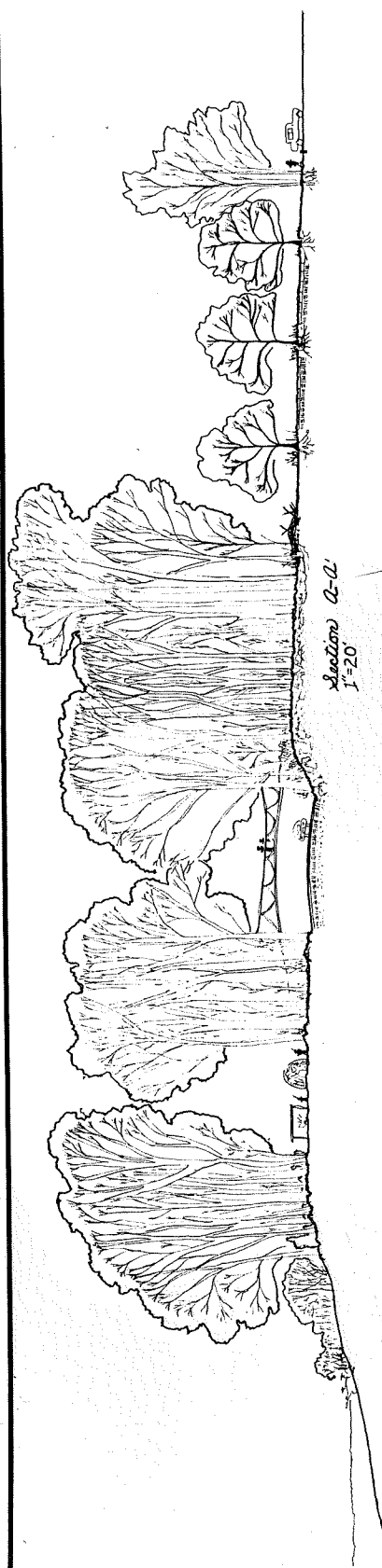


21-11250N
SHE 1, 2, 3, 4
U.P. 11/10/11

**BELMONT REFINERY
ADAPTIVE USE ANALYSIS**

SITE PLAN





INTERPRETIVE PATH: DETAILS & SECTION

Appendix 4.

Photographs.



Boelson Cottage; looking west.



Cottage looking east.



Boelson Cottage.

Left; and below,
Undated photographs
showing cottage and
landscape.

(Photos; Brad Thompson)





Boelson Cottage.

Left;

19th century photograph
of the entrance.

(photo via Brad Thompson)

Below;

Similar view, 1988





View of the Columbia Bridge and Schuylkill River.
(February 1988)



Partial view from the west of the site.



Two of the former buildings
on the site which were demo-
lished in 1987.

(photo:Historical Comm.)





Oil Refinery Office.

View of main facade, taken in 1974.

(photo: Historical Commission)



Same building in February, 1988.

Cooper's Shop.

Right; east facade.

Below; west facade

(April 1988)





Oil Refinery Building.



Refinery Building and Cooper's Shop.
The space inbetween in the foreground
is the proposed spot for the relocated
Refinery Office building.



Cornice Details

Top; the Refinery Building

Lower; Cooper's Shop.

(April 1988)

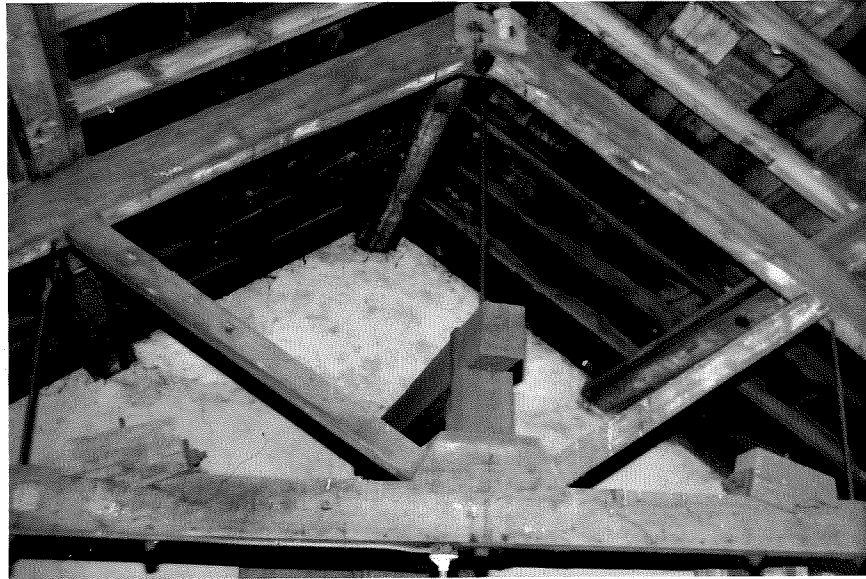


W.P.A. Stables.

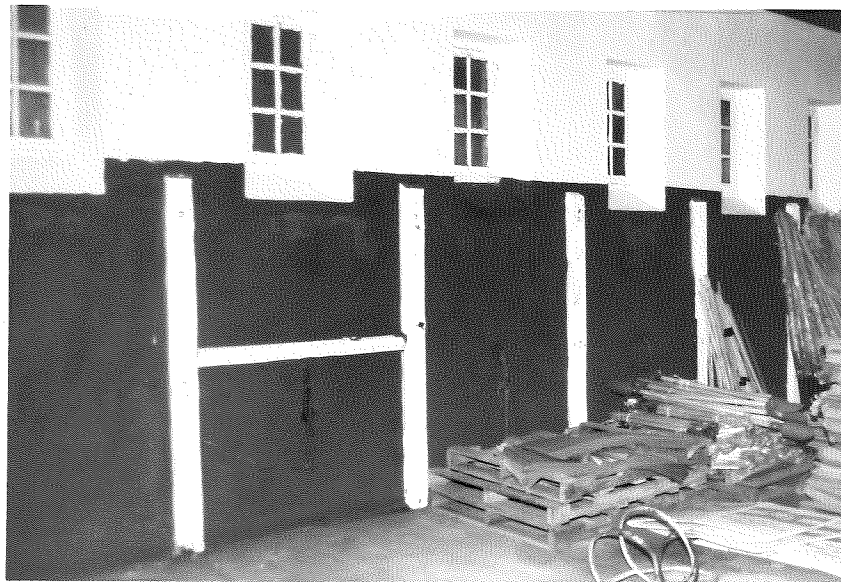
View from the south east on West River Drive.



South-west view of the Stables.



W.P.A. Stables; Roof truss detail, 2nd floor south.



W.P.A. Stables; remains of stalls on the 1st floor.

APPENDIX 5.

Documentation of Early Land Ownership.

JOHN BOELSEN'S HOUSE AND GARDEN

In the early 17th century Dutch explorers sailed up the Delaware almost to the present site of Philadelphia. At this time attempts were made by the Dutch West India Company to settle in the Delaware Valley and to establish a fur trade with the Indians. These early Dutch colonists and traders were soon joined by the Swedes who also established important settlements in the area.

In 1673, Jan Schoeten, a seafaring trader from New York and probably Dutch, sailed up the Delaware River. In 1677, Schoeten was granted several parcels of land totalling 300 acres lying on the west side of the Schuylkill.

Jan Boelsen, probably a Swede, was granted in the same year 100 acres of land above the Mill on Amesland Kill, now Cobb's Creek. As the land around the Mill was rapidly being cleared for farming, the supply of timber for the Mill was rapidly dwindling. To protect the timber supply, land was set aside for the Mill's use and the settlers were offered land elsewhere in exchange. Jan Boelsen agreed to take up 100 acres of land in another place. Boelsen's new tract must have adjoined Schoeten's tract on the Schuylkill for in 1681 they were taxed jointly for a total of 400 acres. In 1684 a deed was issued by William Penn to John Bowles and John Skatton for 400 acres of land.

By 1684 a house had been constructed on the 100 acres belonging to John Bowles. This house is believed to be the so-called "Tom Moore" cottage still standing on West River Drive. Constructed sometime between 1678 and 1684 this building is thus one of the oldest houses in Pennsylvania, possibly predating the Caleb Pussy House which was built in 1683. This house has certain architectural features common to early Dutch and Swedish vernacular architecture of the American colonies. These features include its field stone construction, the small window openings, the arched chimney supports in the basement and the one and a half story elevation under a gambrel roof. Its site, out of the wind by the river, is also characteristic of these early settlers. The plan of the interior suggests that it could have been used by two families, as it is equally divided with two rooms on each floor. Each of the first floor rooms have doors leading to the outside and have fireplaces located back-to-back in the center of the house. Both the first floor fireplaces have niches for lug-poles and both have raised hearths. Although it is possible that Bowles and Skatton, together, built and lived in this house, it is also possible that John Skatton had another house yet to be identified elsewhere on the property.

In 1698 John Bowles and John Skatton divided the 400 acre tract equally between them, John Bowles receiving the southern half including the island later to be known as Peter's Island. The next year John Bowles sold his half to David Meyrick. By the time of this sale the Bowles farm had become a substantial plantation including houses, orchards, gardens, clear land, buildings and other improvements. The houses mentioned in this sale may also have included the earlier structure around which the present day Belmont Mansion was built. An elevation of an early house built in the same early style as the little stone cottage with a gambrel roof but larger, being almost two stories, is still evident in the rear facade of Belmont Mansion. It seems reasonable to assume that by the time of the sale in 1699, a second house was built larger and grander than the first for this more elaborate establishment. John Bowles was a prominent citizen, having been called upon to appraise an ox and to serve on a jury. It is likely that he developed his property to reflect his social station.

In 1717 when this southern half of the original tract of 400 acres of land was sold by David Merick the property contained Messuages, Barns, stables, buildings, etc. When the property was sold again in 1729, it was referred to as a Messuage plantation and included houses, outhouses, buildings, improvements, etc. This property was purchased by William Peters in 1742.

In 1718, John Skatton sold 25 of his 200 acres to William Couch. It was on this 25 acre parcel that Ridgeland was later built. The balance of the Skatton tract remained in the possession of John Skatton and his descendents until at least 1727 and must have included another house or farm. By the time of the sale of the Bowles property to William Peters, the Schoeten tract had also been sold.

When Bowles and Skatton established themselves on the banks of the Schuylkill River they followed the normal pattern for travel and trade developed by the early Dutch and Swedish settlers. Water transportation was the mode favored most by these groups. The use of roads was generally avoided as there were so few and those that existed were in a primitive state.

The first road developed by Bowles and Skatton began at the Schuylkill, just opposite the northern tip of Peter's Island. It ran generally north westward almost in a straight line up the hillside to Monument Road. The junction was very close to the present intersection of Belmont Avenue and North Georges Hill Drive. The road marked the boundary line between Bowles and Skatton's land holdings. Portions of the original road still exist just south of Ridgeland Mansion.

At first it was designed to service Bowles' first two houses or plantations. At some point, probably during the 18th century, it received the designation "limekiln Road" because of the limekilns located a little less than 100 yards up the road from the river. By 1719-20 it serviced the newly established plantation

of William Couch (Ridgeland). The "Map of Farms and Lots Embraced within the limits of Fairmount Park" published by the Commission in 1868 shows only two additional farms developed in connection with the Limekiln Road. One of these farms may have been established by John Skatton. Further research has to be undertaken to determine this.

The area bounded by Belmont Avenue, Chamounix Drive and the old bed of the Inclined Plane Railroad was last occupied by John Melick and was a well developed farm. The second farm occupied the Chamounix Picnic Grounds opposite Ridgeland.

When the northermost half of the Bowles tract was purchased by William Peters in 1742, it was termed a Plantation and included the small island, houses, outhouses, Edifices and buildings, Orchards and Gardens, Ways, Water, Woods, Timber, easements, etc.

The gardens inherited by Judge Peters at Belmont were described in 1762 and seem to reflect characteristics of the typical 17th century garden. These include the use of gravel walks, obelisks, labyrinth hedges, statues of mythological figures and urns. In 1819 these gardens were described as a curiosity being a "most perfect sample of the taste of parterres and arbors made of yew clipped into forms". This description also states "The venerable possessor of Belmont judiciously abstains from altering what his predecessors left him". It seems, therefore, possible that the foundation for this garden was laid out by John Powles in the style fashionable before 1700. This style of garden was certainly out of date by the mid-18th century when the English Romantic Landscape style had become dominant.

The house and garden at Belmont may have thus had their origins in the 17th century when John Boelsen carved his country seat out of the wilderness along the banks of the Schuylkill.

Martha Halpern

John McIlhenny

December, 1983

CHRONOLOGY OF THE JOHN BOELSEN TRACT ON THE WEST BANK OF THE SCHUYLKILL

- 1673 Mar. 20 A license was granted to John Schouten to go with his sloop to New Castle, or parts adjacent, and return to New York with his loading.
(page 404 Annals of Pennsylvania by Samuel Hazard, 1850)
- 1677 Sep. Jan Schoeten desiring a grant of the Court to take up one hundred acres of Land on the west side of the Schuylkill with some marsh.
The Court granted the petition, requesting he seat the same according to the Regulations of his honor the Governor.
(page 62 Record of the Upland Court, Memoirs of the Historical Society of Pennsylvania, Volume VII, 1860 also page 444 Hazard)
- 1677 Nov. Jan Schoeten desiring of the Court a grant to take up 200 acres of Land above in the Schuylkill.
The Court granted the petition requesting he seat and improve the land according to his honor the Governor's Regulations.
(page 73 Upland Court Records)
- 1677 Nov. Jan Boelsen desiring Liberty of the Court to take up 100 acres of land above the Mill in Amesland Kill. The Court granted the Petition Requesting he seat and improve the Land according to his Honor the Governor's Regulations.
(page 72 Upland Court Records also page 447 Hazard)
(Amesland Creek was the present Cobb's Creek page 65 Upland Court Records)
- 1678 Mar. It was brought to the Court's attention that as more people daily were taking up land near the Mill on Amesland Creek, the Mill would be left destitute of any land to get timber for the use of the Mill. The Court therefore ordered that on the west side of the river should be laid out 100 acres of land for the Mill's use.
(page 88 Upland Court Records)
- 1678 Nov. 12 Ordered that the land formerly granted to Jan Boelsen be reserved for the Mill and that Jan Boelsen may have and take up in another place 100 acres of land. To which Jan Boelsen did agree in Court.
(page 115 Upland Court Records also page 460 Hazard)
- Swedish surnames typically end in -son or -sen.
(page 77-78 Upland Court Records)
- On Nov. 12 Jan Boelsen was called upon to appraise an ox
(page 112 Upland Court Records)
- On Nov. 22 he served on a jury.
(page 107 Upland Court Records also page 460 Hazard)
- 1681 Jun. 14 Upon the Request of William Warner and William Orien, it was ordered that the several people holding lands on the Schuylkill bought by the petitioners from the Indians, repay the petitioners proportionable to the quantity of land they hold there. Among the following persons holding land in that Limit were: John Booles and John Schoeten 400 acres
(page 193 Upland Court Records)
- 1684 23rd da. Whereas the Court at Upland by their order bearing the date 9th mo. the 12th of November 1678 did grant unto John Bowles, a warrent to take up 100 acres of land within their limmit and accordingly was taken up by him and seated upon according to regulations and by virtue of an order from the Proprietary and Governor dated the 5th of August 1684 This quantity of land was resurveyed.

(Warrents and Surveys of the Province of Pennsylvania 1682-
1759 Volume 6 page 5 No. 15 Bowles 100 a. Sept. 23, 1684
Volume 3 page 270-271 John Bowles Sept. 23, 1684
City Archives, Philadelphia)

- 1684 30th da. Whereas there is a certain tract of land in the County of
5th mo. Philadelphia lying on the west side of Schull Creek....
Also a small island near adjacent containing 2 acres....
being in all 412 acres of land being by a former grant
surveyed the 20th day 9th month 1678 surveyed by a Warrent
from myself bearing date the 28th day of the 4th month 1683
laid out by the Survey-Generals order to John Bowles and
John Skatton.... William Penn
(Exemplification Record No. 1 page 11
Recorded in Patent Book A Volume 1 page 14 City Archives)
- 1698 Apr. 26 The said John Bowles and John Skuton agreed upon a division
line to be run between them.
(Brief of Title to Five Tracts of Land known as 'Belmont'
Fairmount Park Title Papers, City Archives)
- 1699 1st da. To all to whom these presents shall come John Bowles late of
1st mo. the County of Philadelphia, yeoman, but new resident of the
Province of West New Jersey.... Whereas John Bowles and John
Skuton by a certain Instrument of writing under both their
hands and seals dated 26th 2nd month 1698 did unanimously
agree on a division line between them.... Now know ye that
the said John Bowles for the consideration of 250 pounds
current money of Pennsylvania to me in hand paid and secured
by David Meyrick of the said County of Philadelphia, yeoman
.... All that my above mentioned part and portion of ye said
400 acres of land according th ye said division thereof
being by estimation 200 acres to be the same more or less
with all the houses, orchards, gardens, clear land, Buildings,
Improvements and other Appurtenances thereunto belonging....
(Deed Book TH No. 77 page 81 City Archives)
- 1717 Aug. 9 This Indenture made of the 9th day of August in the year 1717
Between David Merick, Yeoman, William Merick (Eldest son and
heir apparent of David Merick) and Mary his wife.... grant
Release and convey the Land, Island Tenements and
Hereditainments herein after described unto Richard Hill,
Merchant.... This land being the Southerly Moiety or half
part of a certain Tract of land situate on the west side of
Schull Creek.... containing 400 acres of which the said
Southerly Moiety contains 200 acres more or less.... and also
the small island.... also with all and singular Messuages,
Barns, stables, buildings, Woods, Ways, Waters, Rights,
Liberties, Priveleges, Improvements, Hereditainments,
appurtances thereunto belonging....
(Lease David Merick to Richard Hill Book E-7 Volume 10
pages 359-360 City Archives)
Whereas John Bowles and John Skutton did agree upon a division
line to be run between them.... upon this division the
Southerly Moiety of the said 400 acres of land with the
island.... fell to the phase of John Bowles.... a full equal
half part of the 400 acres of land....
(Release David Merick to Richard Hill Book E-7 Volume 10
pages 361-364 City Archives)
- 1727 Mar. 2 On the 2nd day of March in 1727 Between Richard Hill and
Daniel Jones.... hath granted barganed sold.... a certain
Messuage plantation and tract of land situate in the Township
of Blockley.... including all the houses, outhouses buildings

improvements, etc.

(Richard Hill to Daniel Jones Deed Book TH No. 77 pages 82-85 City Archives)

1742 Jul. 21 On the 15th day of June in the year 1747 Ruth Couch lately Ruth Jones Widow and Administratrix of the Estate of her late husband Daniel Jones, deceased.... now the wife of William Couch the Younger.... did sell by Publick Vendue on 21st day July 1742 to William Peters.... the northernmost upper part of the Plantation containing 115 $\frac{1}{2}$ acres.... or half part of the land late of Daniel Jones.... at the Messuage or Dwelling House on the said Plantation.... including the small island.. .. Houses, outhouses, Edifices and buildings, yards, orchards and gardens, Ways, Water, water courses, Woods, Timber, Tree Liberties, Easements, etc....
(Daniel Jones Admin'rx to William Peters Deed Book I No. 4 pages 258-262 City Archives)

From Martha Halpern

John McIlhenny

1. Penn to Bowles and Skutton 400 a.
2. December 6, 1718
John Skutten, yeoman, and Amelia his wife sold to:
(Deed Book H Volume 20 page 144 City Archives)
William Couch, yeoman, of Blockley Township - 25 a. 'Whereas there is a certain piece or parcel of land situate lying and being in the Township of Blockley afores'd.... Containing 25 a. of land being part of the 412 a. of land confirmed by patent to one John Bowles and aforementioned John Skutten unto their heirs and assigns forever by the said patent dated 26 day of 1st month 1684..' (Recorded Philadelphia Book A Volume 1 page 14 City Archives)
This 25 a. was the property upon which Ridgeland was ultimately built.
(A Historical Survey of Rigeland Mansion by Cissy Scheer, Park Historians Office. January 11, 1980)
3. In 1729 Richard Hill sold 200 acres of land formerly belonging to John Bowles to Daniel Jones. At this time this property was adjacent to the land of Jacob Scouton and William Couch.
(Deed Book TH No. 77 pages 82-85 City Archives)
4. In 1747 when this tract was sold by the administrators for Daniel Jones to William Peters the property was bounded by the land of Joseph Johnson and William Couch.
(Deed Book I No. 4 page 258 City Archives)

From Martha Halpern
John McIlhenny

APPENDIX 6.

Engineer's Structural Report
of the Oil Refinery Treating House.
Kieran, Timberlake and Harris, Engineers.
Philadelphia, 1987.

Engineer's structural report on the condition
of the Oil Refinery Building.

By Kieran, Timberlake and Harris,
Philadelphia, November 1987.

*Belmont Petroleum Refinery
Treating House*

TEN HISTORIC STRUCTURES IN FAIRMOUNT PARK

NOVEMBER 1987

BELMONT PETROLEUM REFINERY, TREATING HOUSE

Name(s) of Building - Historic: Belmont Petroleum Refinery, Treating House
- Current: Belmont Oil Works

Address/Location: West River Drive near Montgomery Drive, West Park,
Philadelphia

Date(s) of Construction

Main Building: Treating House/Office, c. 1865

Additions: Twentieth century office on site of Engine House built as part of
Treating House, c. 1865

Auxiliary Buildings: Boelsen Cottage (1678-82); Office (c. 1865); Cooperage
(c. 1865 with additions); Stable (1930's by WPA).

Ownership

Original Owner of Land: John Boelsen and Jan Schoeten (also Skutton) (1684)

Original Owner of Treating House: Joseph Newhouse, Simon Arnold, Ernest
Nusbaum and Isaac Bernheimer

Original Owner of Boelsen Cottage: John Boelsen

Last Owner of Buildings: Messrs. Newhouse, Arnold, Nusbaum and Bernheimer

Date of Purchase by City of Philadelphia: 1870, \$80,000 for 6 acres and
buildings

Significant Person(s) Associated with the Buildings

John Boelsen - first owner, likely builder of Boelsen Cottage c. 1678-82.

William Peters - owned site in eighteenth century as part of Belmont tract.

Richard Peters, Jr. - owned site late eighteenth century to 1828.

Joseph Newhouse, Simon Arnold, Ernest Nusbaum and Isaac Bernheimer -
Philadelphia merchants and developers of refinery.

Brief History of Buildings

Treating House is part of complex constructed c. 1865 for Belmont Petroleum Refinery, one of the first oil refineries in America. By 1868 negotiations began between company and City for acquisition of site as part of plan to eliminate industry along Schuylkill River in order to protect drinking water. Final purchase, 1870. Complex became site of first headquarters of Fairmount Park Commission; headquarters moved to Memorial Hall, 1974. Warehouses, tenant houses on site demolished Spring, 1987. Boelsen Cottage, also on site, may be oldest surviving building in Philadelphia.

Brief Architectural Description of Buildings

Treating House: Three-story stone industrial building with very shallow pitched roof. Exterior originally stuccoed. Interior features original built-in safe and unusual arrangement of rooms that wrap around it. Rare example in Fairmount Park of surviving nineteenth century industrial building along Schuylkill River. Boelsen Cottage: One-and-one-half story stone building with gambrel roof, central chimney and casement windows.

Current Use of Buildings

Treating House: Vacant. Boelsen Cottage: Temporary office for reconstruction of Schuylkill Expressway

Current Condition of Buildings

Treating House: Structurally unsound. Roof fully deteriorated. Southwest corner of building collapsing. Boelsen Cottage: Good.

Repositories with Primary Source Reference Materials

Historian's Office, Fairmount Park Commission: extensive files on Boelsen, Peters family, Belmont Mansion and Belmont Petroleum Refinery; photographs; maps.

Historical Society of Pennsylvania: David Kennedy sketch from window of Treating House looking north to small office and warehouses.

Philadelphia Historical Commission: Belmont Oil Works file including 1965 survey of Refinery buildings.

Comments and Recommendations

Richly historic site encompassing seventeenth century farm, one of nation's first petroleum refineries and administrative offices of Fairmount Park for over 100 years. Sensitive site in picturesque location along West River Drive. Requires extensive research including archaeology to identify full historical significance. Boelsen Cottage is candidate for National Historic landmark status and warrants Historic Structures Report.

BELMONT PETROLEUM REFINERY, TREATING HOUSE
(also Belmont Oil Works)

The subject of this study is the large three-story stone rubble building that served as the Treating House for the Belmont Petroleum Refinery (c. 1865-1870) and later as administrative offices for the Fairmount Park Commission (c. 1870-1974). The Treating House occupied a central location within the refinery complex, constructed on a six-acre site carved from the original tract owned by the Peters family of Belmont Mansion. Joseph Lovering, trustee for the Peters estate, sold the six acres to Joseph Newhouse of Philadelphia in 1864. The next year Newhouse formed a consortium of investors that included Simon Arnold, Ernest Nussbaum and Isaac Bernheimer, all Philadelphia merchants. The formation of this consortium, with its presumed infusion of capital, probably coincides with the point when construction began in earnest on this site. A photograph taken c. 1870 from the east bank of the Schuylkill (see Appendix) documents that the buildings cited in a c. 1865 survey were constructed and not simply planned. However, by the time of the photograph the Refinery was no longer operating.

In 1867 and 1868 the Commonwealth of Pennsylvania passed legislation that empowered the City of Philadelphia through the Fairmount Park Commission to purchase the land and buildings along the Schuylkill River to protect the drinking water of the city. By a jury decision settled June 8, 1870, the owners of the Refinery received payment of \$80,000 for the buildings and the six-acre site. As a result the Refinery operated for less than five years.

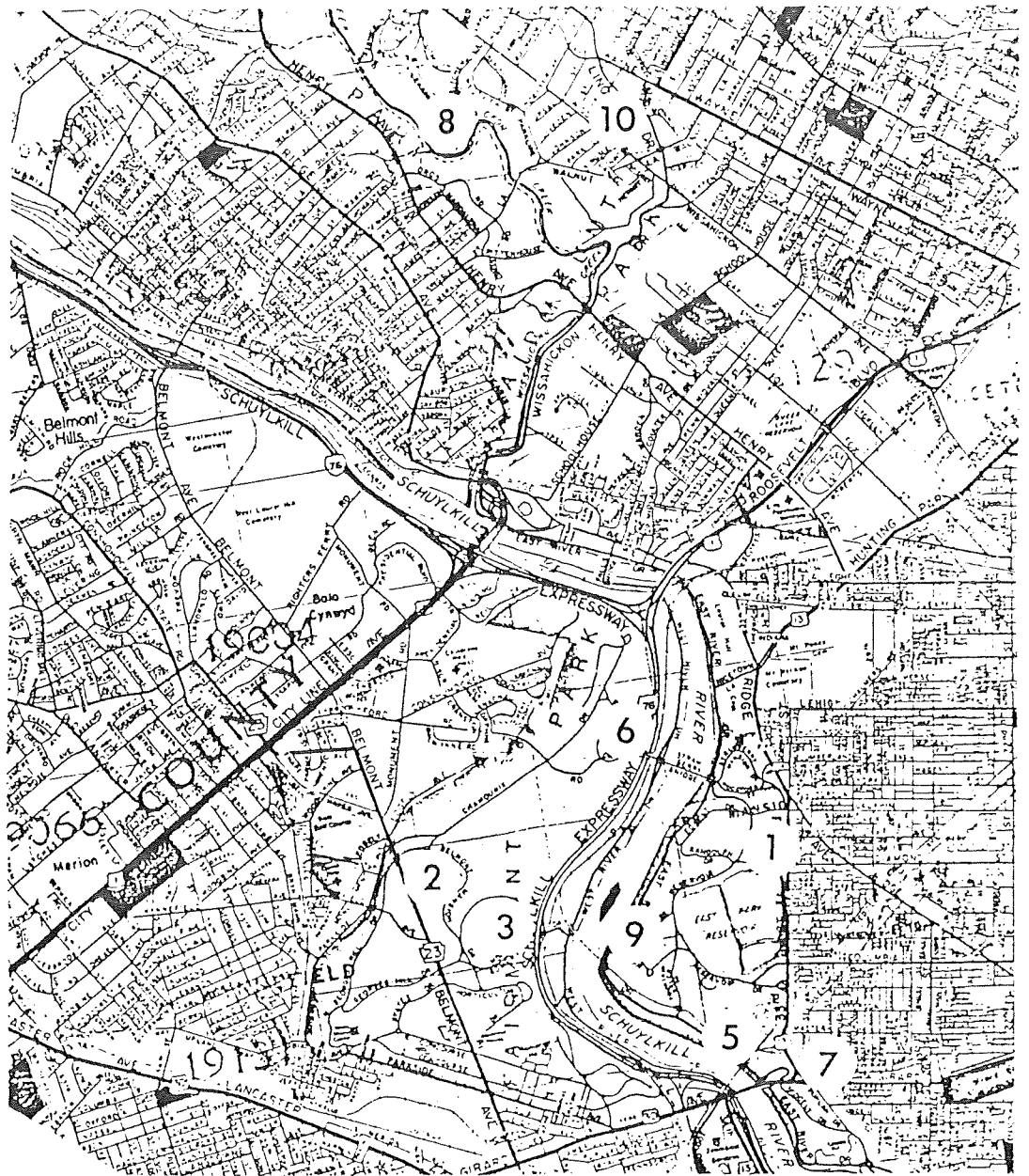
Rather than demolish the buildings, as was the practice for other industrial sites along the River, the Fairmount Park Commission chose to convert the newly built complex into administrative offices, in operation from c. 1870 until 1974. During this period, the actual refinery was demolished to make way for the stone stable, built as a WPA project. The move of the administrative offices of the Park to Memorial Hall in 1974 triggered a serious decline of the buildings, culminating in the demolition of warehouses and tenant houses in 1986 and 1987.

The history of the Belmont Petroleum Refinery and particularly its site is rich and complex. It is associated with the Peters family of Belmont Mansion as well as the seventeenth century Swedish yeoman John Boelsen and the cottage he built on the site c. 1678-1682. When constructed in 1865, the Refinery was one of the earliest in an entirely new industry, making it an important site in America's industrial history. Finally, the Refinery symbolizes the roots of Fairmount Park; it is at once the sole remnant of the industry that almost irrevocably altered the pastoral beauty of the Schuylkill River and the place where the Fairmount Park Commission established its administrative jurisdiction.

Architecturally the Treating House is similar to mid-nineteenth century factory buildings that still stand in Old City, Hunting Park and Manayunk. It originally had a small Engine House that projected from its southeast corner. An underground steam pipe ran south from the Engine House to the Receiving House which had a steam engine, force pump and hose. The Receiving House where refining actually took place was edged to the south by cooling tubs and to the west and north by underground receiving tanks. South of the cooling tubs were ten Stillhouses and a large steam boiler. The WPA stable now occupies the site of the Receiving House and its corollary tubs, tanks and boiler. A one-story

stone office remains at the north end of the Treating House Office. To the west were the Cooper Shop and warehouses, demolished earlier in 1987.

The purpose of the Treating House is not precisely known, but its central location between the areas of active refining and the more passive cooping, warehousing and administration suggests that it served some intermediary function. It is unlikely, however, that it involved much direct processing of oil because the huge built-in safes at the core of the building are original, according to engineer's notes prepared between 1868 and 1870; see Appendix. Surely, Messrs. Newhouse and Nussbaum, the proprietors of the Refinery, would not want to risk fire or explosion in the building where they stored valuables or documents.



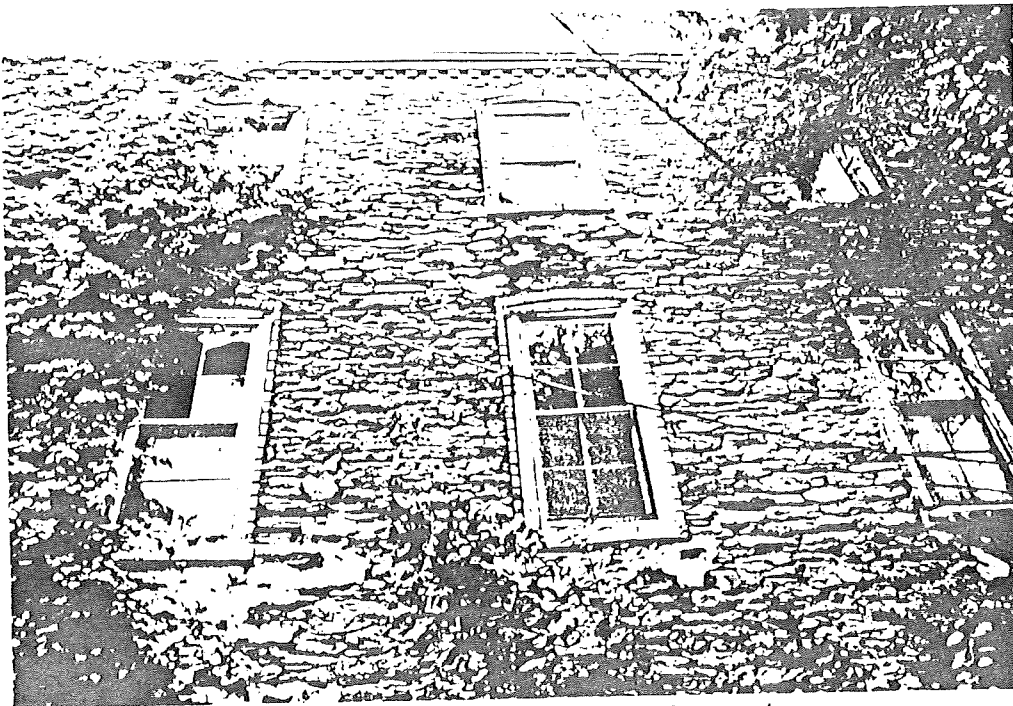
- 1 Arnest
- 2 Belmont Mansion
- 3 Belmont Petroleum Refinery
- 4 Blue Bell Tavern
- 5 The Cliffs
- 6 Greenland
- 7 Hatfield
- 8 The Monastery
- 9 Rockland
- 10 Thomas Mansion, "Clifford Park"

BELMONT PETROLEUM REFINERY, TREATING HOUSE
(also Belmont Oil Works)



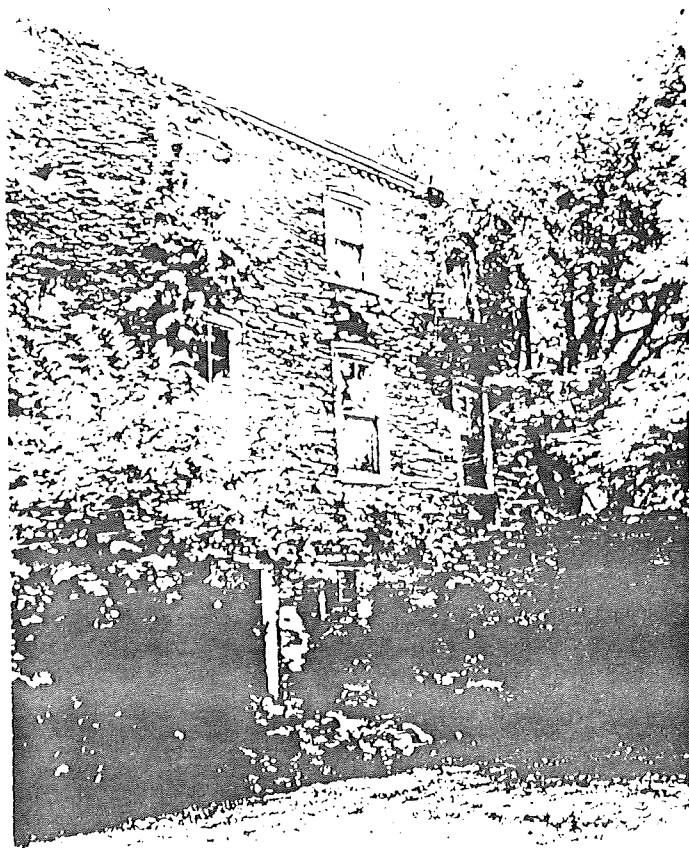
1. Treating House, south and west facades.

When built c. 1865 as part of the Belmont Petroleum Refinery complex, this three-story stone rubble building functioned as a Treating House, according to a survey prepared c. 1865; see Appendix. While the Treating House is a large part of the site today, it was one of several significant structures that formed the complex. A small Engine House projected from the southeast corner of the building. An underground steam pipe ran south from the Treating and Engine Houses to the Receiving House where oil was refined. The Receiving House was bounded on the south by cooling tubs and on the west and north by underground receiving tanks. There were ten Stillhouses and a large steam boiler immediately south of the cooling tubs. North of the Treating House was and remains a one-story stone Office for the company. To the west were the Cooper Shop, still standing, and warehouses and tenant houses that were demolished in 1986 and 1987. The purpose of the Treating House is not precisely known; its central location within the complex and the original built-in safes suggest that it served some intermediary function. The architecture of the building is similar to other mid-nineteenth century factory buildings, many of which survive in Old City, Hunting Park and Manayunk. After the Belmont Petroleum Refinery was sold to the Fairmount Park Commission in 1870, the Treating House was converted to administrative offices for the Commission. This use continued until Park offices were moved to Memorial Hall in 1974.



2. Treating House, west facade, second and third stories.

Traces of the original stucco still cling to the rubble stone walls of the Treating House. Two photographs of the building taken c. 1870 show that it was a glistening white and had a cupola with a flagpole crowning its tin roof; see Appendix. Without the protective stucco, the stone walls are deteriorating rapidly. The west wall in particular is collapsing. Mortar is disintegrating, stones are heaving, and there are substantial cracks where the walls are settling. The building currently is dangerously unstable, and it is questionable whether any piece of its fabric is salvageable. Neg. 3-21.



3. Treating House, west facade.

Vines which penetrate and weaken mortar cling to every face of the Treating House. The structural collapse of the southwest corner is strikingly apparent where the cracked, unmortared stone walls have pressed the lintel of the righthand second floor window completely out of plumb. Neg. 3-20.

Clear photographs of the east and south facades are impossible because of the dense vegetation that encrusts the walls.

4. Treating House, first floor,
entrance hall from north door,
looking east.

This small vestibule leads to an office to the east and a similar room to the west. The original moldings are intact. Neg. 3-0.



5. Treating House, first floor,
entrance hall from north door,
looking west.
Neg. 3-1.



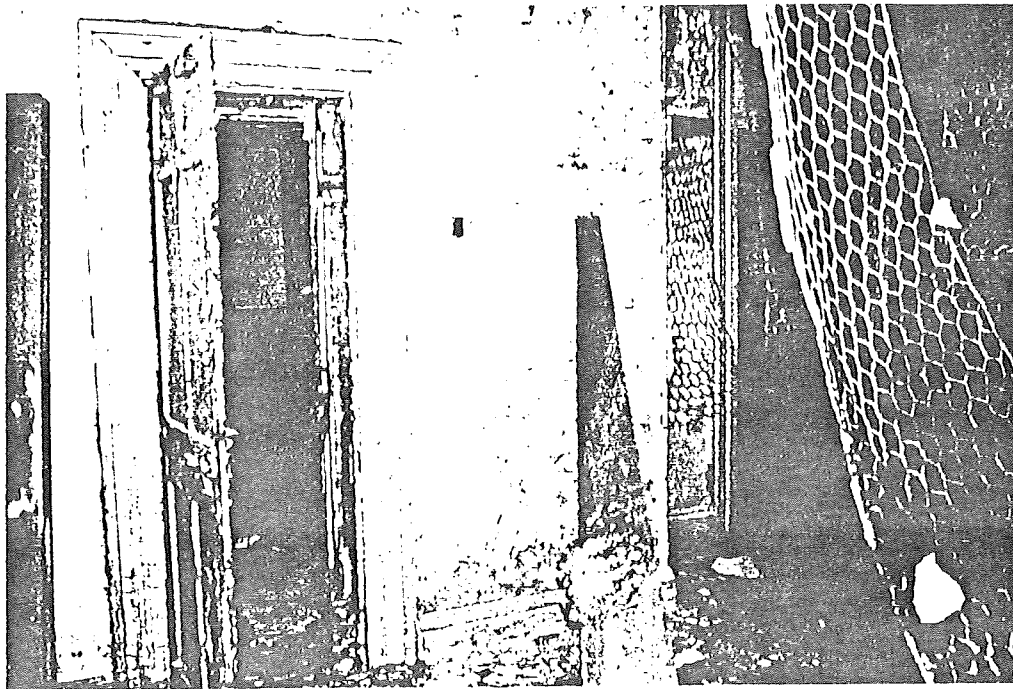
6. Treating House, first floor,
northwest office, closet.

The vestibule is just visible to the left. The storage closet door exhibits some of the attractive mid-Victorian style paneling found throughout the building. Neg. 3-2.



7. Treating House, first floor,
middle room, west.

The Treating House features an unusual floor plan of offices wrapped around the central core which contains the built-in safes for the Refinery. This office is west of the safes and has access to them, so it may have been used by bookkeepers. The office is in the section of the building that is suffering the most severe structural deterioration. Deep cracks document substantial movement of the walls, and the ceiling is collapsing. The floor at the entire southern edge of the room is completely rotted and cannot be traversed. Neg. 3-3.



8. Treating House, first floor, middle room west, east wall, looking into the built-in vault.

The built-in vault or safe with its heavy iron door is original to the building according to engineer's notes prepared c. 1868. Neg. 3-4.



9. Treating House, first floor, northeast office, east wall.

A boxed heating duct, probably original, juts out from the northeast corner of the room. Central heating became increasingly popular during the 1860's and the presence of the latest industrial technologies at the Refinery--underground steam pipes, large boilers and especially the refining of petroleum--make it likely that a heating plant was part of the original plans for the Treating House. Neg. 3-5.



10. Treating House, first floor, northeast office, west wall, looking through vestibule to northwest office.

The closet with its paneled door is similar to that in the northwest office. Neg. 3-6.

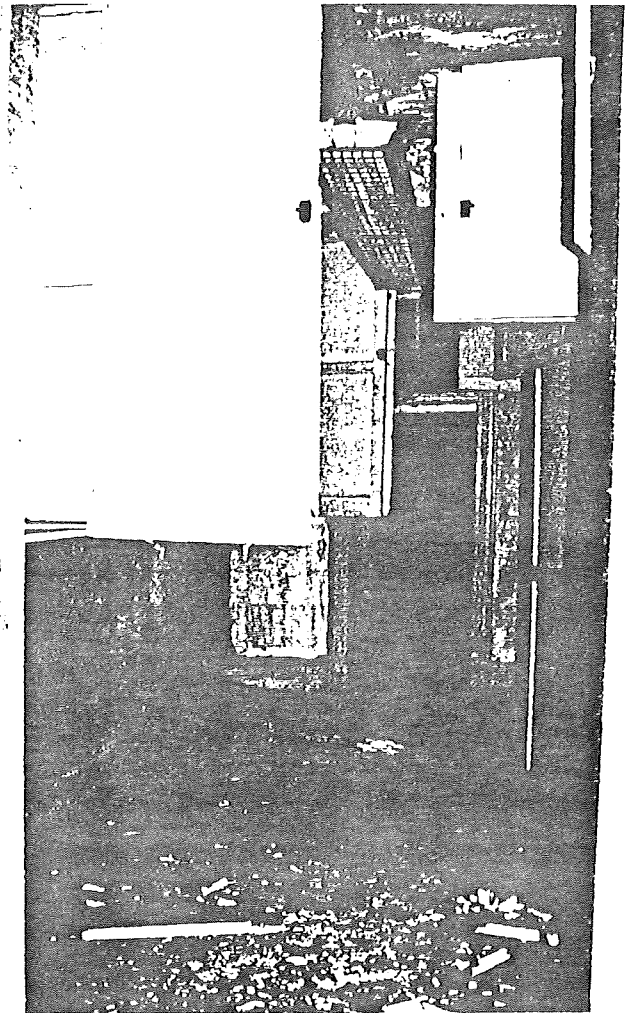
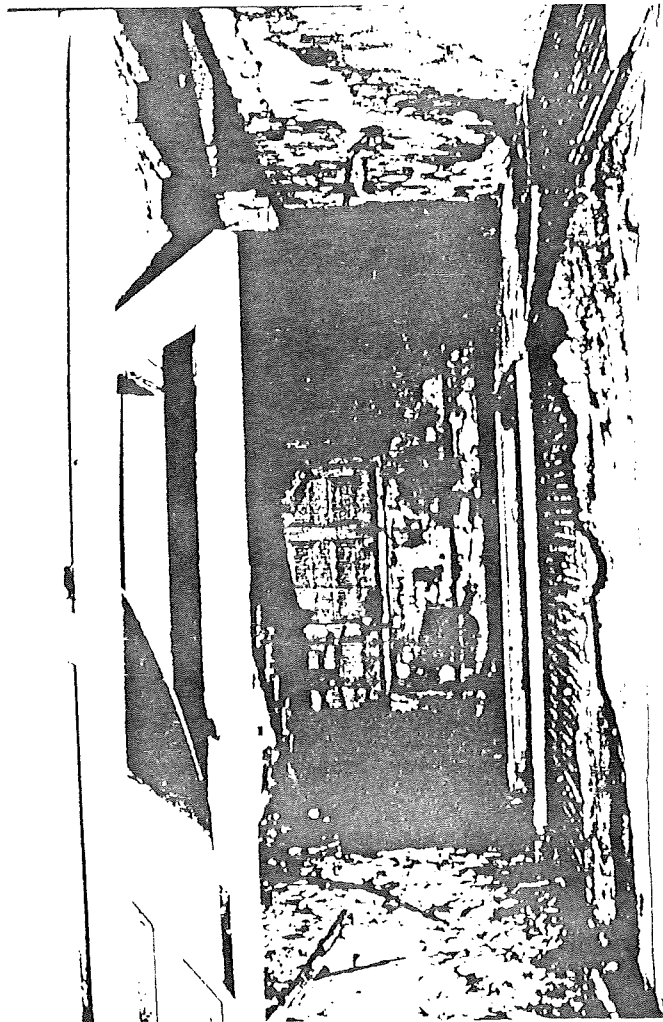


11. Treating House, first floor, east room, east and south walls.

The unusual wraparound plan of the Treating House survives in the east rooms of the first and second floors. The partition to the west (right) separates a passageway from the main office space. The wall just visible at the extreme right corner of the photograph is the east wall of the vault/safe room. Neg. 3-7.

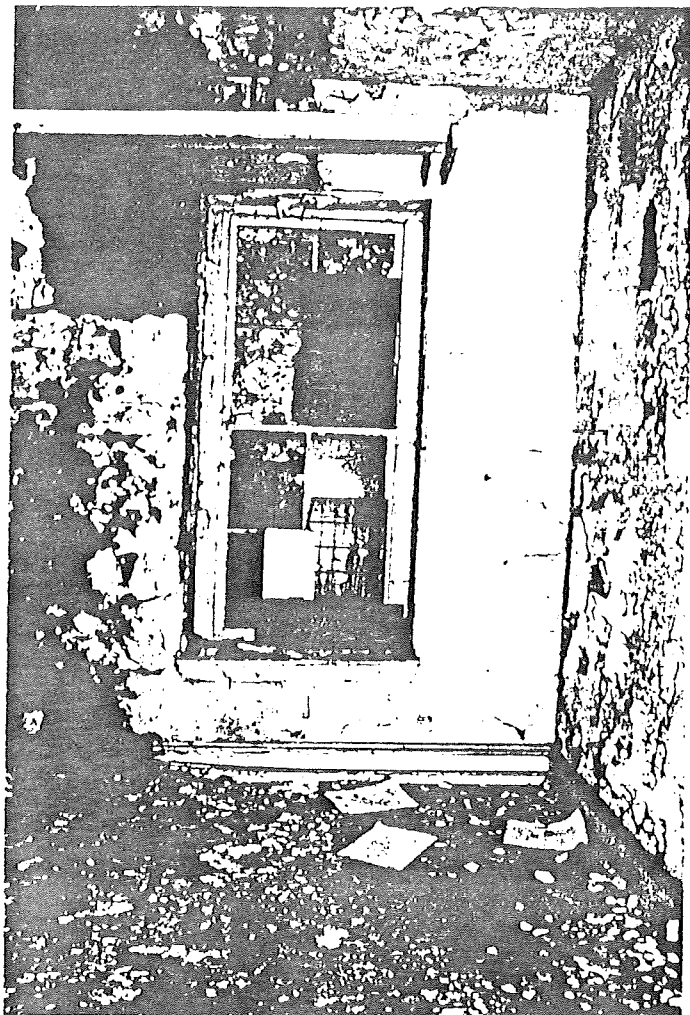
12. Treating House, first floor,
hall connecting east office with
west office.

This passageway has hanging
cupboards on either side. The
vault room is on the other side of
the north (right) partition.
Neg. 3-8.



13. Treating House, first floor,
stairhall and west exterior door.

The staircase is built into the
southern wall. Its banisters and
newel post are walnut and well
executed, indicating that this was
the main public entrance to the
building. The staircase is
deteriorating rapidly and may be
unsalvageable because of excessive
exposure to the elements. The floor
directly in front of the wall with
exposed lathwork is completely
rotted and will support no weight.
Neg. 3-9.



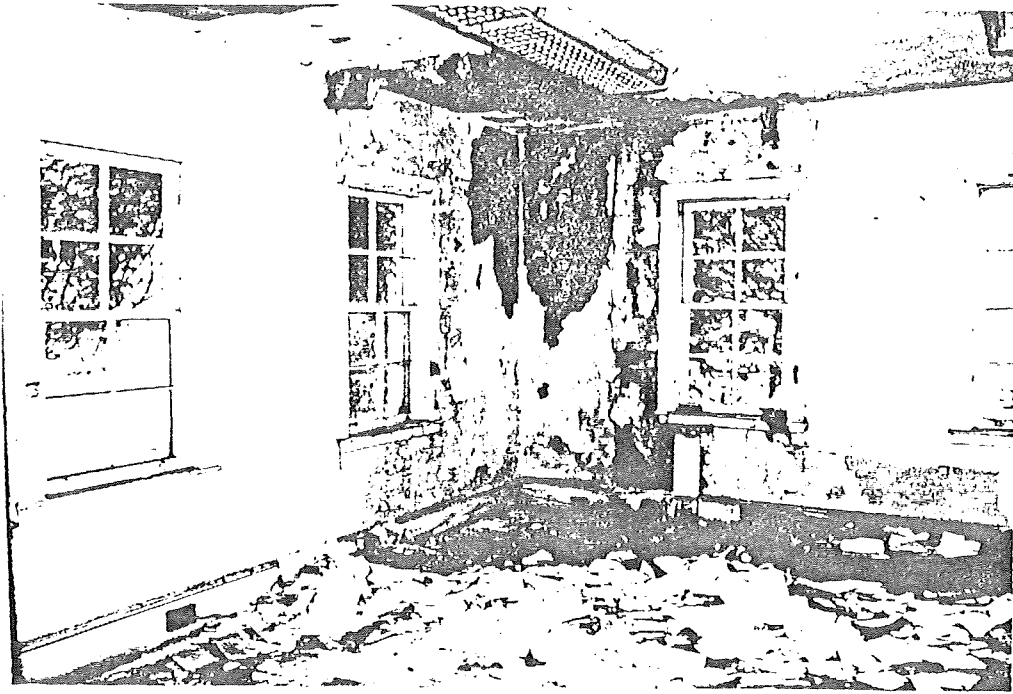
14. Treating House, first floor, small office, southeast corner.

This small room may have been a private office for one or two people, based on its size.
Neg. 3-10.



15. Treating House, first floor, office, southeast addition to the main block.

This twentieth century addition occupies the site of the former Engine House, as indicated on the c. 1865 survey. Neg. 3-11.

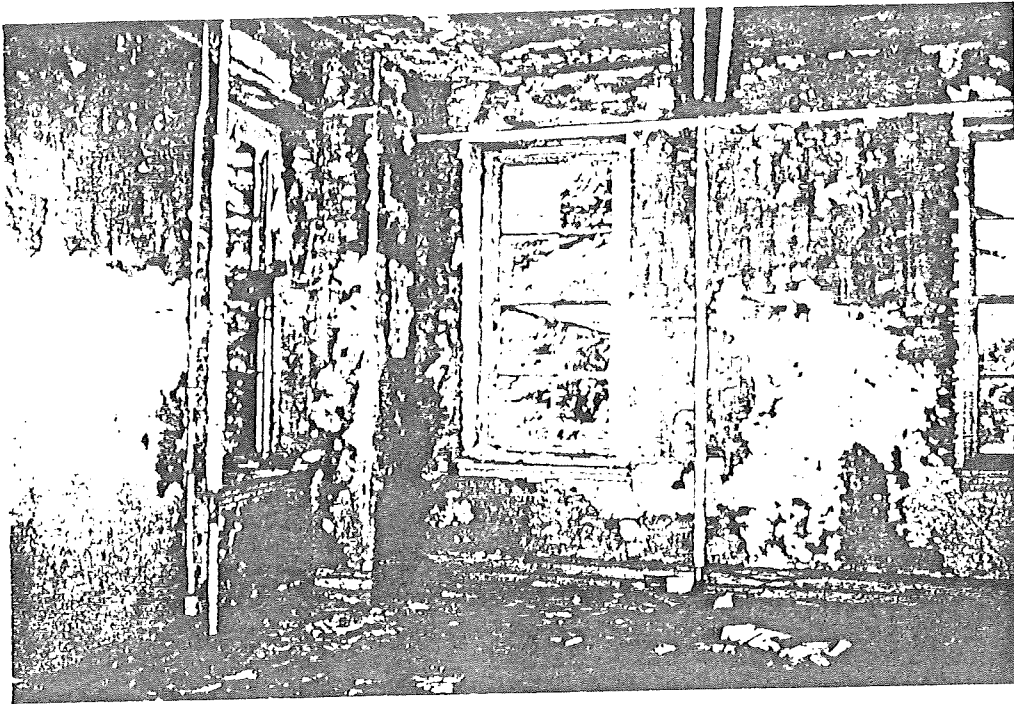


16. Treating House, first floor, office, southeast addition, southeast corner.
There is extensive water damage in the southeast corner caused by a leaking roof and damaged gutters on this one-story addition. Neg. 3-12.

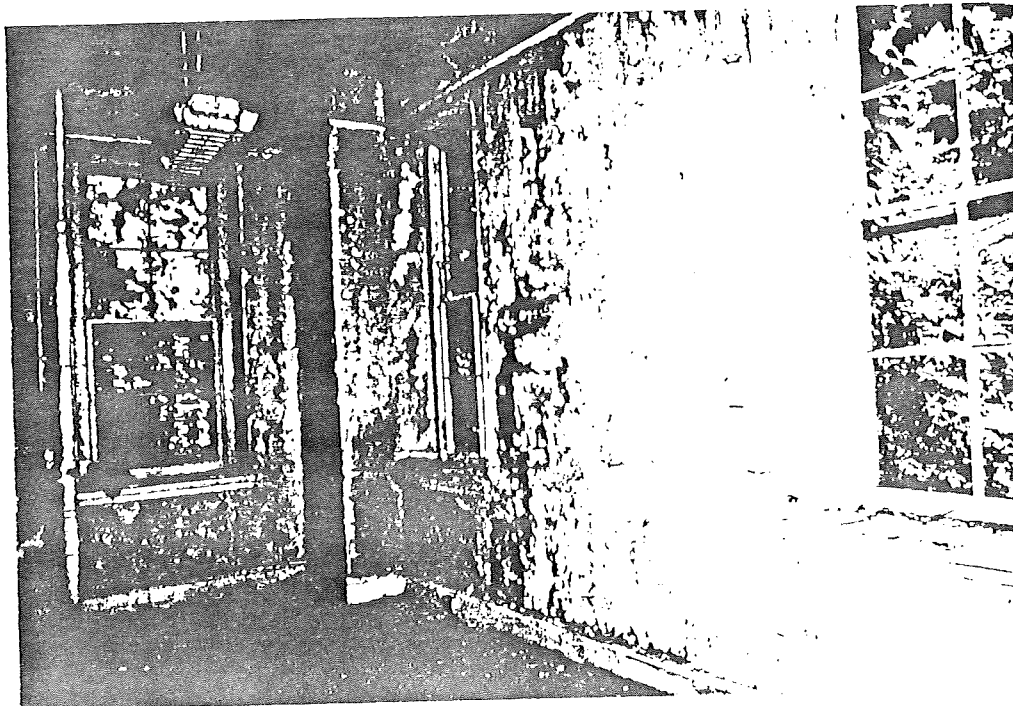
17. Treating House, first floor,
door from Treating House to
twentieth century addition.

The thickness of the wall and the arch above the door which matches that of the windows reveal that this once was an exterior wall; see Photograph 2 for detail of arched windows. Neg. 3-13.



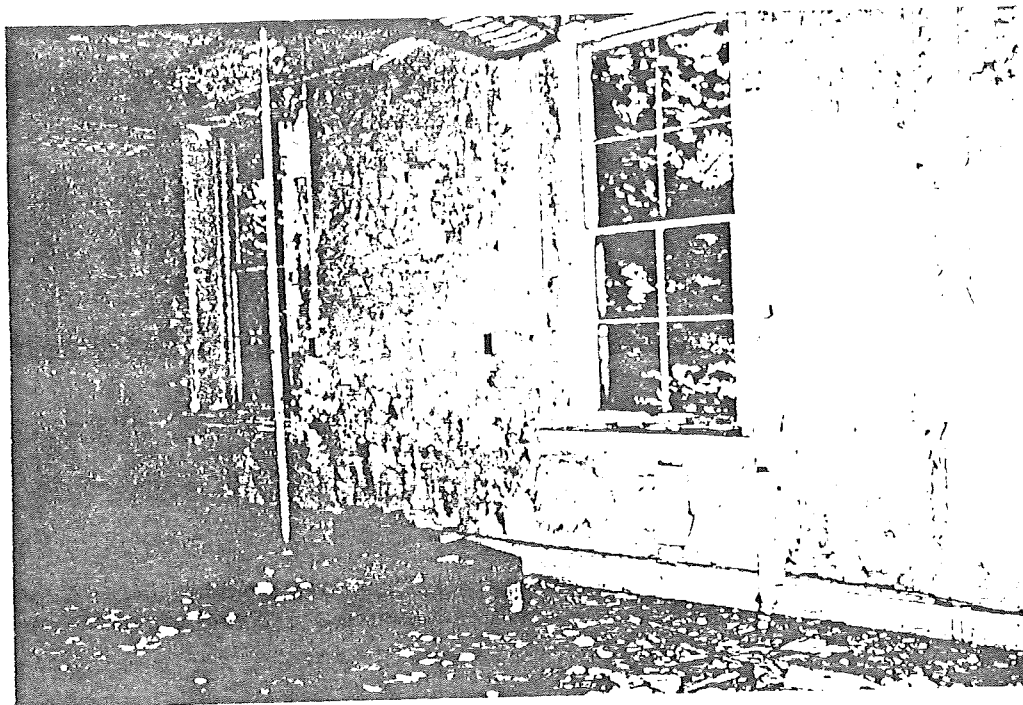


18. Treating House, second floor, southeast office, southeast corner.
The condition of the second floor is perilous. Large sections of the floor are rotten and will support little weight greater than the mushrooms that currently thrive. This corner exhibits the original central heating duct and the large, light-filled windows used throughout the building. Neg. 3-14.

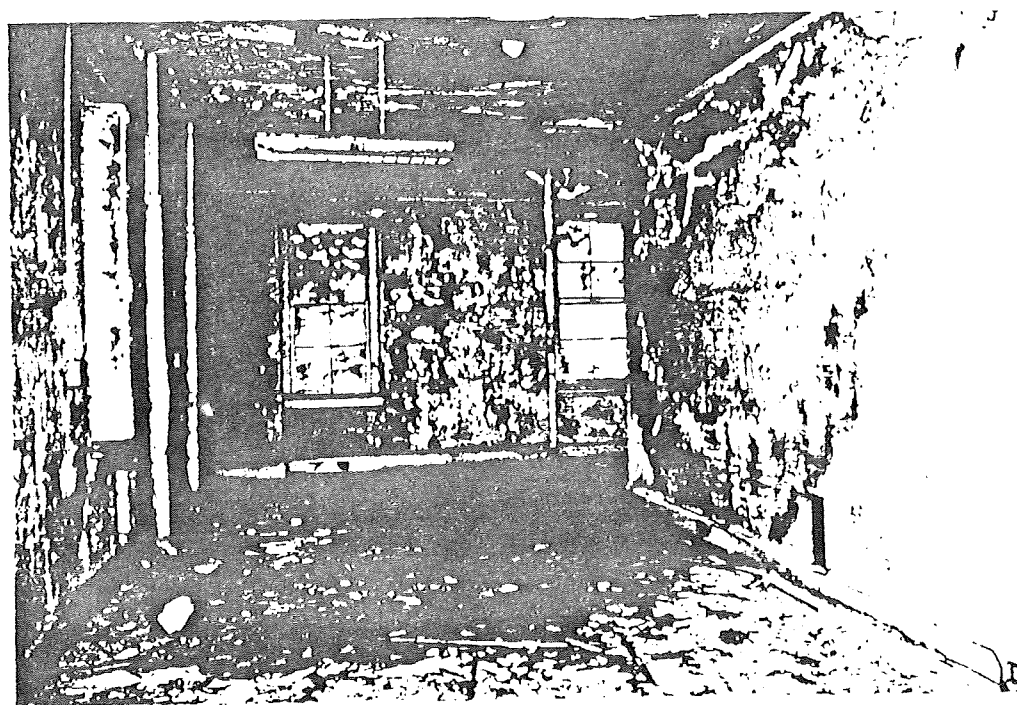


19. Treating House, second floor, east section of "wraparound" room that extends along the east, north and south walls.

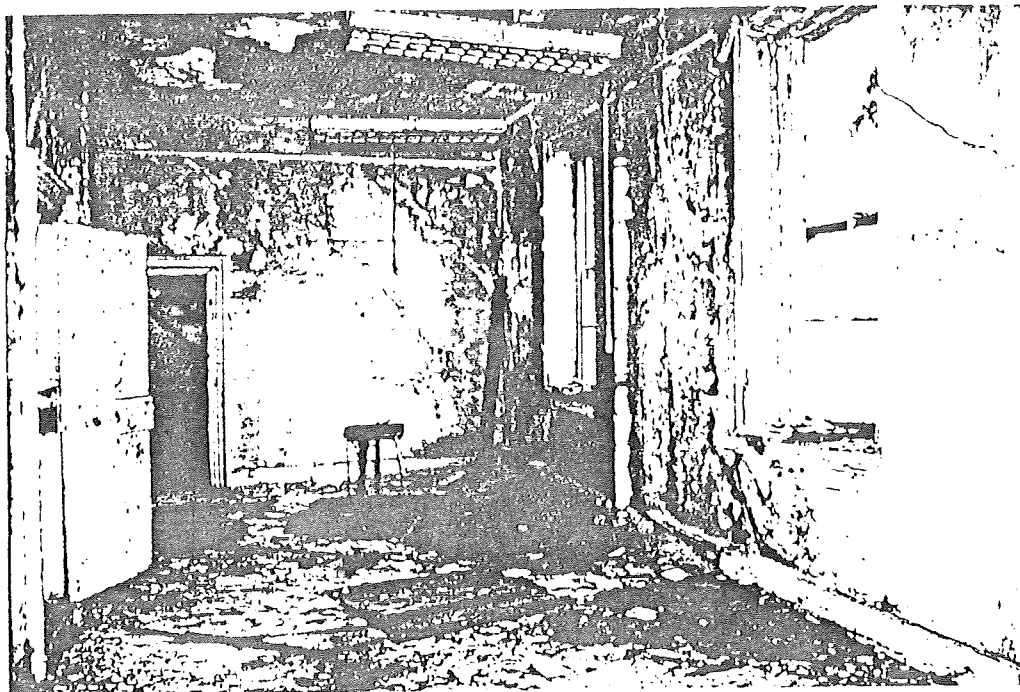
This U-shaped room wraps around the central core containing the second floor vault which, like the vault on the first floor, is secured by a heavy iron door. The purpose of this unusually large and well-lighted work space is unknown. Neg. 3-15.



20. Treating House, second floor, "wraparound" room, north wall.
Neg. 3-16.



21. Treating House, second floor, "wraparound" room, east and north walls.
The partition to the south (right) is for the vault room. Neg. 3-17.

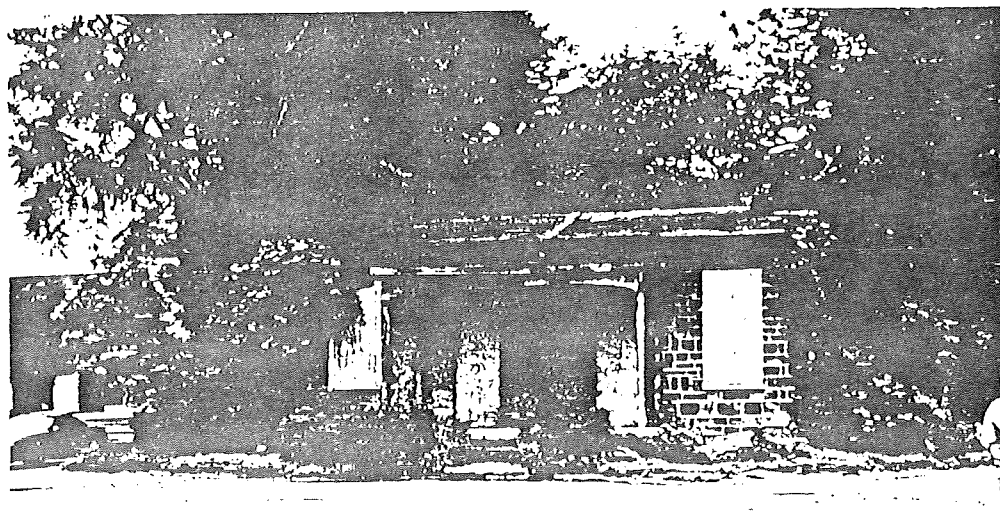


22. Treating House, second floor, "wraparound" room, west wall.

The iron door to the vault is visible to the left. Also visible through the door frame is the staircase along the south wall. Deep cracks in the west wall are the product of severe movement of the west and south walls at the southwest corner of the building. This corner and the stairhall are unsound and in imminent danger of collapse. Neg. 3-18.

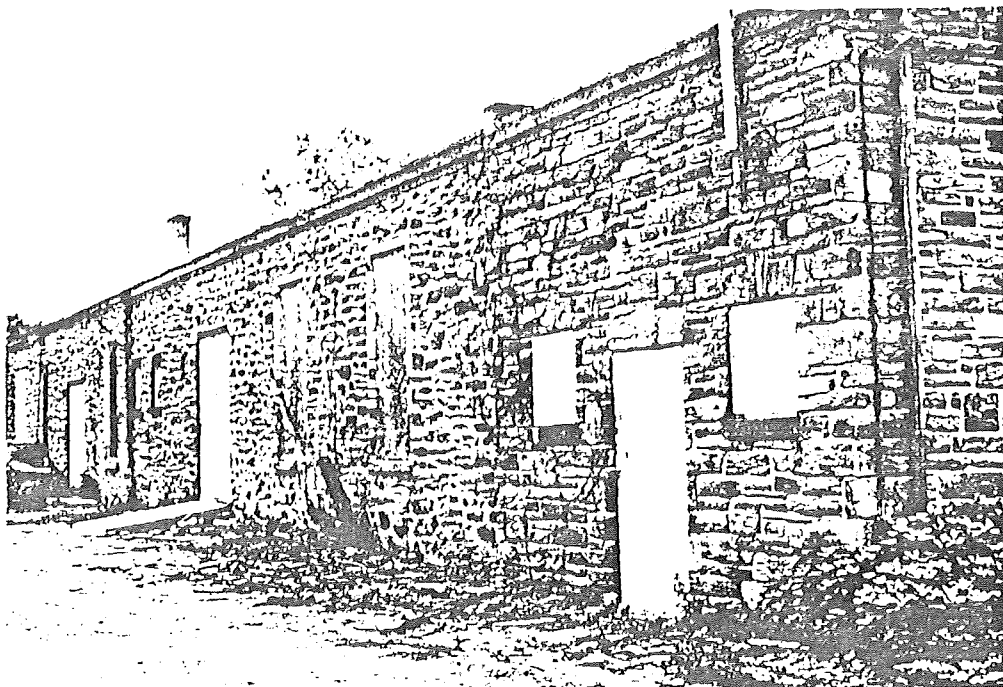
23. Treating House, second floor, stairhall, southwest corner.

The stone wall under the window is caving in, and the window frame is collapsing. This is the same window noted in Photograph 3. The supporting frame of the staircase has pulled from the banisters which are secured solely by their joint to the frame of the third floor staircase. The staircase, situated as it is in the perilous southwest corner and with its evident severe structural damage, may not last the winter. Neg. 3-19.



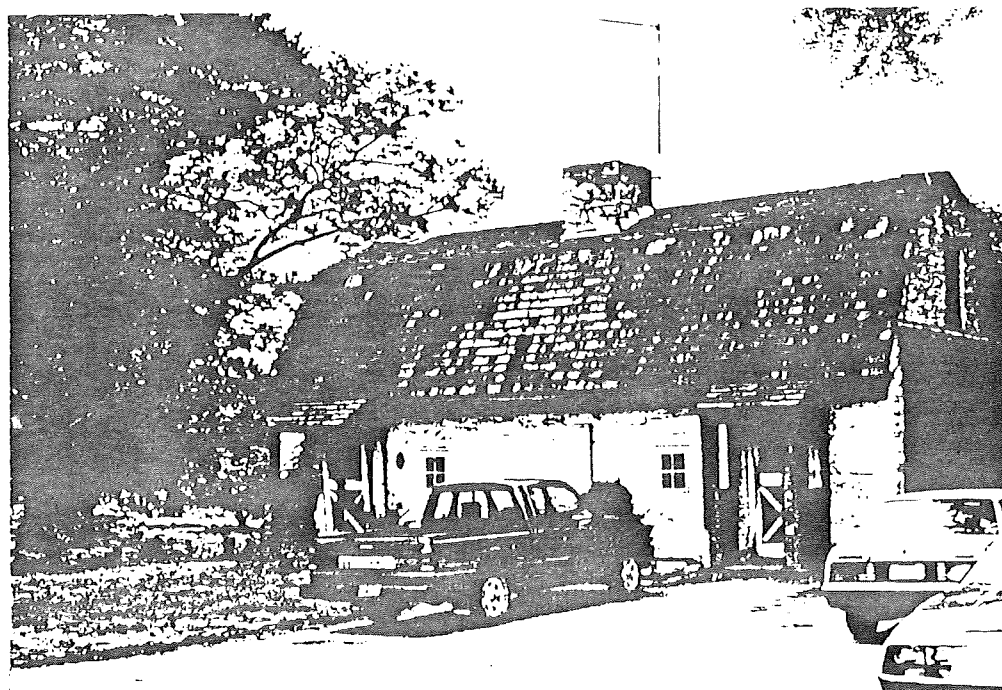
24. Office.

The c. 1865 survey cites that this was the "Office," probably for the chief engineer. Starting in 1870 the building served as the office of John C. Cresson, chief engineer for the Fairmount Park Commission, and David J. Kennedy, draftsman; see Appendix. Neg. 19-32.



25. Cooper Shop.

The c. 1865 survey describes this as the building where barrels for refined oil were made. The section to the right with different stone work is an addition. Neg. 19-31.



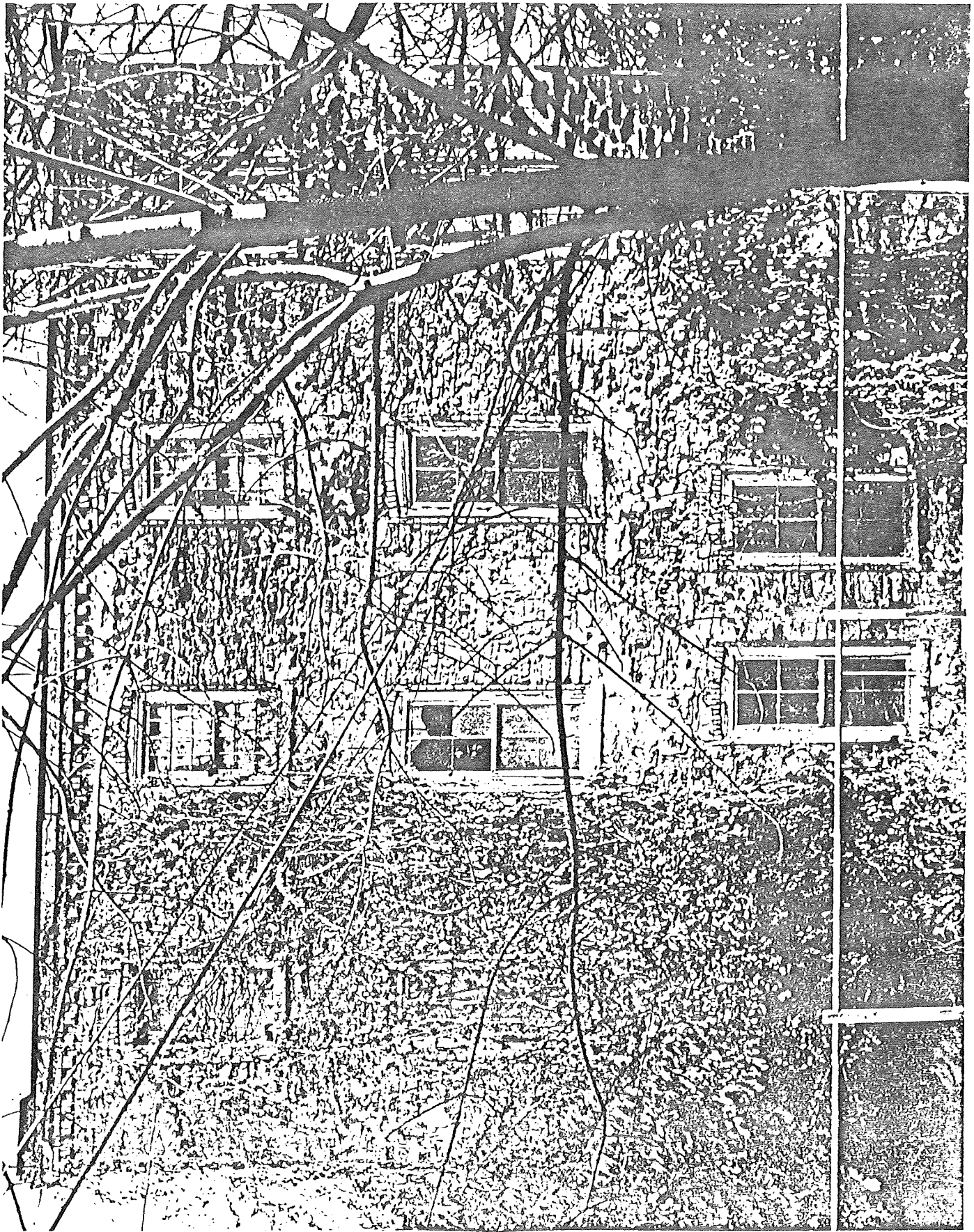
26. John Boelson Cottage.

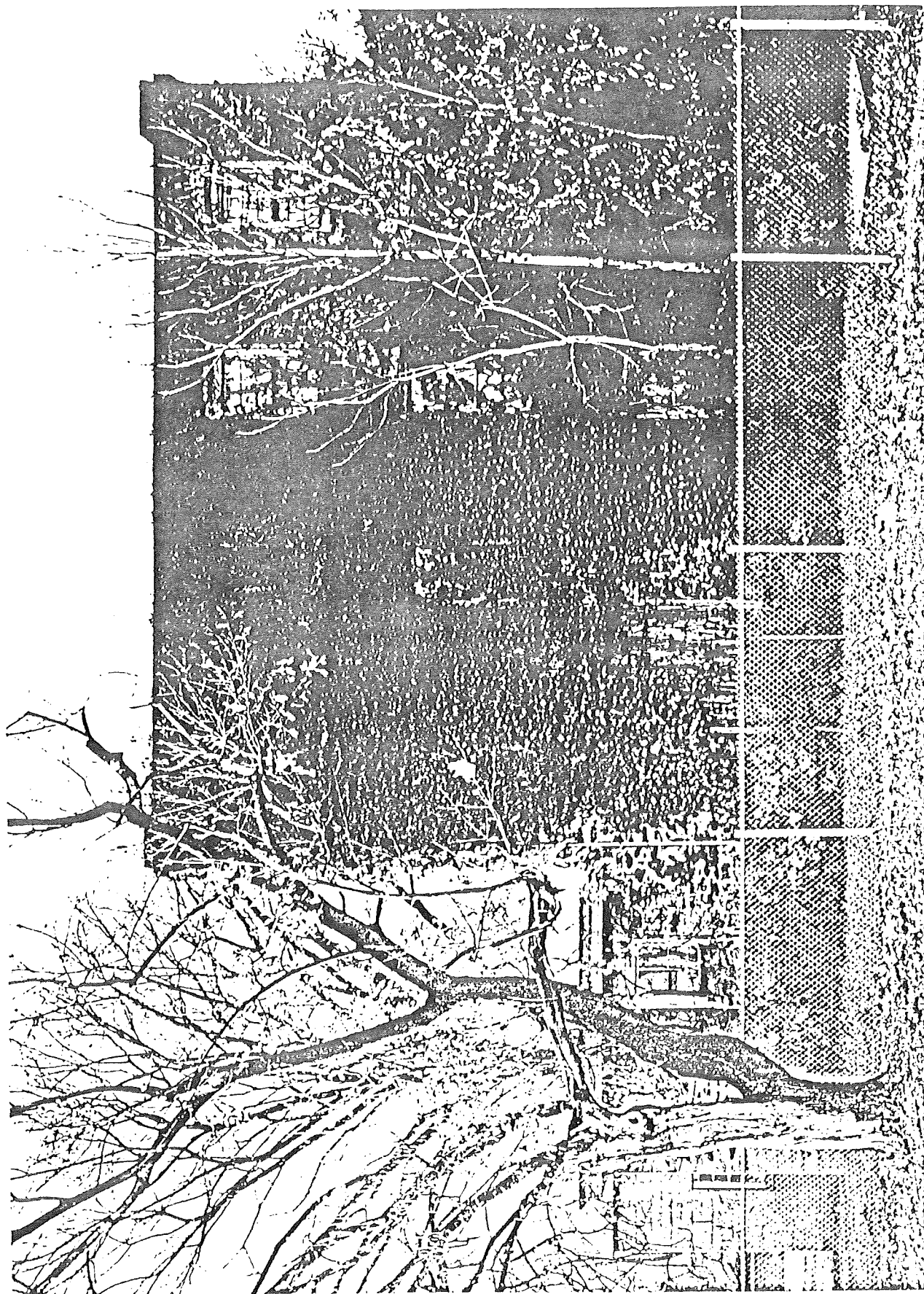
Situated at the north end of the Refinery site, this one-and-a-half-story cottage is a miraculous survivor from the seventeenth century. Deed research conducted by John C. McIlhenny reveals that the cottage dates to c. 1678-82 and is a virtually unique example of the houses built by Swedish settlers who preceded Penn's Quakers in Philadelphia. The first floor has been restored heavily, but the loft appears to be largely intact. This building is worthy of the highest standards of research and preservation. An Historic Structures Report is recommended. Neg. 19-34.

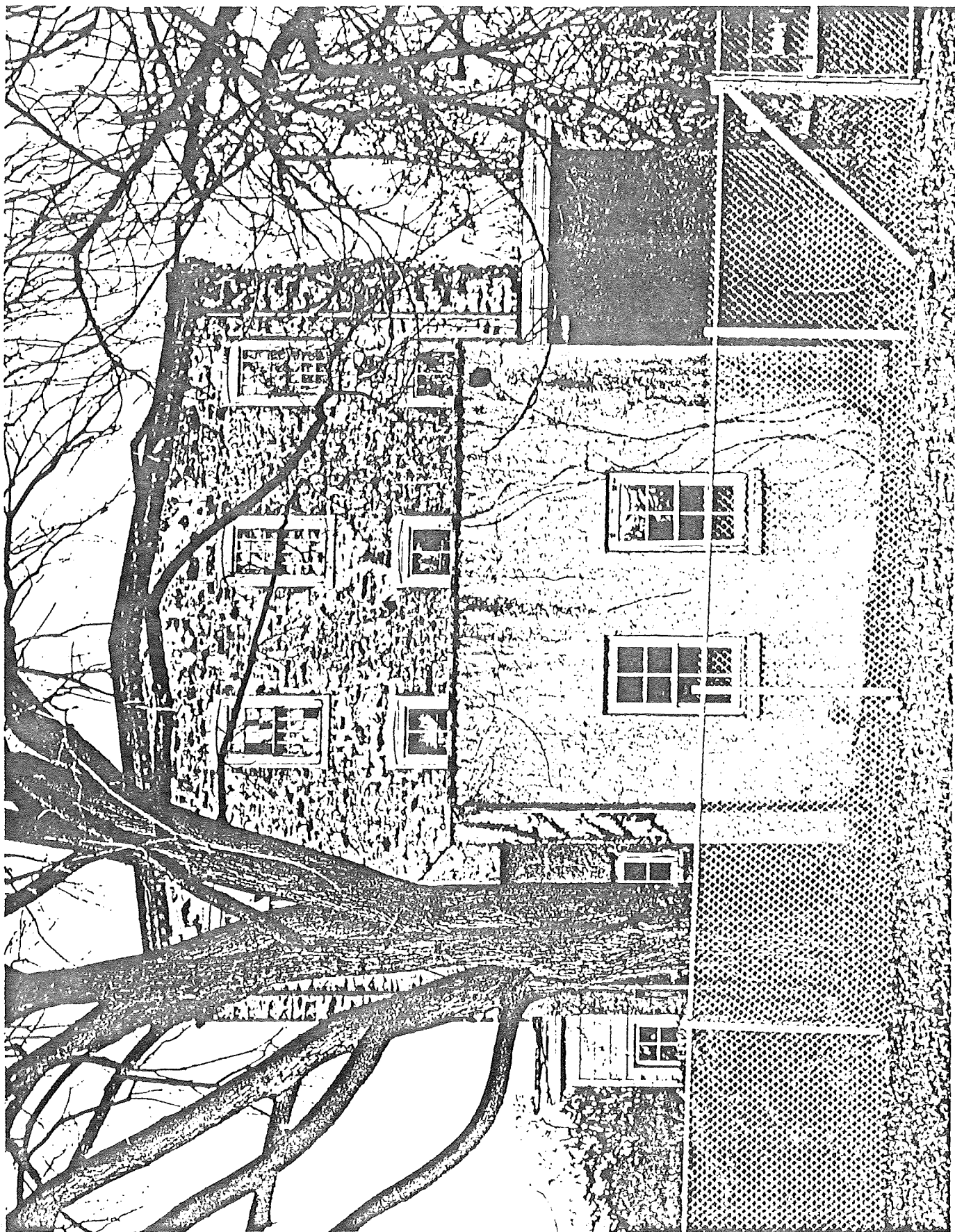


27. Stables, west and north facades.

This W.P.A. building was constructed over the site of the Receiving House, the structure where actual refining was done by the Belmont Petroleum Refinery. It is used as a district headquarters for maintenance employees of the Fairmount Park Commission.







BELMONT PETROLEUM REFINERY, TREATING HOUSE

The Treating House is constructed of load-bearing, random rubble stone masonry walls. The stone is local mica-schist, and the mortar is a mixture of crudely ground lime and clay. Despite the prevalence of Portland mortar in repointing, it is likely that the Treating House was originally stuccoed. Interior load-bearing partitions are of similar masonry composition. Interior floor and roof framing and lintels are light timber. The roof is shallowly pitched. The existing built-up roof replaces what was probably a metal roof originally.

The Treating House structure is unstable, deteriorating at an accelerating rate and verging on collapse. The masonry of the exterior walls has eroded substantially. These walls were designed to be covered with stucco, and removing that protective layer exposed the schist and mortar to weathering. The south wall is disengaging from the body of the building, and within a matter of months it is likely to collapse onto and through the one-story addition on this side of the building. The Treating House is covered with vines which partially obscure its condition; manual removal of the overgrowth would disturb the masonry and should not be attempted. Fencing was installed in the fall of 1987 in an effort to protect the public from this hazardous condition.

The roof has deteriorated to the extent that it no longer protects the building. There are openings of several inches in width, and both rainwater and birds are entering the building through the roof. Its construction is layers of rolled out tar paper and pitch and was only lightly built up. Many of the windows are broken, and frames are rotted. Timber used throughout the building for interior framing, windows, lintels and trim is in poor condition due to fungal rot, termite infestation and fire damage. A few pieces are salvageable, including doors, frames and perhaps one or two structural members. In general the wood in the building is unusable. Birds are now living in the Treating House, and their presence will further accelerate the deterioration of timber.

The mechanical systems in the building are beyond salvage. The electrical system is corroded. Plumbing fixtures, supplies, sewers, drains, downspouts and gutters are not functional. The heating plant is useless. Ventilation is provided only by broken windows and holes in the roof.

Immediate measures to preclude collapse of the building would require lateral and vertical bracing in the form of strong-backs and tension rods to tie the walls together. The roof, window openings and doors must be covered. Wildlife must be evicted and ventilation provided. This emergency stabilization would cost between \$40,000 and \$50,000.

Rehabilitation to return the building to minimally habitable condition would involve replacement of all timber, the roof, all mechanical systems and nearly all interior surfaces and finishes. The masonry shell must be thoroughly repointed and repaired, vines removed as part of repointing and restuccoed to protect the walls. An estimate of the cost of rehabilitation is \$650,000. The cost of restoration of the Treating House would exceed \$1,000,000.

BELMONT PETROLEUM REFINERY, TREATING HOUSE: Index to Appendix

Survey, Belmont Petroleum Refinery, Newhouse, Nusbaum & Co., c. 1865.
Philadelphia Historical Commission.

Photograph, Belmont Petroleum Refinery from east bank of Schuylkill River,
c. 1870. Fairmount Park Commission.

Photograph, Belmont Petroleum Refinery from east bank of Schuylkill River,
c. 1870. Fairmount Park Commission.

Sketch, "View from 2nd Story of Draughting Room of Belmont Offices, Fairmount
Park looking North on December 26, 1870, Offices of John C. Cresson, chief
engineer, Fairmount Park, and D. J. Kennedy, draftsman, together 1870." Sketch
identifies second floor of Treating House used as drafting offices by Fairmount
Park Commission in 1870. Sketch shows small office, still standing, and
warehouses, now demolished. Sketch by David J. Kennedy courtesy of Historical
Society of Pennsylvania.

Photograph, "Treating House" from southwest taken 1974 by John C. McIlhenny and
representative of group of exterior views taken at that time and on file,
Fairmount Park Commission.

Photograph, tenant houses and warehouse, taken 1974. Buildings demolished in
1986 and 1987. Fairmount Park Commission.

West of Schuylkill River above Columbia Bridge - For Naval Yard

Ирина Михайловна Н. Николаева

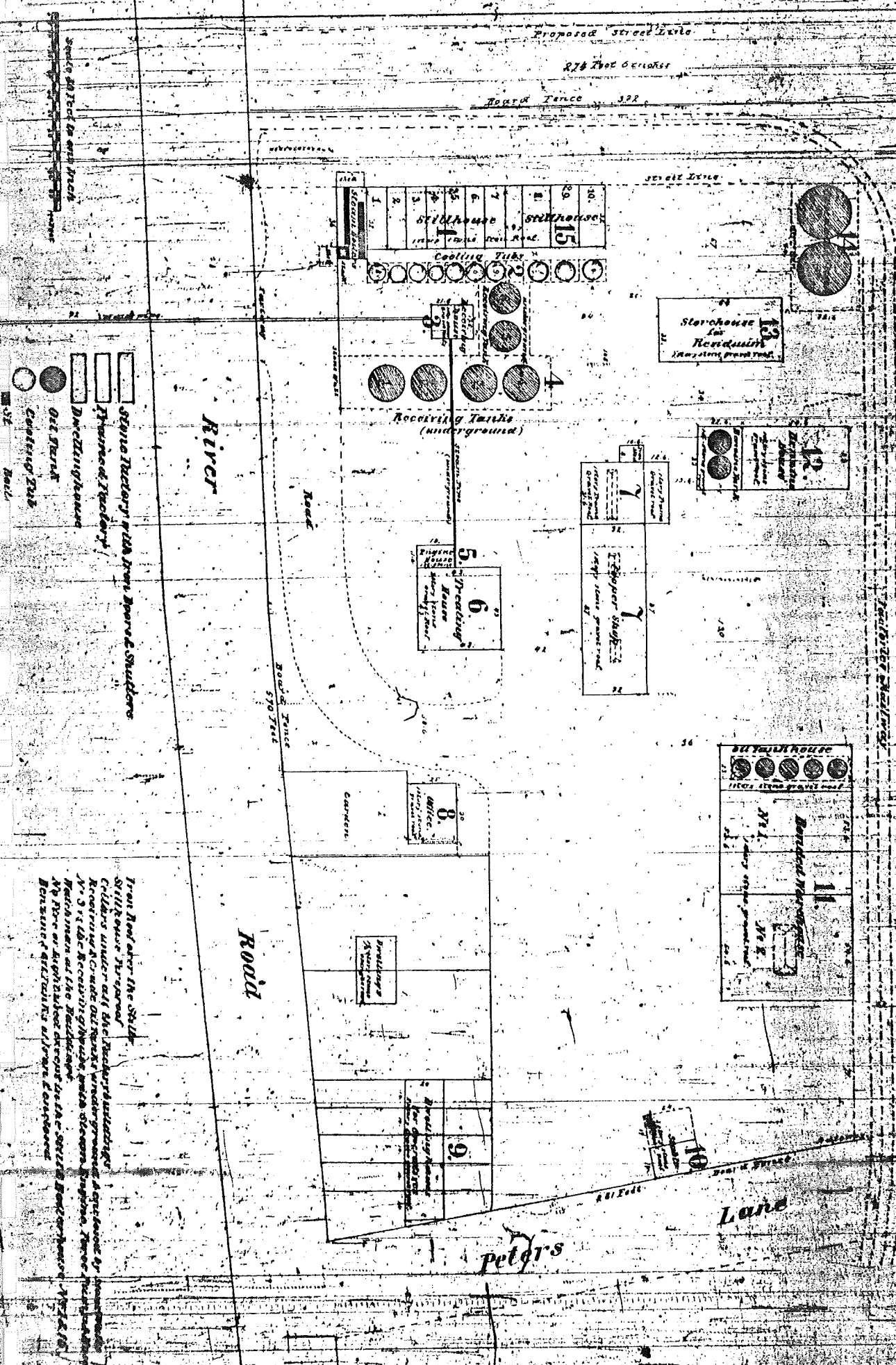
Red Prince

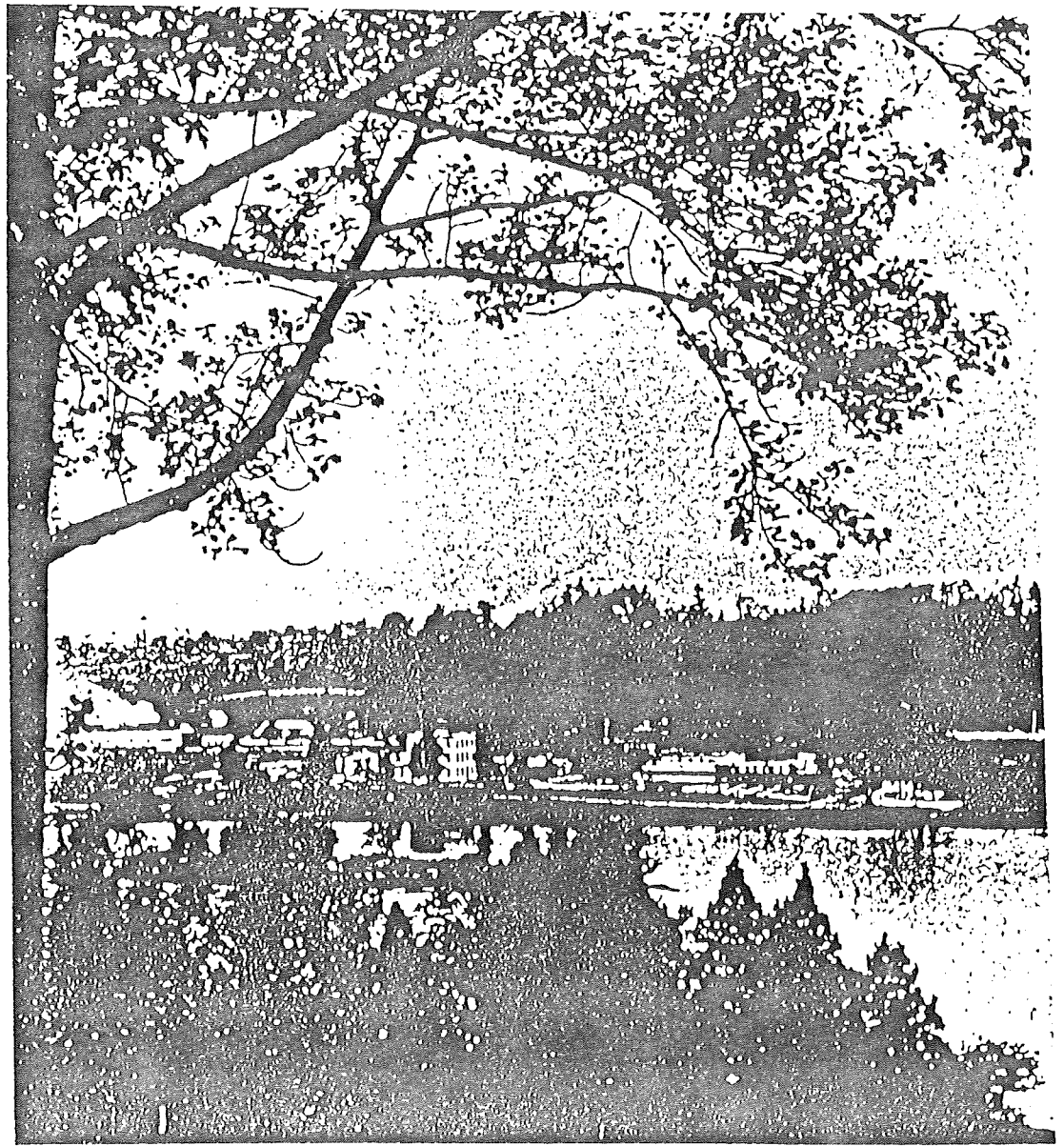
FOOTNOTES

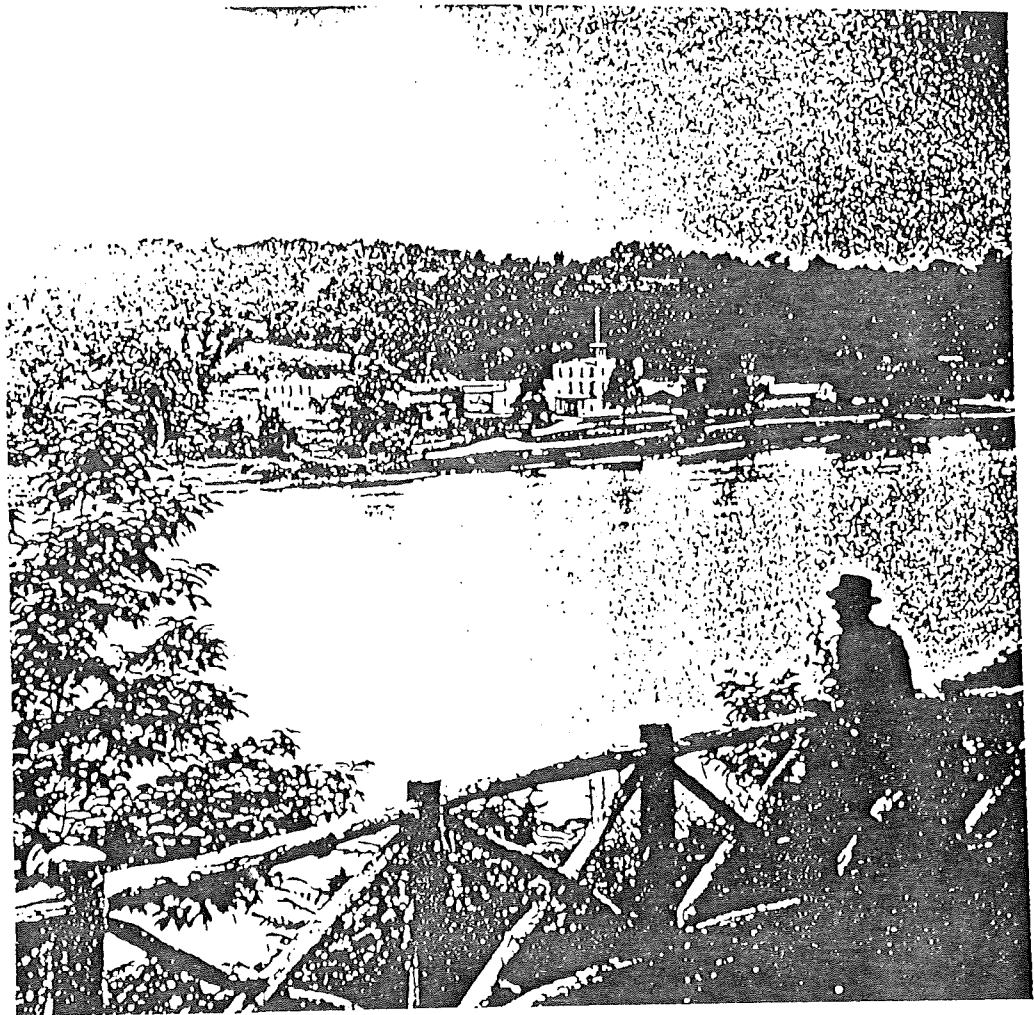
Lane

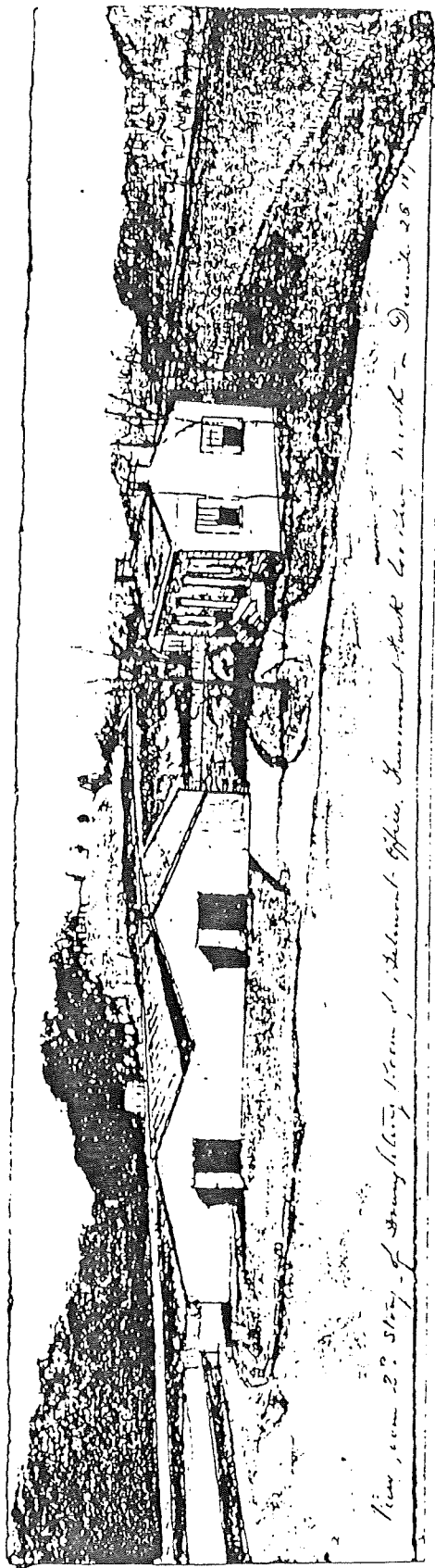
RSI Eds.

Peters









View, from 3rd story of Army Signal School, Signal School, June 28 1870

Officers of John C. Jackson, Army Engineer, Signal School, and
 15th Co. 1st drafts made together 1870





Belmont Mansion, continued

Belmont Mansion file, FHC.

- 1) Newspaper articles related to use as restaurant, 1870-1976.
- 2) Photographs.

"Belmont News." Newsletter of American Women's Heritage Society, April/May, 1987.

Belmont outbuildings. Pencil sketch by David Kennedy. K:8-112, HSP.

Belmont and Waterworks/Mount Pleasant. Lithograph by Augustus Kollner. Bb. 61, K 8346.81, HSP.

Belmont. Watercolor by David Kennedy, 1872. K:II-14, HSP.

Belmont Mansion and George Washington's Carriage. Photograph, 1876. Bd. 862, 1876.

Butler, Thomas Richard. "Belmont Through the Years." Remarks delivered at the Numismatic and Antiquarian Society of Philadelphia, May 24, 1954.

Peters Papers. HSP. Approximately 1,500 items related to Rev. Richard Peters, William Peters, Richard Peters, Jr., and others.

Peters, Richard, Jr. Alumni Records, University of Pennsylvania Archives.

Peters, Richard, Jr. Dictionary of American Biography. Pp. 509-510.

BELMONT PETROLEUM REFINERY

Belmont Oil Works file, PHC.

- 1) Survey of buildings in refinery, c. 1865.
- 2) Appendix to Minutes of the Fairmount Park Commission, January 11, 1873, in re alterations to buildings at Oil Works.
- 3) Photographs of buildings, 1974.
- 4) Deed research transcriptions, 1864-70.

Belmont Oil Works files, Historian's Office, FPC.

- 1) Photographs, including 2 from across Schuylkill River showing refinery complex, c. 1870.
- 2) Research prepared by John C. McIlhenny.
- 3) Site surveys.

Office of Fairmount Park. Sketch by David Kennedy, 1870. K:I-40.3, HSP.

ARNEST

Arnest file, Historian's Office, FPC.

- 1) Extensive collection of photographs, exterior and interior, taken in 1974.
- 2) Letters between James D. Arnest and Fairmount Park Commission, 1868-9.
- 3) Research notes prepared by John C. McIlhenny.
- 4) Brief of Title.
- 5) Site survey, c. 1867-8.
- 6) Advertisement for sale of house, October 1, 1867 (photocopy).
- 7) Plans for proposed restoration, 1976.

Arnest file, PHC. File related to proposed restoration, 1976; photographs c. 1974.

Price, Peter. 3 letters, 1783, to John Pemberton, Henry Drinker and Henry Pemberton. Pemberton Papers, Drinker Papers, HSP.

BELMONT MANSION

Architectural drawings (1). ATH.

Belmont. Arrival of the Grand Duke by David Kennedy. K:4-98, HSP.

"Belmont." Brochure prepared by Junior League of Philadelphia, 1986.

Belmont Dining Pavilion File, Historian Office, FPC. Extensive research prepared by Martha C. Halpern on Centennial dining pavilions constructed adjacent to Belmont Mansion, 1871-6.

Belmont. 2 drawings by David Kennedy. K:VII-38 and K:VII-27, HSP.

Belmont. Ink sketch of ornamental ceiling by David Kennedy, 1876. K:II-14a, HSP.

Belmont Mansion files, Historian Office, FPC.

- 1) Photographs, c. 1860 to present.
- 2) Site survey, c. 1868.
- 3) "Belmont," by Fiske Kimball, March, 1927.
- 4) Summary, brief of title.
- 5) Blueprint, January, 1905.
- 6) MSS research by John C. McIlhenny.
- 7) Transcription of Deborah Norris Logan diary entry, 1819, with description of interior.
- 8) Information about restaurants, 1871-1980.
- 9) Transcription of 1789 tax entry, Richard Peters.
- 10) Research by John C. McIlhenny on Boelsen ownership of land.

The Belmont Maintenance Buildings and Offices located on West River Drive above Montgomery Avenue contain several structures erected in 1864 as part of the Belmont Petroleum Refinery operated by Newhouse, Nusbaum & Company. This refinery is one of several founded in the late 1850s and early 1860s reflecting the emergence of the oil industry during this period especially in Pennsylvania. Philadelphia quickly became a center for oil storage and refining. Among other companies formed were the National Oil Refinery, the Empire Stores, the Atlantic Petroleum Storage Company and the Atlantic Refining Company, later to become the Atlantic-Richfield Company (ARCO).

Joseph Newhouse bought this land from the Belmont Estate in 1864 and formed an association with Ernest Nusbaum, Isaac Bernheimer & Simon W. Arnold, with whom he divided the assets and land the following year into seventh parts. He kept three parts, Bernheimer, two and Nusbaum and Arnold one apiece. In 1866, Newhouse sold his three parts to Bernheimer who resold two of them to Henry Oberndorfer two months later.

In 1867, "An Act appropriating ground for public purposes in the City of Philadelphia" was approved by the General Assembly of the Commonwealth of Pennsylvania. The Assembly also passed a supplement the following year. By this Act, the Fairmount Park Commission was empowered to appropriate, and pay the owners, the ground bordering the Schuylkill River above the Fairmount Water Works as bounded and described in the two Acts. The jury appointed by the Commission to pay damages handed down a decision to pay the owners of the Belmont Petroleum Refinery \$ 85,000.00. On 8 June 1870, Bernheimer, Oberndorfer, Nusbaum & Arnold accepted the payment and signed a quit claim to the property.

The collection of buildings erected for the refinery proved to be the most substantial group located in the center of the park along the west side of the Schuylkill River and the Fairmount Park Commission, rather than demolishing all, as they did to most of the buildings taken over, converted them to park offices.

Although not known, the existence of this refinery, the Park Oil Works near the northeast corner of 38th Street and Girard Avenue, and the Washington Print Works, along the west side of the Schuylkill River across from East Falls, probably helped to spur the passage of the 1867 act in order to protect the water supply for the city.

6 July 1865

Joseph Newhouse & Abby, his wife

Philip L. Summers

All that certain Lot or piece of Ground with the Buildings and Improvements thereon erected situate on the West side of the Schuylkill River in the Twenty fourth Ward of the City of Philadelphia Commencing at low water mark in said River at the middle of the revised line of Lebanon Street thence extending along the middle of said Lebanon Street North 71 degrees 20 minutes West crossing Bridgewater Street 453 feet to a point of land granted or intended to have been granted to The Reading Rail Road Company thence extending by the same on a line parallel to Bridge-water Street South 31 degrees 28 minutes West 577 feet 8 3/4 inches to the middle of a certain Eighty feet Street laid down on the revised plan of the Belmont estate thence extending along the middle of said Street South 58 degrees 32 minutes east 432 feet more or less to low water mark in said Schuylkill River thence along said low water mark North 31 degrees 3 minutes East 108 feet, North 19 degrees 17 minutes East 162 feet and North 37 degrees 25 minutes East 413 feet more or less to the place of beginning Containing Six acres and six hundredths of an acre of ground (Being the same Premises which Joseph S. Lovering Trustee by Indenture bearing date the Fourteenth day of July One Thousand eight hundred and sixty four Recorded in Deed Book L.R.B. No. 43 page 518 &c granted and conveyed unto the said Joseph Newhouse in fee Subject to the restriction and agreement that no slaughter-house soap candle or Glue factory or skindressing establishment dye house or any other Building for offensive occupation should ever be erected on the above described and granted lot of Ground Provided however that nothing therein contained should be so construed as to prevent the erection or use of any buildings for the refining or manufacture of Petroleum or any other oils and the different products created from and belonging thereto)

14 July 1864

Joseph S. Lovering, Trustee under a certain deed of trust from Henry C. Townsend to him dated March 31st 1853, recorded in deed book T.H. No, 73, page 260 as hereinafter recited and acting herein by the direction and approval of Edward M. Davis, Jr. and George W. Richards signified and declared by their signing as witnesses hereto as provided for in said deed of trust, of the one part and

Joseph Newhouse, of the City of Philadelphia, of the other part.

All that certain Lot or piece of ground Situate on the west side of the Schuylkill River in the Twenty fourth Ward of the City of Philadelphia commencing at low water mark in said River at the middle of the revised line of Lebanon Street thence extending along the middle of said Lebanon Street North 71 degrees, 20 minutes West crossing Bridgewater Street 453 feet to a point a corner of land about being conveyed to the Reading Rail Road Company thence by said land on a line parallel to Bridgewater Street, South 31 degrees, 28 minutes West 577 feet, 8 and three-quarters inches to the middle of a certain eighty foot Street laid down on the revised plan of the Belmont Estate, thence extending along the middle of said Street South 58 degrees 32 minutes East 432 feet more or less to low water mark in the said Schuylkill River thence along said low water mark North 31 degrees 3 minutes East 108 feet, North 19 degrees 17 minutes East 162 feet, and North 37 degrees 25 minutes East 413 feet more or less to the place of beginning Containing 6 acres and six hundredths of an acre. Being a part of the same premises which Henry C. Townsend, by the above recited Deed granted and Conveyed unto the said Joseph S. Lovering in fee in trust to sell and convey the same as therein expressed and set forth in pursuance and execution of which Trust this Conveyance is made. . . Under and Subject to the restriction and Agreement that no slaughterhouse, soap or candle or glue factory or skin-dressing establishment, dyehouse or any other building for offensive occupation shall ever be erected on the above described and granted Lot of ground Provided however that nothing herein Contained shall be so construed as to prevent the erection or use of any buildings for the refining and manufacture of Petroleum or any other Oils and the different products created from and belonging thereto.

Recorded in the Office for Recording Deeds in and for the City & County of Philadelphia in Deed Book L.R.B. Number 43, page 518

14 July 1864
L.R.B. 43, p. 518

Joseph S. Lovering, Trustee
to Joseph Newhouse, Merchant

6 July 1865
L.R.B. 109, p. 84

Joseph Newhouse, late merchant & Abby, his wife
to Philip L. Summers, Conveyancer

6 July 1865
L.R.B. 109, p. 98

Philip L. Summers to Joseph Newhouse, late merchant
Three full equal and undivided Seventh parts the whole into seven
equal parts to be divided in and to

6 July 1865
L.R.B. 109, p. 35

Philip L. Summers to Simon W. Arnold, merchant
One full seventh part

6 July 1865
L.R.B. 109, p. 32

Philip L. Summers to Ernest Nusbaum, merchant
One full seventh part

6 July 1865
L.R.B. 109, p. 106

Philip L. Summers to Isaac Bernheimer, merchant
Two full seventh parts

16 March 1866
L.R.B. 162, p. 385

Joseph Newhouse, late merchant & Abby, his wife
to
Isaac Bernheimer, of the City & State of New York, merchant
Three full equal and undivided Seventh parts

30 May 1866

Isaac Bernheimer, merchant & Isabella W., his wife
to
Henry Oberndorfer

Two full seventh parts

By reason of all of the above Conveyances the premises described
became vested in the said Isaac Bernheimer, Henry Oberndorfer, Ernest
Nusbaum and Simon W. Arnold in fee as Tenants in Common in the following
proportions to wit

Isaac Bernheimer	3/7	
Henry Oberndorfer	2/7	= 7/7
Ernest Nusbaum	1/7	
Simon W. Arnold	1/7	

8 June 1870
quit claim
F.T.W. 6, p. 257

Isaac Bernheimer & Isabella, his wife
Henry Oberndorfer & Marianne, his wife
Ernest Nusbaum & Clarissa W.A., his wife
Simon W. Arnold & Mary H., his wife
to
Fairmount Park Commission

APPENDIX 7.

Slides of the Site and Buildings.