NPS Form 10-900
(Oct. 1990)

OMB No. 10024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "X" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Connecticut Valley Railroad Roundhouse and Turntable Site

other names/site number 106-25

2. Location

street & number in Fort Saybrook Monument Park off Main Street in Saybrook Point ☐ not for publication

city or town Old Saybrook ☐ vicinity

state Connecticut code CT county Middlesex code 007 zip code 06475

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ☒ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☒ meets ☐ does not meet the National Register criteria. I recommend that this property be considered significant ☐ nationally ☒ statewide ☐ locally. (☐ See continuation sheet for additional comments.)

Signature of certifying official/Title — Date 03/28/94

John W. Shannahan, Director, Connecticut Historical Commission

State of Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐ See continuation sheet for additional comments.)

Signature of certifying official/Title — Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

Signature of the Keeper — Date of Action

☒ entered in the National Register. ☐ See continuation sheet. — 4-28-94

☐ determined eligible for the National Register ☐ See continuation sheet.

☐ determined not eligible for the National Register.

☐ removed from the National Register.

☐ other, (explain:) _____

Connecticut Valley Railroad Roundhouse and Turntable Site
Name of Property

Middlesex, CT
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply)

- ☐ private
- ☒ public-local
- ☐ public-State
- ☐ public-Federal

Category of Property
(Check only one box)

- ☐ building(s)
- ☐ district
- ☒ site
- ☐ structure
- ☐ object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
		buildings
		sites
2		structures
		objects
2	0	Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

TRANSPORTATION/rail-related
TRANSPORTATION/water-related

Current Functions
(Enter categories from instructions)

LANDSCAPE/park
RECREATION AND CULTURE/monument/marker

7. Description

Architectural Classification
(Enter categories from instructions)

N/A

Materials
(Enter categories from instructions)

foundation BRICK, with STONE/granite footings for roundhouse
walls
roof
other CEMENT for turntable

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets.)

Narrative Description

Introduction

The Connecticut Valley Railroad Roundhouse and Turntable Site (Figure 1) contains the remains of two structures associated with one of Connecticut's early important independent railroads - the Connecticut Valley Railroad Company, chartered in 1868 and opened in 1871 - which extended from Hartford along the west bank of the Connecticut River south to Saybrook Point. The next year its southern terminus was extended over a cove to Fenwick, a growing summer colony (Figures 3, 7 and 8). Like so many other small, independent railroads, the Connecticut Valley line had trouble making ends meet and went bankrupt in 1876. Reorganized in 1879, it emerged as the Hartford and Connecticut Valley Railroad. Better managed, it was leased in 1887 for 99 years to the huge New York, New Haven and Hartford Railroad, which had absorbed or obtained control of virtually every railroad line in the state. This huge conglomerate, called "The Consolidated," was the first "big business" in the United States, operating as a ruthless acquisition machine until government regulators finally stepped in. The Valley Division of the New York, New Haven and Hartford Railroad, as the old Connecticut Valley Railroad line became known, ran to Fenwick until 1916 and to Saybrook Point until 1922. The line fell victim to the greed of its managers, debt, union problems, intense automobile, trucker, and highway competition, and the lack of loan and credit programs (Turner and Jacobus 1986: 282).

Saybrook Point's strategic location at the mouth of the Connecticut River along Long Island Sound (Figures 1-3) made it the focus of trade, commerce, and transportation for centuries. The archaeological remains of the Valley line quarter-round roundhouse and turntable on Saybrook Point were discovered in the early 1980s by Professor Harold Juli of Connecticut College and incorporated into the Fort Saybrook Monument Park, which commemorates 350+ years of changing land use on Saybrook Point, from the property's Indian occupation to the first European fort/settlement in 1635, to the 19th-century railroad facility construction, and to its abandonment as a major transportation point in 1922 (Figure 20). Dr. Juli's excavations provided archaeological data on railroad structures, about which very little has been written. Most of the available documentary sources on railroads are about locomotives, tracks, grades, and cars, not about the maintenance facilities, thus the roundhouse and turntable remains, which have integrity, have yielded and may yield more important information about the construction and operation of 19th-/20th-century railroad transportation features. Other railroad-related features may be nearby on Saybrook Point but have not been field-verified.

Physical Description

The railroad roundhouse remains and associated turntable are today exposed and incorporated into Fort Saybrook Monument Park on Saybrook Point (Figure 20; Photographs 3-7). The park also includes the site of the first English fortified settlement on the Connecticut shore: Fort Saybrook, established in 1635. The fort burned in 1647 or 1648 and was replaced with another nearby. The archaeological remains of both fort sites have been obliterated by 19th- and 20th-century construction, some of it related to the circa 1871 construction of the Connecticut Valley Railroad track, yard, and facilities,

Narrative Description (continued)

which encompassed much of the eastern portion of Saybrook Point. The roundhouse, turntable, and a complex network of tracks, signal tower, storehouse, ice house, coal bin, station, and steamboat dock were all built on the point (Figures 2, 3, and 14). Besides the roundhouse foundation and turntable, Dr. Juli found 19th-century wharf remains further east; remains of the other railroad structures may be buried under parking lots, lawns, and 20th-century commercial buildings such as restaurants that are near the park today (Figures 9, 10 and 20).

Saybrook Point is located at the mouth of the Connecticut River where it opens into Long Island Sound, on the western side of the river. The promontory changed its function over the years, but always maintained a maritime and riverine importance. The Connecticut Valley Railroad's Connecticut River/Saybrook Point connection followed the same lines of the 17th- and 18th-century travelways, in which river and shoreline passengers and freight boats met at Saybrook Point and then traveled by boat westward to New York over Long Island Sound or eastward to Boston. In the second half of the 19th century and into the early 20th century, combined train and steamboat travel was very popular, replacing earlier stagecoach-sailboat travel. The southward connection to Fenwick in 1872 was established for a slightly different purpose - to transport tourist passengers to this newly developing resort. By the 1920s steamboat/railroad routes were declining in the face of more efficient automobile, trolley line, and trucker/highway travel. The east-west Shore Line Railroad survived because of its significant connections with New York City and Boston, but the north-south Connecticut Valley Railroad could not generate enough freight or passenger business to continue and ceased operating in 1922. The Point, however, still serves as a dock, though more for recreational boating than anything else; nevertheless, the waterway connection remains.

Archaeological Investigations

Archaeological investigations were first conducted at Saybrook Point in July of 1980 by Dr. Juli. The preliminary archaeological exploration had been suggested by the Old Saybrook Historical Society, with the goal of finding the site of the original 1635 Fort Saybrook in anticipation of commemorating the 350th anniversary of the town's founding in 1986. At that time the land was owned by the state, and residents wished to purchase the property and establish a town park in honor of the Point's historical importance (Juli 1980: 1). The goal of the 1980 archaeological work was to obtain information about the potential for finding intact evidence of the fort. The 1980 survey began with oral tradition and document research, to determine the sequence of land use of the property. This sequence begins with the 1635 fort construction just north of the present College Street, the 1648 destruction of the fort by fire, and the 1649 building of a new fort on a battery mound farther east toward the river. Dr. Juli found that in 1871, the year the railroad yard was built, the site of the first (1635) fort was leveled and removed as fill, the battery mound (and presumably the 1649 fort remains) was leveled, and the railroad facilities were concentrated in this area (Figure 9). Research also indicated the roundhouse and other railroad buildings were removed in 1922, the year the Valley Railroad Division ceased operation to Saybrook Point (Juli in press: 6). However, a 1923 Sanborn map (Figure 6) shows the roundhouse still standing, though abandoned (the map could have been drawn up

Narrative Description (continued)

in 1922, before the building was destroyed, and printed after the building was taken down). In the 1930s the WPA removed the last evidence of the first fort and in the 1940s the Dock and Dine Restaurant and other "recreational businesses" were built on the sites of the railroad facilities and the second fort. Between 1982 and 1987 the property at Saybrook Point became the Fort Saybrook Monument Park, its present form today (Juli in press: 6).

In 1981 and 1982 Dr. Juli returned to Saybrook Point to continue testing, still with the goal of finding the 1635 and 1649 forts. The 1981 and 1982 investigations found archaeological evidence of 19th-century railroad activities in the area (Figure 9, Zone IV) thought to contain the site of the 1635 fort; leveling and fill removal probably obliterated the fort remains (Juli in press: 6). In the survey of the remainder of the property, 17th- and 18th-century refuse from old houses was found, but none of the houses are still standing. The archaeological study also identified circa 1820 wharf remains at the northeast part of Saybrook Point, consisting of brownstone blocks. This wharf ceased being used after the Valley Railroad built a track bed east of the wharf, blocking boat entry to the wharf and creating the tidal pond which is still there today (Figures 9 and 10) (Juli in press: 9).

The most extensive archaeological remains found turned out to be those of the Connecticut Valley Railroad. Maps of that period (1871-1922) show extensive transportation facilities, including a dock, railroad station, rail yard with roundhouse and turntable, switching tower, coal bins, and other features of a railroad support and maintenance complex (Figures 2-6)(Juli in press: 10). Documentary data suggested the roundhouse and turntable might be archaeologically intact. Dr. Juli began his archaeological investigation by excavating the roundhouse with a 35-meter-long trench, east-west, which revealed the back wall footing and several internal track footings. A second trench 10 meters to the south revealed more of the internal footings and back wall. With these data and dimensions taken from a 1918 railroad map (Figure 5), test pits were positioned to locate the four corners of the building. The granite footings of a large six-bay, one-quarter railroad roundhouse were found (Figures 11 and 12), matching the 1918 map depiction (Figure 5; Photographs 3, 4, and 6). Two of the six bays were completely excavated.

At the building's entrance seven square footings or piers were revealed, three meters apart; these were foundations for support columns and doors (Figure 11). Each of the six bays was built on a base of two granite footings 25 meters long, set about one meter apart. These footings supported the railroad track in each bay, which sat on low brick foundations built on the granite footings. The bays also contained ceramic pipes which served as conduits for venting excess water from the engines and bins for coal ash disposal (Juli in press: 11).

Structural remains of the turntable, which was necessary to direct an engine to the desired roundhouse bay, were found 20 meters north of the roundhouse entrance footings (Figures 10 and 13). The excavations revealed the table's cement pivot base, a circular cement feature around the base, and the outer wall of the turntable (Photographs 5 and 7). Artifacts were relatively scarce in the turntable area, consisting mostly of coal ash and brick spalls and some iron objects such as railroad spikes (Juli

Narrative Description (continued)

in press: 12).

Following the completion of the archaeological excavation, the town created an interpretive park, depicting the history of land use at Saybrook Point, and focusing on the Point's economic, transportation, and commercial roles. A major feature of the park is the archaeologically exposed portions of the roundhouse and turntable (Figure 20; Photographs 6 and 7). The stone footings and bays of the six-bay, one-quarter wedge-shaped roundhouse are visible, as are the turntable components. Plaques explaining the railroad's history accompany this exhibit, informing visitors of the important role the Point played in the railroad era.

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] **A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] **B** Property is associated with the lives of persons significant in our past.
- [ ] **C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [X] **D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- [ ] **A** owned by a religious institution or used for religious purposes.
- [ ] **B** removed from its original location.
- [ ] **C** a birthplace or grave.
- [ ] **D** a cemetery.
- [ ] **E** a reconstructed building, object, or structure.
- [ ] **F** a commemorative property.
- [ ] **G** less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance
(Enter categories from instructions)

TRANSPORTATION
ARCHAEOLOGY/HISTORIC - NON-ABORIGINAL/transportation
ENGINEERING

Period of Significance
1871-1922

Significant Dates
1871, 1887, 1896

Significant Person
(Complete if Criterion B is marked above)
N/A

Cultural Affiliation
N/A

Architect/Builder
unknown

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibilography
(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- [ ] preliminary determination of individual listing (36 CFR 67) has been requested
- [ ] previously listed in the National Register
- [X] previously determined eligible by the National Register
- [ ] designated a National Historic Landmark
- [ ] recorded by Historic American Buildings Survey # _____
- [ ] recorded by Historic American Engineering Record # _____

Primary location of additional data:

- [ ] State Historic Preservation Office
- [ ] Other State agency
- [ ] Federal agency
- [ ] Local government
- [X] University
- [ ] Other

Name of repository:
Connecticut College, New London, CT

Connecticut Valley Railroad Roundhouse and Turntable Site — Middlesex, CT

Name of Property — County and State

10. Geographical Data

Acreage of Property less than one acre

UTM References
(Place additional UTM references on a continuation sheet.)

	Zone	Easting	Northing
1	18	721800	4573460
2			
3			
4			

☐ See continuation sheet

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Mary Soulsby (reviewed by John Herzan, National Register Coordinator)

organization PAST, Inc. date 6/30/93

street & number P.O. Box 209 telephone (203) 486-4264

city or town Storrs state CT zip code 06268

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items
(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Town of Old Saybrook
Town Hall, First Selectman's Office

street & number 302 Main Street telephone (203) 395-3123

city or town Old Saybrook state CT zip code 06475

Narrative Statement of Significance

The Connecticut Valley Railroad Roundhouse and Turntable Site includes the remains of facilities of a steam-powered railroad which played a part in the development and adoption of new methods of transportation, industrialization, engineering, and business dealing that revolutionized America. The Old Saybrook site offers information on the construction, function, and adaptation of railroad facilities, about which very little is known, since railroad maintenance structures were rarely documented.

Criterion A. Sites that are associated with events that have made a significant contribution to the broad patterns of history.

This site makes important contributions in the areas of maritime history; transportation mode changes; industrialization; settlement, market, and travel patterns; changes in capitalistic economic and business practices; the development of government regulation of an industry, and engineering advances.

The site's first contribution is directly related to Saybrook Point's long history as an important maritime and riverine location. The junction of the mouth of the Connecticut River with Long Island Sound certainly made it desirable to Native Americans, and attracted early Dutch and English interest. Beginning in at least 1623 the Dutch traded there with Indians but had not erected a permanent post when in 1635 the English moved in and built Fort Saybrook; the railroad facilities were later constructed on the fort site. Saybrook Point's strategic location gave the English control of access to the Connecticut River from the Sound and prevented the Dutch, who had built a post upriver at Hartford, from reaching the Sound via the river without passing by Fort Saybrook. As English settlement of New England expanded, Saybrook Point continued its important seaside role as a market center, military outpost, harbor, and gateway to the great Connecticut River, which offered access to far interior New England. This seaside and riverine focus on commerce and travel continued through the 18th century and into the 19th century. Travel of passengers and freight was accomplished by water alone or a combination of ship and overland horse-drawn stagecoach travel. In the early 1830s, railroads began to be built in Connecticut and the rest of the East, basically built as replacements for the stagecoach routes; the railroads, like their stagecoach predecessors, carried people and materials to water connections. Every 19th-century railroad in southern New England had a steamboat connection along the way. Saybrook Point was one of these connections. The Connecticut Valley Railroad began at Hartford and ran south along the Connecticut River to Saybrook Point, where it connected with steamers which went to New York via Long Island Sound (Figures 2, 3, 7, and 8). The Valley Railroad's success, and that of most of Connecticut's railroads, is inextricably bound with steamboat travel (Farnham 1973: 102). The railroad was meant to compete directly with Connecticut River steamboat lines and it worked for quite a while. Though railroad and steamboat service to Saybrook Point stopped in 1922, the Point continued to function as a harbor and still does today, carrying on its long history as a seaside travel and commerce point.

The Valley Railroad was one of the later Connecticut railroads, built in 1871, but it effected changes in the way people traveled, and not just in that Hartford urbanites could ride the train to Saybrook

Narrative Statement of Significance (continued)

Point instead of taking a river steamboat. The train was faster and gave patrons direct access to the shore line area which was rapidly becoming a fashionable summer resort for the wealthy, particularly Fenwick, just south of Saybrook Point, to which the Connecticut Valley Railroad's tracks were extended in 1872. The Valley Railroad, although it did carry freight, was one of the few railroads in Connecticut which did not connect two cities; it connected a city (Hartford) with a string of summer-oriented villages (Saybrook, Saybrook Point, and Fenwick), which automatically limited its commercial and year-round passenger business. Its directors recognized these limitations meant limited revenues and sought ways to enhance them by linking up with other lines, but their efforts eventually failed in the face of competition from larger railroad lines.

The Connecticut Valley Railroad was part of the 19th-century national frenzy to build railroads. Starting around 1830 "railroad fever" broke out sporadically throughout the East, eventually spreading to the Midwest and West. Every city and town believed it needed a railroad to share in America's "great destiny" of progress (Holbrook 1947: 40). Eventually, Connecticut had, for its size, more railroad lines than anywhere in the country (Figures 8 and 9). This expansion in such a small state had much to do with the growing industrial focus of its cities and with its location between New York City and Boston, major financial centers and shipping and receiving ports. Connecticut's railroad development is really a microcosm of the country's railroad development. Cities away from major rivers or oceanside ports saw railroads as a major opportunity to make commercial connections. Waterbury, for example, a non-water oriented city, had become an important brass producer and needed a more effective means of shipping its products and of bringing in raw materials. Before the railroad was invented, Waterbury had no transportation alternatives but animal-powered stagecoaches or canals, less attractive options. Railroad access, as expected, spurred the economic development of industries in cities, so much so that it is not exaggerating to say that it was key to the industrialization of America and its growth as an industrial economic force. The greatest expansion of railroads and industry, in both Connecticut and the rest of the country, occurred after the Civil War, particularly between 1865 and 1871, encouraged by state and federal governments which gave railroad promoters 300,000 square miles of public lands and huge loans (Weller 1969: 9). With railroads, markets seemed limitless, and lines were extended bit by bit to distant points north, south, and west. The railroad, in fact, was responsible for rapidly opening the West to settlement.

It was an era unforeseen in America. Holbrook (1947) is only one of many to note how this period of American railroad-building and industrialization was a state of anarchy run by ruthless men who did anything to increase profits. The enormous possible profits and lack of government control combined with greed to produce a frenetic period of capitalism out of control, at the expense of passenger and employee safety. Workmanship was shoddy, with few professional engineers or experienced designers involved. The situation worsened when mega-financiers such as J.P. Morgan and Charles Mellon jumped on the bandwagon, using their enormous capital, power, and political connections to take over railroad lines and build competing lines, eventually seizing control of 90% of all of New England's transportation facilities by 1890 (Weller 1969: 91) (Figure 10). This rise of these so-called robber or railroad barons and their merging of companies to form huge corporations was mirrored by

Narrative Statement of Significance (continued)

manufacturing corporations merging into giant holding companies or diversified industrial firms (Roth et al 1981: xxiv). These were the United States' first "big businesses." The Connecticut Valley Railroad became part of this new economic/business practice when it was leased for 99 years in 1887 by the New York, New Haven and Hartford Railroad, the mega-railroad owned by Morgan and his associates.

In the 1850s recurring accidents became a national disgrace. Consumers and journalists grew outraged and began to rebel in an unprecedented way against the unsafe railroads and the railroad owners' business tactics. Connecticut and other states began efforts to try to legislate railroad construction and management to protect passengers and employees, but it was a long road. Connecticut established a railroad commission in 1853, empowered to inspect railways, regulate train speed, standardize signals, and make other directives for safer operation (Turner and Jacobus 1986: xvii). In 1862 Congress standardized the gauge for railroad tracks (Morse 1940: 110), and in 1887 the Interstate Commerce Act was passed, bringing more national regulation (Kirkland 1948a: 516). Later, especially just after 1900, the government launched a long-term battle to break the rail barons' monopoly. The end result of this federal crusade was the crushing of the barons and their company, the New York, New Haven and Hartford Railroad, and the over-regulation of railroad companies, perhaps out of overreaction to the ruthless business practices conducted in the mid to late 19th century. It forced all railroads to improve safety conditions, but the huge costs of these overhauls, combined with previous reckless spending, hurt the railroads tremendously. By the 1920s, with the growing popularity of cars, trolleys, buses, and trucks, railroads were losing ground, and by the 1940s, with the advent of air travel, they were virtually crippled, particularly under the weight of burdensome government regulation of every area of rail management.

One side result of the push for railroad building was the development of new technological advances and the refinement and adaptation of existing technology. Railroads were at the forefront of industry at the time and builders were willing and eager to experiment with new materials and designs for tracks, locomotives, roundhouses, turntables, and all other associated facilities. For example, railroads were among the first industries to use cement, concrete and reinforced concrete. The Valley Railroad roundhouse and turntable site shows early use of this technology (see below).

Connecticut Railroad Background

The earliest railroads in Connecticut were mainly shore-oriented, reflecting New England's maritime focus. Connecticut's first railroad was six miles of the New York, Providence and Stonington Railroad in the southeast corner of the state. The first railroad to be completely within the state boundaries was the Hartford and New Haven, opened in 1839; a steamship connection to New York was made in New Haven (Roth et al 1981: xviii). One of the more important lines was the Shore Line Railroad, which ran from New Haven along the Long Island coast to Old Saybrook where it crossed the Connecticut River (by ferry until the bridge was built in 1870) and then the Thames (again by ferry until bridge construction in 1889), connecting in Groton with the New York, Providence and

Narrative Statement of Significance (continued)

Stonington Railroad, which ran to Providence (Figure 8). Trains from New York City connected with the Shore Line's western terminus and a Boston connection was made from Providence.

The New York and New Haven Railroad, opened in 1848, connected New York City directly with New Haven (Turner and Jacobus 1986: 17); it also leased the Shore Line Railroad. The New York and New Haven Railroad immediately became Connecticut's most important rail corridor because it controlled the entrance from southern New England into New York City. There were innumerable other railways in Connecticut. Some of these lines were very short, such as Danbury and Norwalk Railroad (Turner and Jacobus 1986: 99). In the 1850s, relative to its size, New England surpassed the rest of the country in railroad mileage (Kirkland 1948a: 285). Most of them were for business product transportation, such as the Norwich and Worcester Railroad, which was important to northeast Connecticut's textile manufacturers (Farnham 1973: 4; Roth et al 1981: xvii). As time went on, independent railroads grew larger and consolidation began to characterize New England. Railroads acquired branches or parallel lines to dominate territory or joined together to form longer routes. It began in the 1840s, grew in the 1850s, slowed during the Civil War, then exploded in the 1870s. On August 6, 1872, the Hartford and New Haven and the New York and New Haven Railroads merged, forming the New York, New Haven and Hartford Railroad Company. By 1900 two systems controlled nearly all of New England: the Boston and Maine Railroad and the New York, New Haven and Hartford Railroad (Kirkland 1948b: 1-2).

The New York, New Haven and Hartford Railroad was run by extremely powerful, ambitious men who decided on a complete monopoly of all transportation in Connecticut and the New York/southern New England area. The company directors included some of the most famous men in American financial history: J.P. Morgan, Charles Mellon, and William Rockefeller. By the end of the 19th century all Connecticut railroads but the Central Vermont Railroad had been absorbed into the huge New York, New Haven and Hartford Railroad system, nicknamed "The Consolidated" (Morse 1940: 257-258). Three hundred former companies were included, some outside of Connecticut, in southern New England (Figure 11) (Turner and Jacobus 1986: 205-206). The railroad even owned gas, electrical, and water utilities (Weller 1969: 3).

All across the country, as in Connecticut, passenger train travel declined after 1920, giving way to buses and cars. Travel slumped even further in the 1930s depression, and in the 1940s the development of air travel and the concomitant spread of the population out of cities and into suburbs, with residents and merchants moving away from centralized downtown areas, really struck a strong blow to the railroads (Sorrell and Wheeler 1944: 12, 13, 35). These factors, combined with massive debt resulting from forced safety improvements, unrestrained buying, and too-strict government regulation, forced the end of the railroad era in Connecticut.

The Connecticut Valley Railroad

The Connecticut Valley Railroad was first envisioned in the 1860s as a way to compete with boat

Narrative Statement of Significance (continued)

transportation up and down the Connecticut River between Hartford and Long Island, particularly important when the Connecticut River froze and ships were immobilized. The Connecticut Valley Railroad Company was granted a charter by the state in 1868 to build the railroad and also was given permission to build and maintain docks on Long Island Sound, crucial for establishing steamship connections to New York City (Turner and Jacobus 1986: 156). The directors had until 1876 to open the railroad. Saybrook Point was chosen for the southern terminus of the track. The money to build the railroad was raised in the typical fashion of the time: via the sale of stocks and bonds. The first bond issue was for one million dollars. The railroad received support from individuals and towns, and the state abated taxes on the bond to assist the project. The City of Hartford subscribed to nearly $500,000 of stock. All of the railroad's assets were pledged for the bond and the state treasurer was named as its trustee. This action no doubt was the result of the disastrous financial rip-offs of many of the earlier railroads.

The Connecticut Valley Railroad opened on July 29, 1871 (Figure 7), with 15 men on the payroll. At Old Saybrook the line crossed the east-west running Shore Line Railroad, while at Middletown it crossed the tracks of the New Haven, Middletown and Willimantic Railroad (also known as the Air Line). In its first year of operation the little railroad grossed $34,000, but no dividends were paid because of the start-up debt owed (Turner and Jacobus 1986: 159).

In 1872 the railroad extended the track south from Saybrook Point, over a one-half-mile-long trestle over a cove, to Fenwick, a growing summer colony for the wealthy (Turner and Jacobus 1986: 162). By the next summer the northern terminus of the track was extended in Hartford to reach the Asylum Street depot of the Hartford, Providence and Fishkill Railroad (Figure 7). The Connecticut Valley Railroad grew in public acceptance and became popular for transporting vacationers to beaches while also carrying coal, lumber, grain, and feed (Turner and Jacobus 1986: 156). Gross revenues reached one-quarter of a million dollars a year by 1873. One hundred forty-two people were now on the payroll and the line had six coal-burning steam locomotives. But the prior start-up debts and costs of personnel and facilities were plaguing the railroad and no dividends were paid despite a second bond issue of a million dollars in 1874 (Turner and Jacobus 1986: 162). The company directors therefore looked for more business, though their options were limited because the railroad was between a city and a string of villages, not another city. In essence, its structure condemned it to being a branch line trunk (Turner and Jacobus 1986: 162). In 1876 the Connecticut Valley Railroad directors leased the Central Railroad, which ran from East Hartford to Springfield and then leased the running rights over the tracks of the Hartford, Providence and Fishkill Railroad to reach East Hartford across the Connecticut River from Hartford. Unfortunately, although this action made geographic and economic sense, the Connecticut Valley Railroad was not in a financial position to carry it off due to its debts. It defaulted on its second mortgage bonds and went into receivership in June of 1876, unable even to pay the interest on the first mortgage. The company was reorganized in 1879, emerging as the Hartford and Connecticut Valley Railroad. The state treasurer stepped in and canceled the Connecticut Central Railroad lease. The new directors immediately began making long overdue improvements to the roadway; they installed steel rails and 25,000 new ties, and slowly but steadily

Narrative Statement of Significance (continued)

improved stretches of trestles. The directors also took steps to control expenses. By the early 1880s there were seven engines and 175 cars and 200,000 passengers a year were transported. Daily passenger and freight service was run, with special summer excursions from Hartford to Saybrook Point to Fenwick. Seven hundred twenty-five thousand dollars of stock was issued and bondholders from the original Connecticut Valley Company were granted the opportunity of redeeming their foreclosed bonds for the new stock (Turner and Jacobus 1986: 163).

While the Hartford and Connecticut Valley Railroad was being put into good shape, the management looked for a purchaser. In the gamesmanship that was necessary for business dealing then, the railroad owners, to make their railroad more attractive to buyers, attempted to make it look even more successful than it was. They "leaked out" word that the Valley line, having lost the Connecticut Central lease (which the New York and New England Railroad had then obtained), was thinking of building its own line from Hartford north through Granby to West Springfield and Holyoke. Three larger railroads immediately showed interest in the Valley Line. One was the Connecticut River Railroad, whose southern endpoint was Springfield, near Holyoke. The Boston and Albany Railroad was also interested in the Valley line as a way to get into the Connecticut marketplace. Lastly, the huge New York, New Haven and Hartford Railroad ("The Consolidated"), on a buying spree to protect its Connecticut empire, entered the competition, paying a hefty price for a 99-year lease of all the Valley line property in 1887 (Harlow 1946: 193; Turner and Jacobus 1986: 163).

Soon after its acquisition of the Valley line, "The Consolidated" found it to be a "light density" line, one with low population centers and too few manufacturing points, which meant no great profit. In 1905, in an effort to increase business and therefore profits, "The Consolidated" began running its New London-to-Hartford trains via the Valley Division, as the Valley line was now called, from New London to Old Saybrook to Hartford and back. This effort apparently was not productive enough because in 1916 the Fenwick branch was taken out of service and the long railroad causeway to Fenwick from Saybrook Point became an auto road. The increasing popularity of cars, buses, trucks, trolleys, and highways was adversely affecting railroad business, both passenger and freight. In 1922 railroad service to Saybrook Point and its docks was halted.

In the 1930s The Consolidated concentrated on its Valley Division commuter trains between Middletown and Hartford, but the last passenger train ran in 1933, just when steamboat service on the Connecticut River was ending. Cars had finally taken a real toll on passenger rail travel. Freight travel along the Middletown and Hartford route continued, but diminished through the 1940s and 50s, ending in the 1960s except for a few separate parts of Hartford and Middletown. The Valley Division's "last great deed" was to bring in the long heavy steel for construction of the Baldwin Bridge over the Connecticut River for car and truck traffic because the railroad was the only way to get the girders to the waterside barges. The line was abandoned in 1967 (Turner and Jacobus 1986: 169).

Narrative Statement of Significance (continued)

Criterion D. Sites that have yielded or may be likely to yield information important in prehistory or history.

The Connecticut Valley Railroad Roundhouse and Turntable Site has provided important information about railroad maintenance facilities, about which very little has been recorded in documents. There is much published information about locomotives, tracks, bridges, stations and companies, but virtually nothing is printed about the construction and operation of the maintenance and support facilities. The focus of interest seems to be on the architectural characteristics of station buildings and the technology of steam engines. Perhaps rail yards and their myriad structures such as tracks, coal and ash bins, water tanks, pump houses, machine shops, roundhouses, and turntables were simply too utilitarian to record in detail. This is unfortunate because railroads were at the forefront of industry in engineering and building technology.

There are only a couple of roundhouses left standing in Connecticut and there are a few turntable remains in the state, but none of these resources has been professionally studied with the exception of the Saybrook Point site. Only one other railroad yard has been subjected to archaeological investigation in the Northeast - the Steamtown National Historic Site in Scranton, Pennsylvania. At Steamtown, archaeological data helped accurately reconstruct and interpret a 19th-century railroad complex which is now an operating museum (Holt and Alterman 1991: 1). The Saybrook Point Site archaeological data were used in a similar way to develop an exhibit at Fort Saybrook Monument Park which includes exposed portions of a one-quarter-round, six-bay roundhouse and turntable (Figure 20) and explains, via plaques, the railroad history of Saybrook Point. The site is very important for providing information on construction methods and materials of railroad features, information not accessible in documentary sources, and telling what technological advances were used at the site.

It is unclear if the turntable components exposed at the Valley Railroad Roundhouse and Turntable Site date to the 1871 construction of the railroad line. Two 19th-century maps of Saybrook Point show the rail yard roundhouse tracks and waterside freight house (Figures 2 and 3); however, only one figure shows the turntable (Figure 3), but that is not surprising because the other figure's scale is too small (Figure 2). But on each map, the roundhouse is clearly facing different directions than the roundhouse exposed at the site today. A 1915 right-of-way and track map of the New York, New Haven and Hartford Railroad (which had absorbed the Connecticut Valley line in 1887) (Figure 4), a 1918 map of the facility (Figure 5), and a 1923 Sanborn Insurance map (Figure 6) all show the roundhouse and turntable in the configuration exposed by Professor Juli (Figure 10). Either the 19th-century maps are incorrect, which is unlikely, or the railroad rebuilt the Saybrook Point facilities by 1915, which is very likely since the New York, New Haven and Hartford Railroad was forced by government regulators, consumer demand, and technological change to rebuild many of its facilities at the turn of the century. Reports of the Connecticut Railroad Commissioners from 1896 through 1899 show regular and extensive capital improvements to the Valley Division (Railroad Commissioners of the State of Connecticut 1896, 1897, and 1899). The Saybrook Point facilities may well have been included in turn-of-the-century renovations by The Consolidated, based on the cartographic evidence

Narrative Statement of Significance (continued)

and the fact that railroad modifications were common then. Another indication of a later date for the site is the fact that the exposed turntable remains are of concrete or cement. Concrete was developed by a Frenchman in 1868 (Bush 1990: 57) but not widely used in the United States until later. Reinforced concrete (metal bars in the concrete) was just coming into real use, and in fact was still in the experimental stage, between roughly 1900 and 1910 (Bush 1990: 57; Clouette, personal communication 1993; Holt and Alterman 1991). Cement and concrete were used in the 1870s, when the Valley Railroad was built, but extremely rarely. It is more likely that the concrete suggests a date closer to 1900, suggesting a rebuild or replacement of the original Saybrook Point railroad facilities. Such modifications were common, to take advantage of new technology and to accommodate the locomotives, which were growing larger. At Steamtown, archaeologists found that in the early 20th century an old roundhouse was razed and an 1865 house and turntable were enlarged; at that time a mixture of concrete and brick was used, new technology at the time (Holt and Alterman 1991: 7). Bush (1990: 141-142) also gives numerous examples of the expansion and reinforcement of turntables (and roundhouses) as steam engines grew and necessitated larger and stronger accommodations (see Figure 18).

The 1896 annual report of the Connecticut Railroad Commissioners indicates that The Consolidated built a new "brick engine-house, with stalls for the accommodation of six engines," at Saybrook (Railroad Commissioners of the State of Connecticut 1896: 19). The roundhouse was built by the Berlin Iron Bridge Company (Photograph 1) (Miller, personal communication 1993); the turntable may also have been built by the company. The turntable was likely constructed or rebuilt at this time, or it may even postdate 1896. Max Miller, of the Essex Valley Railroad Museum (personal communication 1993), and Bruce Clouette (personal communication 1993) believe that the design and material construction of the turntable suggest a circa 1896 construction or rebuild. The turntable remains (Photographs 5 and 7) suggest it probably operated on iron rollers, standard for the time; bronze ball bearings would have been used later, after the turn of the century (Bush 1990: 128; Clouette, personal communication 1993).

Even if the roundhouse and turntable remains are not the original features of the railroad, the significance of the site is in no way diminished. Virtually nothing is known of the operation of steam engine repair facilities, and the Saybrook Point site can help understand the sequence of modification of the railroad facility at the site, particularly if future archaeological and document work is permitted. The remains of other associated features and buildings may still be on Saybrook Point, and, if the current roundhouse and turntable are replacements of earlier features, the remains of the earlier sites may still exist. For example, excavation of the outside of the turntable walls may reveal whether the cement walls exposed today are reinforcements of stone walls of an earlier table. The Saybrook Point Site has already made a significant contribution to understanding railroad history, but has the potential to contribute far more, including the possibility of comparison with the few remains of rail houses and turntables left in Connecticut and additional data to help further develop the exhibit at Fort Saybrook Monument Park and perhaps the Essex Valley Railroad museum, which operates on the lower half of the old Valley line.

Narrative Statement of Significance (continued)

Railroad Facilities

Virtually nothing has been recorded about railroad support facilities, which involved state of the art engineering and design skill and imagination. Keeping trains running meant much maintenance and repair. By 1838 New England built most of the locomotives used on its railroads, many made by builders generally associated with cotton machine shops; these locomotives were also sold to the transcontinentals and abroad (Kirkland 1948a: 312). The locomotives were sent to the roundhouse at the end of each run, as a matter of routine, to be "turned", which meant complete servicing of the engine after each run before it was sent out again. The term derives from the fact that the roundhouse is the heart of the engine terminal and the turntable the *sine qua non* of the roundhouse (Bush 1990: 11; Henry 1942: 279). Interestingly, roundhouses and turntables were also built by shops which specialized in nonrailroad-related construction: bridge manufacture outfits (Bush 1990: 121). This is primarily because the turntable operated on the principle of a swing bridge and because the truss work in roundhouses was similar to that of bridges (see below).

The roundhouse and turntable worked on the following principle: tracks ran into the roundhouse bays, radiating out from a turntable in front of the house. The turntable had a track or trestle across it which could be turned to connect the track to a particular roundhouse bay. The size and construction of the roundhouse varied depending on the needs of the particular railroad; some were very small, some were huge. Semi-circular or fully circular roundhouses appear to have been preferred in the United States, although there were also so-called roundhouses which were rectangular or square and had tracks which ran directly into the house at various entrances without passing over turntables (Henry 1942: 280). Non-round houses were more common in Canada and abroad.

One advantage of the roundhouse and turntable system was the ability to add bays to a semi-circular roundhouse when expansion was needed. Roundhouses also required less space than the rectangular houses, which had doors in the front and rear which allowed locomotives to pass through. One disadvantage was enlarging the roundhouse bays and turntable to accommodate larger, longer locomotives. It was frequently done, however, as evidenced in Figures 18 and 19. Another disadvantage was that if the turntable broke, the roundhouse was blockaded. There appears to have been no pattern of building material in rail houses over time; economics decided whether the houses were built of wood or brick (Clouette, personal communication 1993). Bush (1990: 42), however, noted that in 1875 American standards for roundhouse construction called for stone foundations, stone or brick walls, and slate or metal covering for the roof, safeguards against fire. Bush noted that an 1893 Berlin, Connecticut, roundhouse of the New York, New Haven and Hartford Railroad featured iron roof trusses and a slate roof (Bush 1990: 42). The Saybrook Point roundhouse appears of much the same construction (Photograph 1).

The early turntables were operated by hand but worked essentially on the same principle as the later machine-powered ones. The turntable was set in a dug-out round pit, whose sides were reinforced with wood piles, stone, or concrete, and within which, along the interior rim, was an iron rail (later replaced

Narrative Statement of Significance (continued)

by steel). Across the pit ran a trestle track which connected to the rim rail with wheels and was level with the upper ground surface where it connected to railroad tracks in the yard. In the center of the pit was a stone (or concrete) pedestal, its base set below the frost line, on which the trestle track rested as it crossed the circular pit (Figures 15 and 16). Bearings on this pedestal allowed the track to pivot easily and move around the circle because there was very little friction. The trestle track was basically a swing bridge, pivoted at the center. Figure 16 is a diagram of the operation of a typical turntable of this "center balanced" type, which was used exclusively in North America until circa 1912 (Bush 1990: 121, 125). The bearings on the pivot took all the weight of the trestle track, turntable, and locomotive on it. Once the locomotive was balanced precisely on the trestle, the turntable operated freely on its center pivot only, the rim wheels riding clear of the outside circular track. This reduced friction to a minimum, so the early turntables could be turned by one man (Bush 1990: 125). These tables were known as "armstong" tables because they were operated by brute manpower (Figure 15). After 1912 the three-point turntable came into common use, with weight distributed evenly between the center and the two ends of the trestle because locomotives had become larger and much heavier. At the same time, better ball bearings were introduced and steam and then gas and electric power replaced manpower (Bush 1990: 128-129).

In 1909 The Consolidated listed 42 roundhouses, 180 water stations, 74 coaling stations, and 190 turntables among its assets (Weller 1969: 129). Virtually none are left. In 1980 buildings at the Cedar Hill terminal in New Haven were standing but empty. A 30-stall engine house had been destroyed, but a brick-walled, 44-stall roundhouse, 360 feet in diameter was extant. Unfortunately, it has since been destroyed (Roth et al 1981: 186).

The South Manchester Railroad, completed in 1869 to provide rail service to the Cheney Brothers silk manufacturing company on 2.25 miles of track, built a roundhouse in 1879. In the 1930s The Consolidated bought the railroad. The passenger station, engine house and 3-stall roundhouse have been demolished, but the roundhouse foundation could still be seen north of the surviving freight station in 1981 (Roth et al 1981: 89).

The New York, New Haven and Hartford Railroad built a small repair facility in Guilford in 1875. The engine house is now gone, but bulldozing circa 1980 uncovered the turntable remains: granite blocks cut to form segments of a 40-foot-wide circle (Roth et al 1981: 187).

The Norwich and Worcester Railroad built manufacturing and repair shops in 1867/1868 in Norwich on North Main Street. The roundhouse, 16 feet high and 148 feet in diameter, was made of brick and slate with a metal roof (Farnham 1973: 144); it is still standing, used by a plumbing company (Plummer, personal communication; Roth et al 1981: 207). The turntable is gone. The New York and New England Railroad leased the Norwich and Worcester and in 1890 moved its repair and manufacture service operations to East Hartford. There is a roundhouse standing in East Hartford, now being used by a trucking firm; it could be the New York and New England's.

Narrative Statement of Significance (continued)

In New London on Fourth Street is a one-quarter-round roundhouse; the site inventory form suggests a date of 1874 and associates it with the Central Vermont Railroad but the cement construction suggests a circa 1910 rebuild (Clouette, personal communication 1993). Its turntable was destroyed two years ago, but the roundhouse, altered to accommodate larger engines, still stands, no longer used as a railroad facility (McGuirk 1992: 10) (John Wraight, personal communication 1993) (Figure 20). In Willimantic, south of the Willimantic River, there are the remains of a turntable foundation, possibly dating to the 1870s (Clouette, personal communication 1993; Poirier, personal communication 1993).

There may be other remains of roundhouses and turntables in Connecticut, but they are few and fast disappearing. The Saybrook Point site is the only railroad facility professionally studied and curated for the preserving and disseminating of information.

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Verbal Boundary Description

The roundhouse and turntable site is located in Fort Saybrook Monument Park in Old Saybrook at the tip of Saybrook Point. The site boundaries include only the exposed turntable and roundhouse remains and their immediate environs (Figure 10). The site measures roughly 1500 meters square. Beginning at the extreme northeast corner of the park, just off College Street, the site extends north along the park border for about 49 meters just behind the turntable, then turns west for 32 meters, then south about 46 meters to the back wall of the roundhouse remains, then north, along College Street, to its starting point.

Boundary Justification

The boundaries were chosen strictly on the basis of the excavated archaeological remains of the turntable and roundhouse, particularly those remains left exposed today as part of the park's exhibit. However, in consultation with Professor Harold Juli, who excavated the site, archaeological remains excavated but not left exposed were also included. These include, for example, the whole quarter-round roundhouse configuration even though only a few bays were left fully exposed.

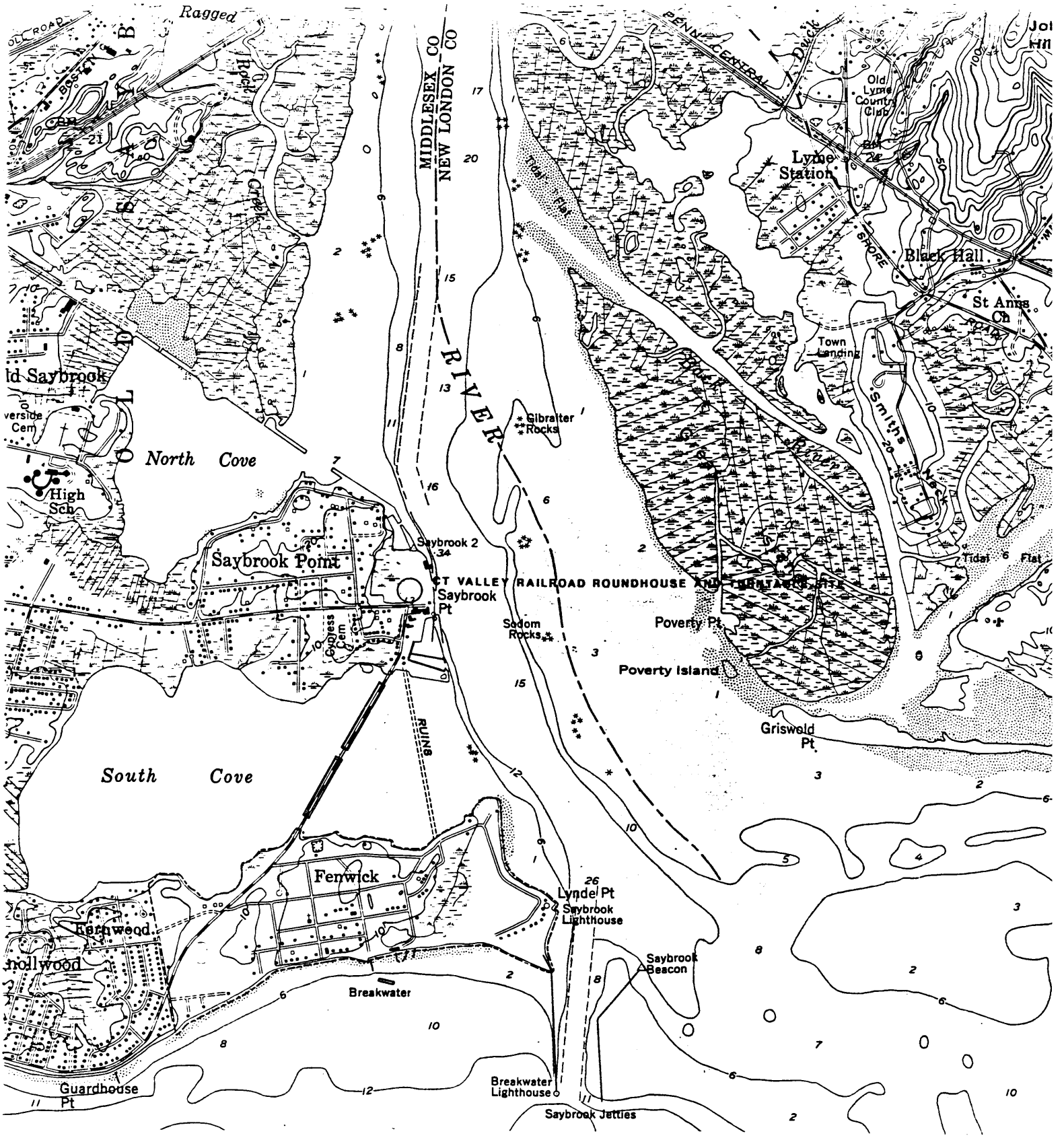


FIGURE 1

USGS TOPOGRAPHIC MAP (OLD LYME QUADRANGLE)

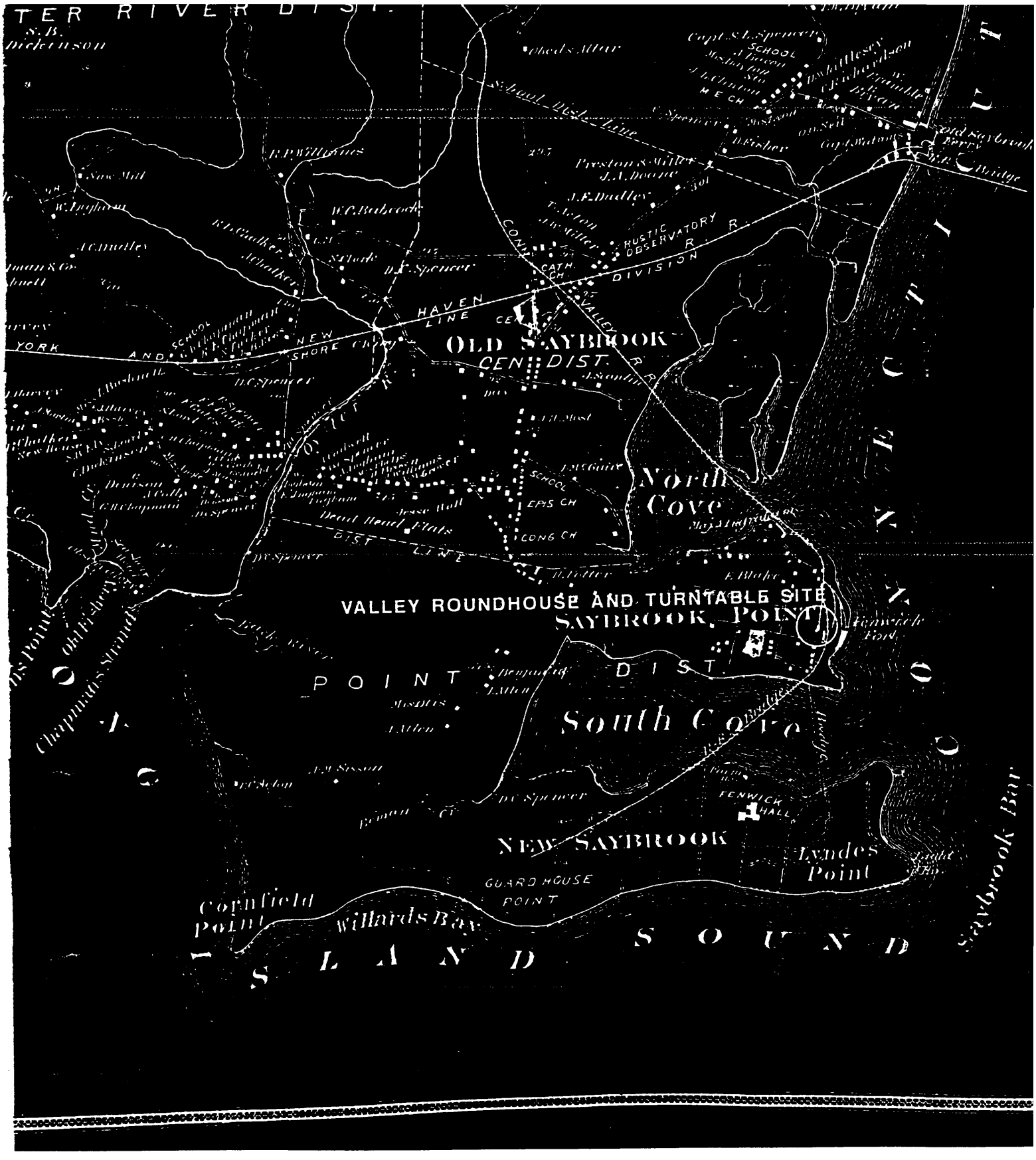


FIGURE 2

19TH CENTURY (POST-1871) BEERS MAP OF OLD SAYBROOK

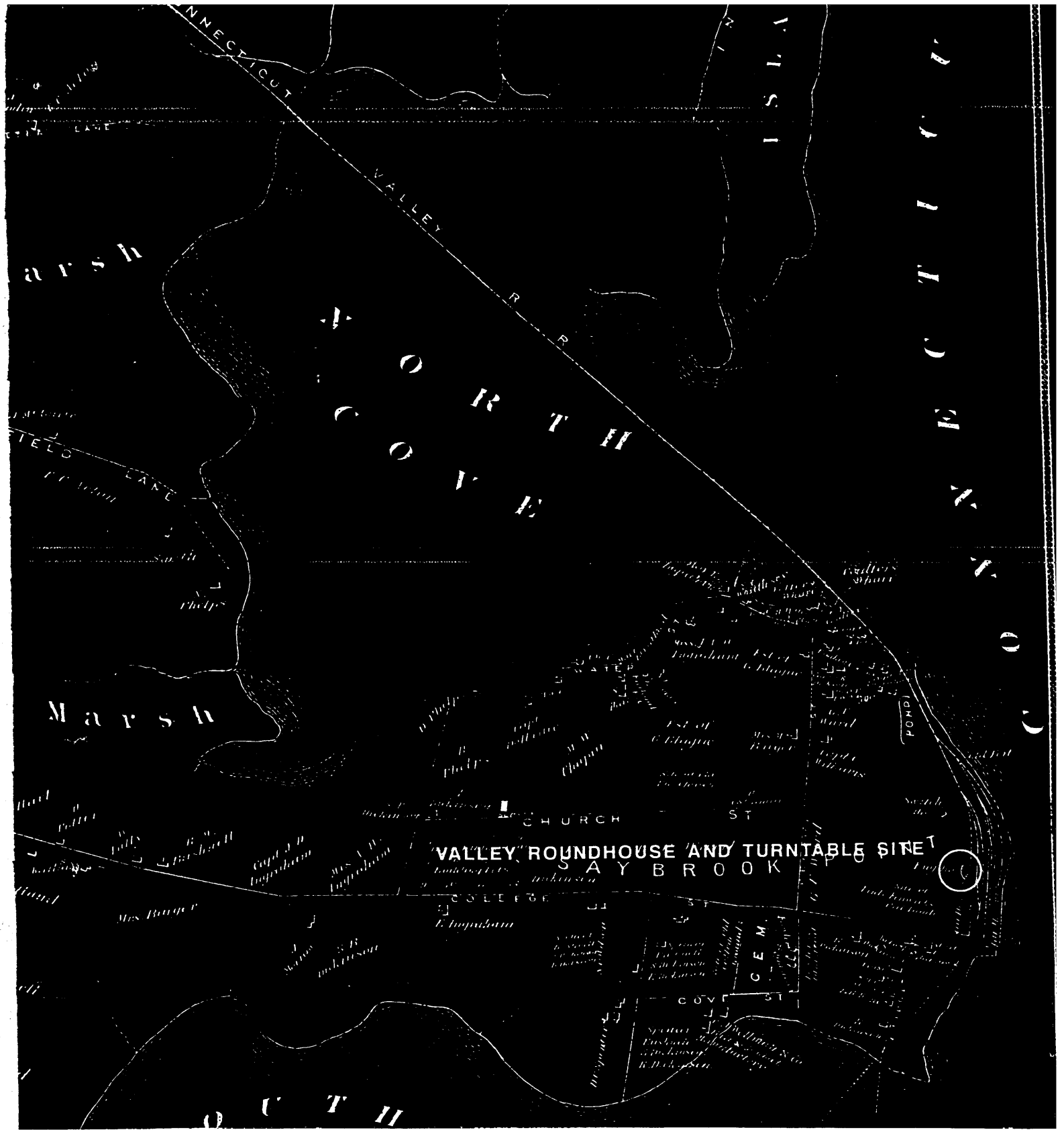


FIGURE 3

19TH CENTURY (POST-1871) BEERS MAP OF SAYBROOK POINT

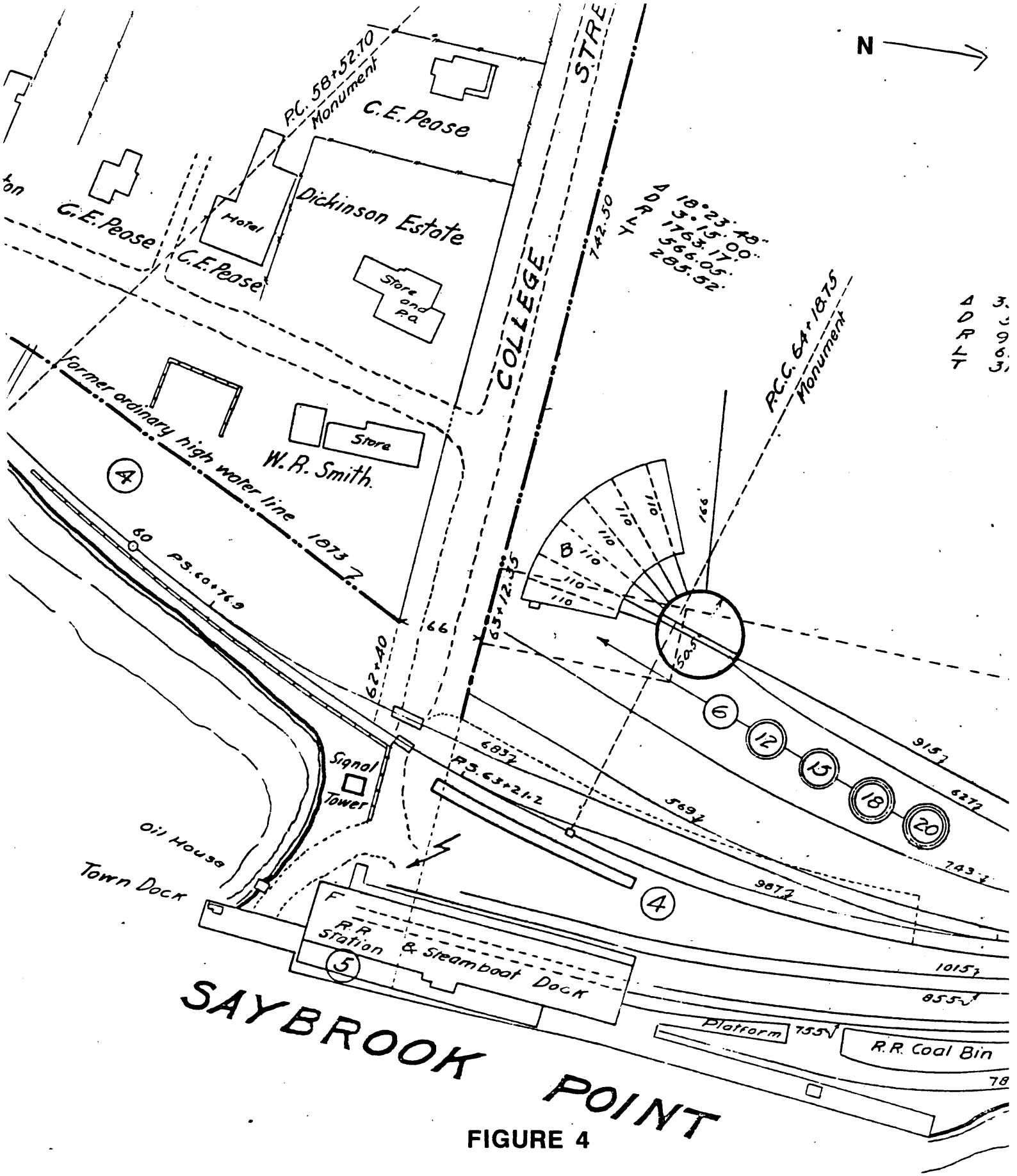


FIGURE 4

1915 NEW YORK, NEW HAVEN AND HARTFORD RAILROAD RIGHT-OF-WAY MAP SHOWING SAYBROOK POINT FACILITIES

1" = 100'

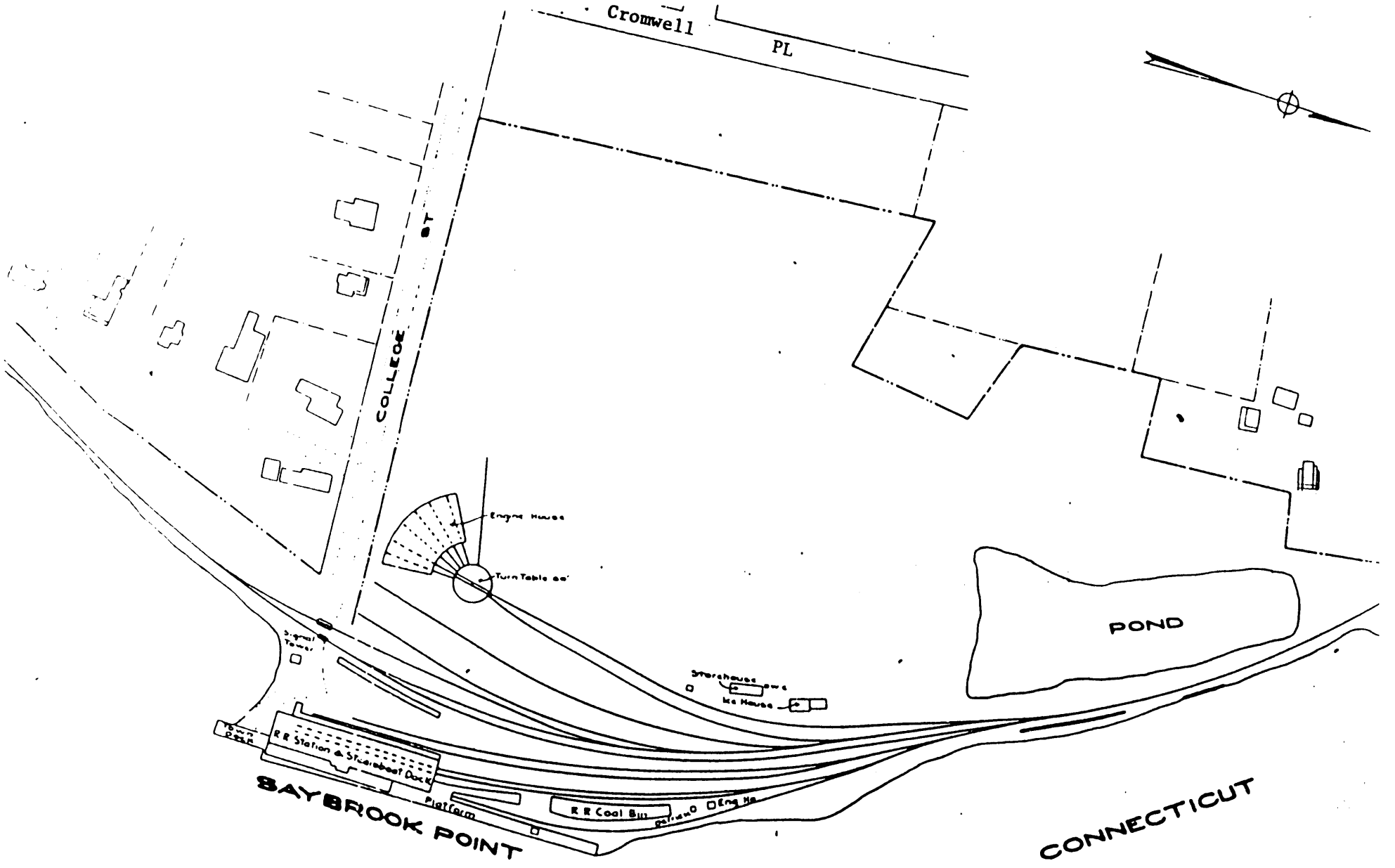


FIGURE 5

1918 MAP OF THE RAILROAD COMPLEX AT SAYBROOK POINT, SHOWING THE ROUNDHOUSE AND OTHER FACILITIES (FROM JULI, IN PRESS)

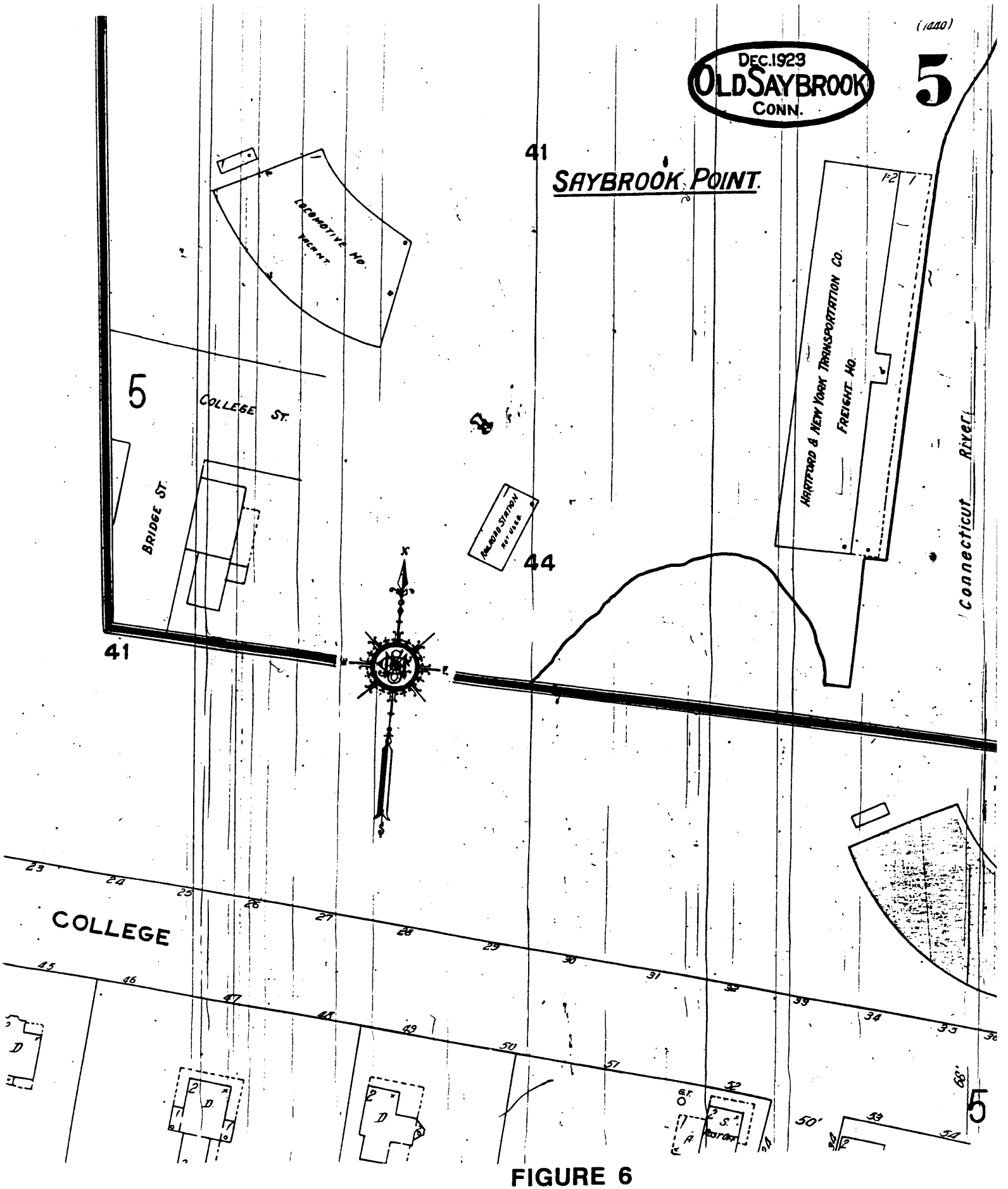


FIGURE 6

1923 SANBORN INSURANCE MAP SHOWING SAYBROOK POINT ROUNDHOUSE, VACANT

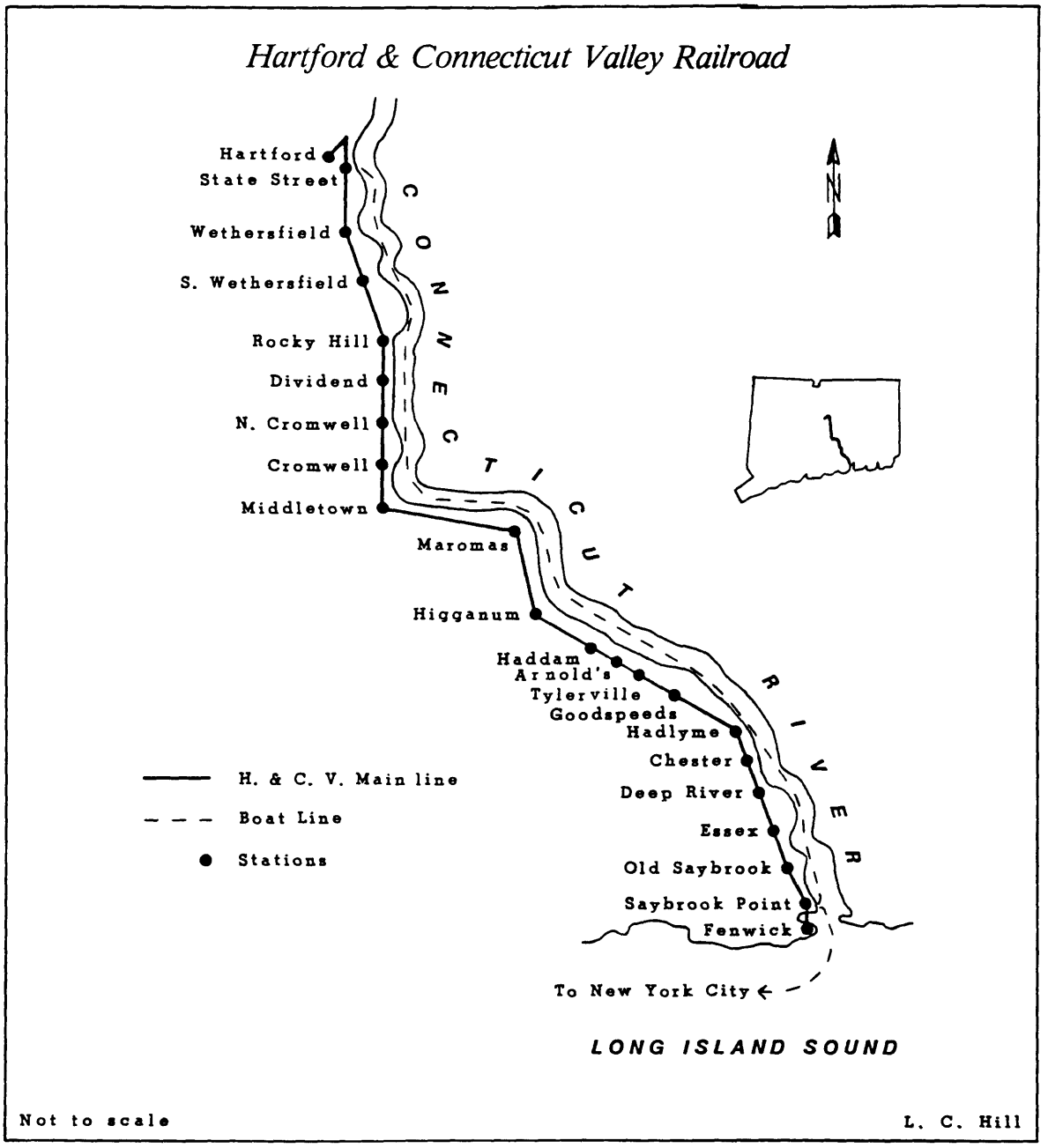


FIGURE 7

FROM TURNER AND JACOBUS 1986

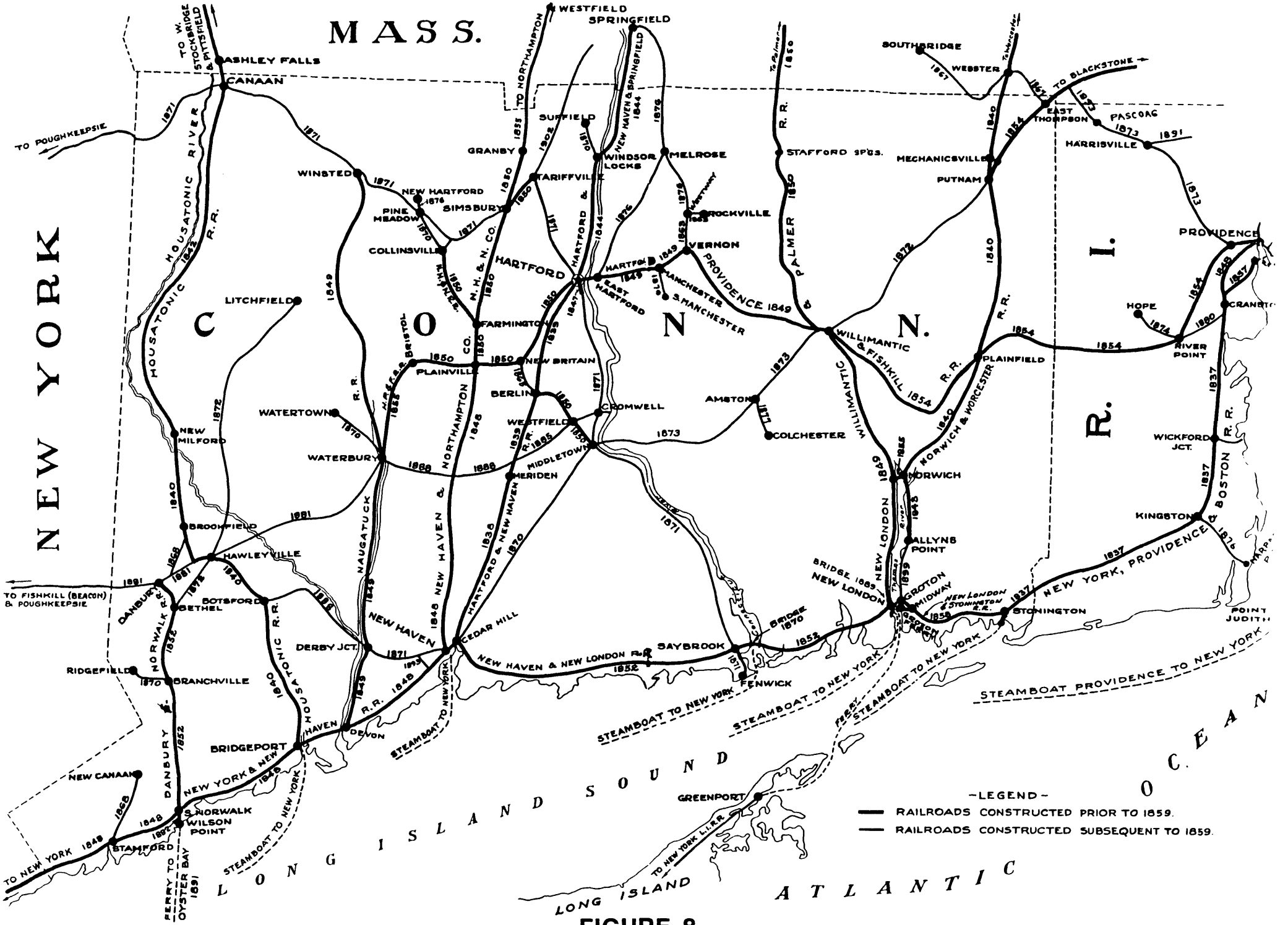


FIGURE 8

FROM WITHINGTON 1935, SHOWING PRINCIPAL RAILWAY LINES AND THEIR OPENING DATES

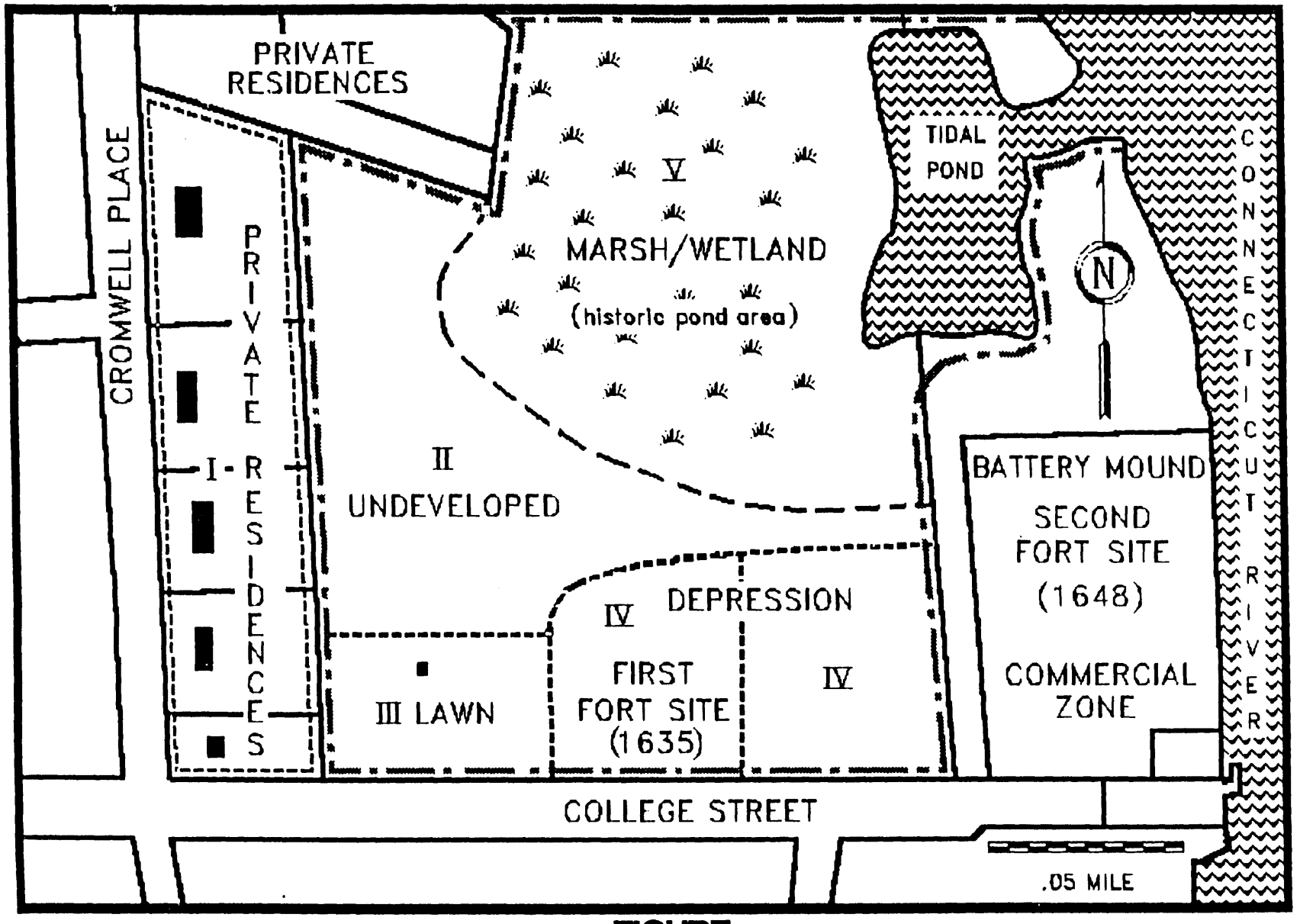


FIGURE 9

MAP OF SITE ZONES PRIOR TO EXCAVATION
(FROM JULI, IN PRESS)

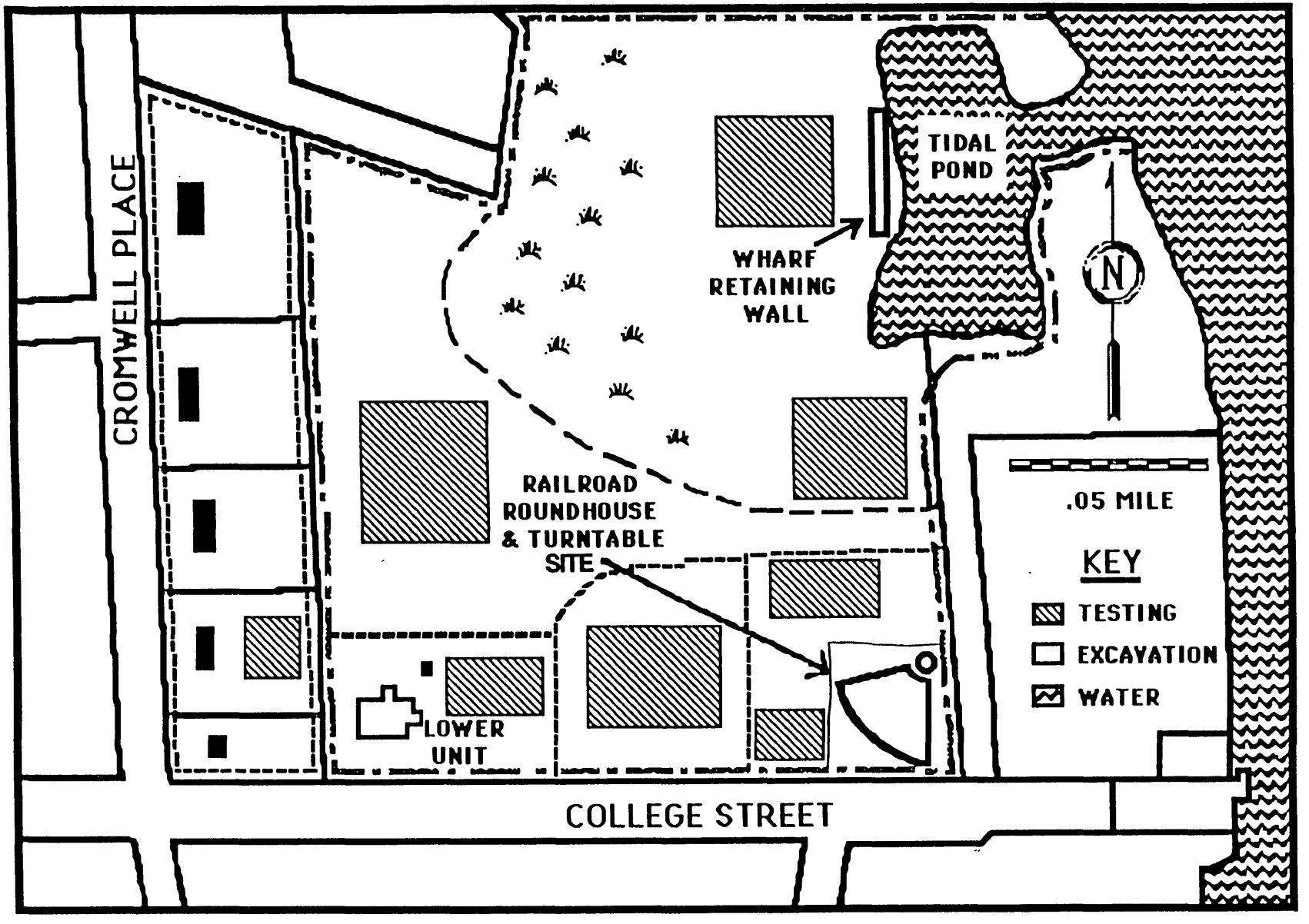


FIGURE 10

MAP SHOWING LOCATIONS OF ARCHAEOLOGICAL EXCAVATION UNITS AT SITE
(FROM JULI, IN PRESS)

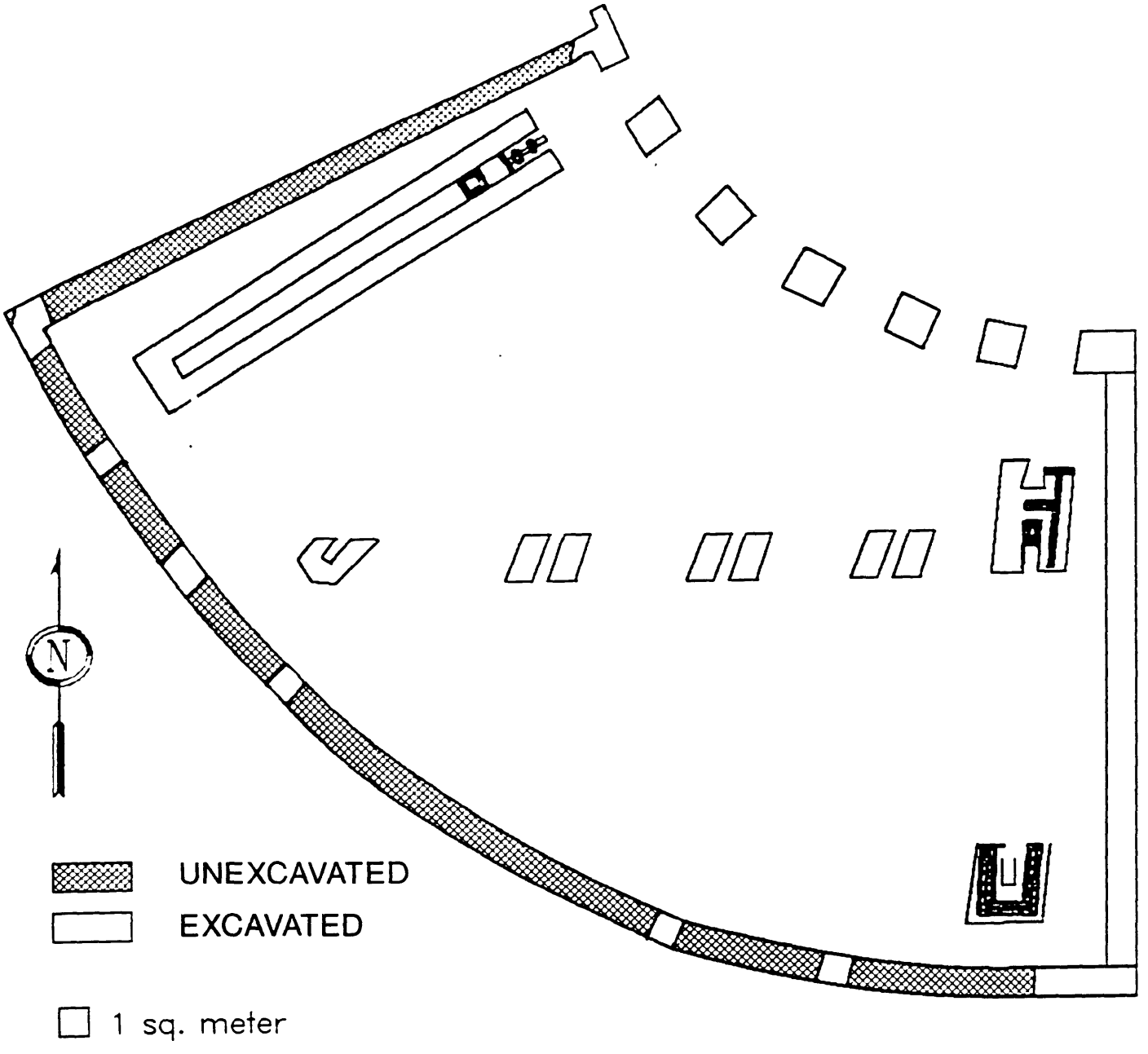


FIGURE 11

ROUNDHOUSE EXCAVATION UNITS SHOWING THE STRUCTURE'S OUTLINE AND BAYS 1 AND 6

FROM JULL IN PRESS

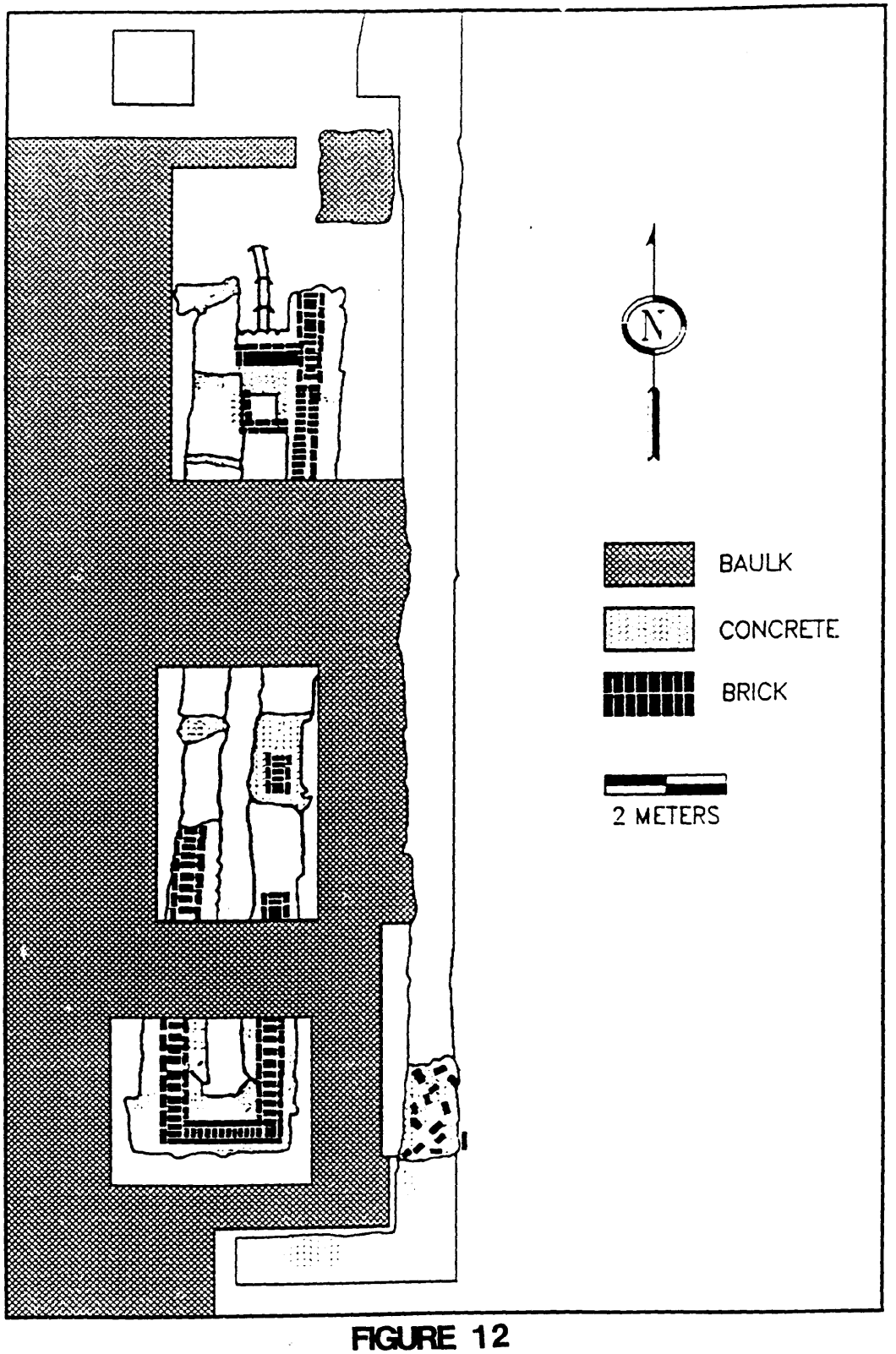


FIGURE 12

ROUNDHOUSE EXCAVATION UNITS IN BAY 1, SHOWING FOOTINGS, BRICKWORK, AND PIPE
FROM JULI, IN PRESS

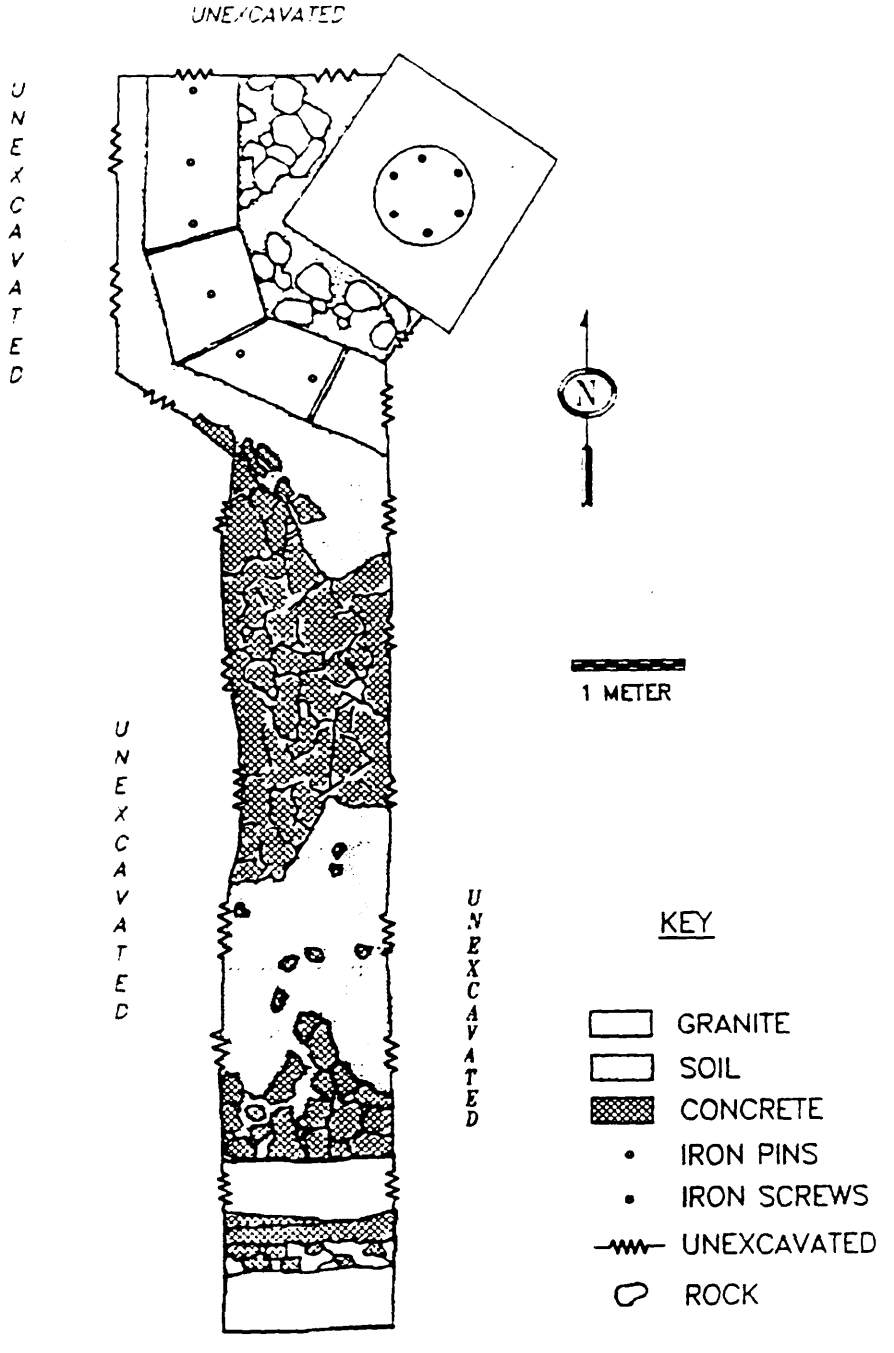


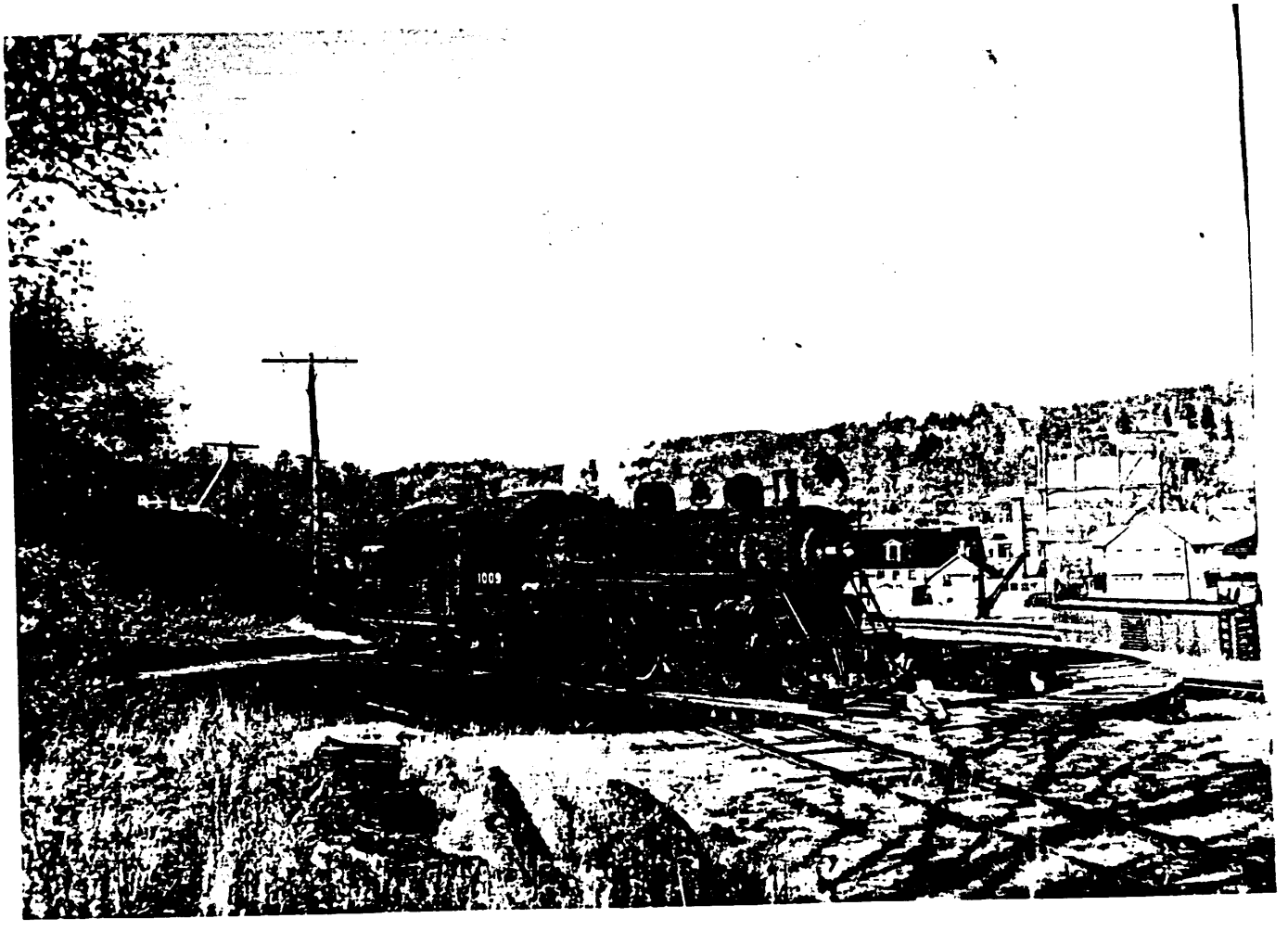
FIGURE 13

TURNTABLE EXCAVATION UNITS, SHOWING GRANITE TURNTABLE BASE

FROM JULI IN PRESS

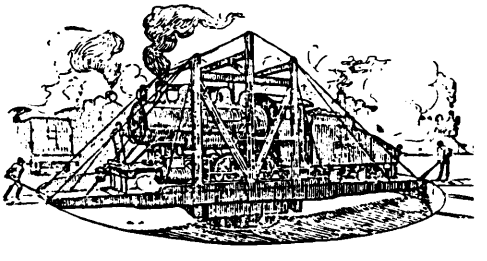
FIGURE 14

CONNECTICUT VALLEY RAILROAD SAYBROOK POINT FACILITIES, FROM LEFT: ROUNDHOUSE, CAR STORAGE, AND STEAMBOAT DOCK, ALL DESTROYED. FROM TURNER AND JACOBUS 1986.



Locomotive 1009, on the hand turntable at Winsted

FIGURE 15A FROM STANFORD 1976



This turntable was operated by muscle power.

FIGURE 15B FROM TURNER AND JACOBUS 1986

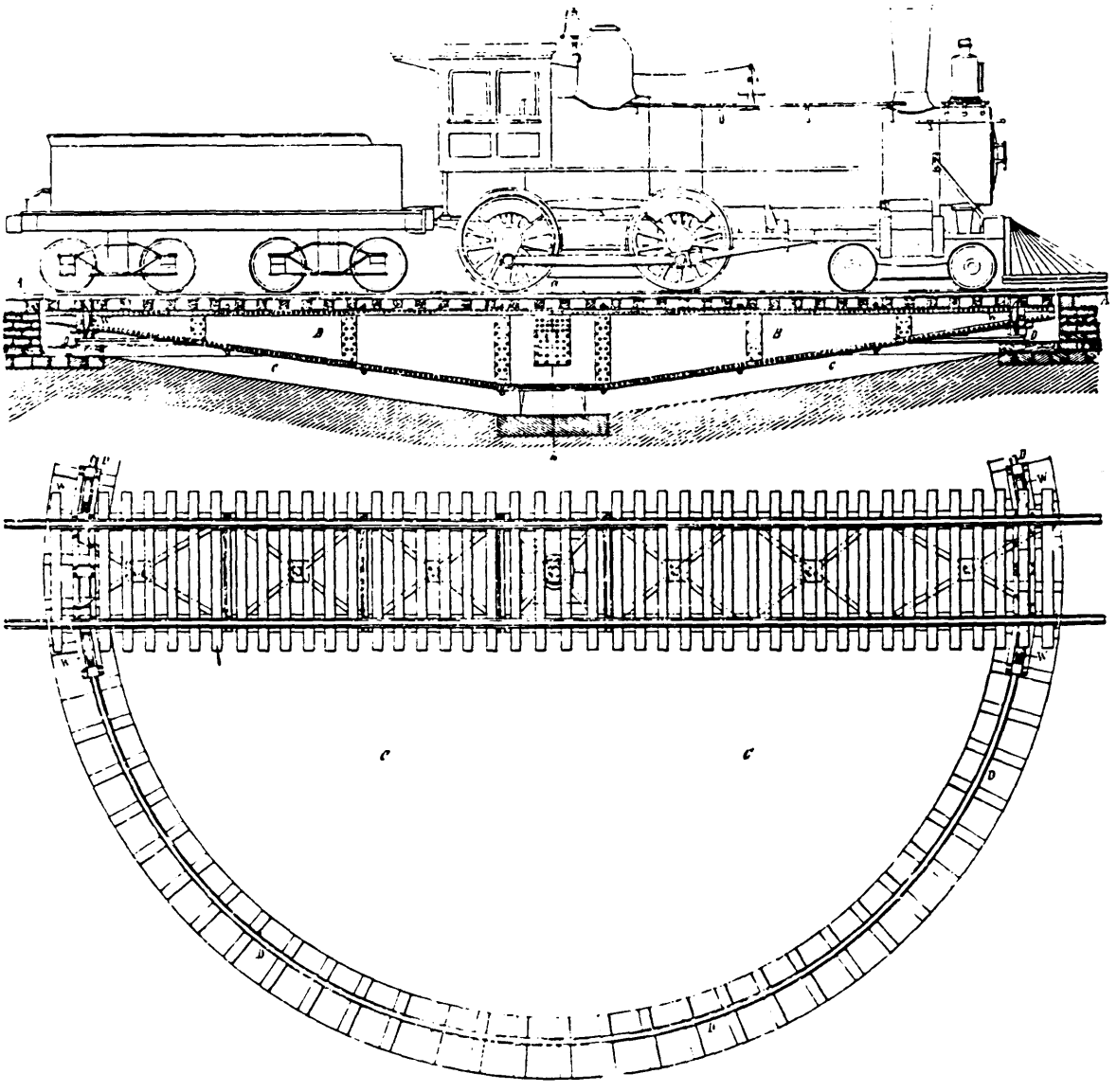


Fig. 1. Line drawing of the typical balanced turntable, 1889.

– *Railroad & Engineering Journal*, June 1889

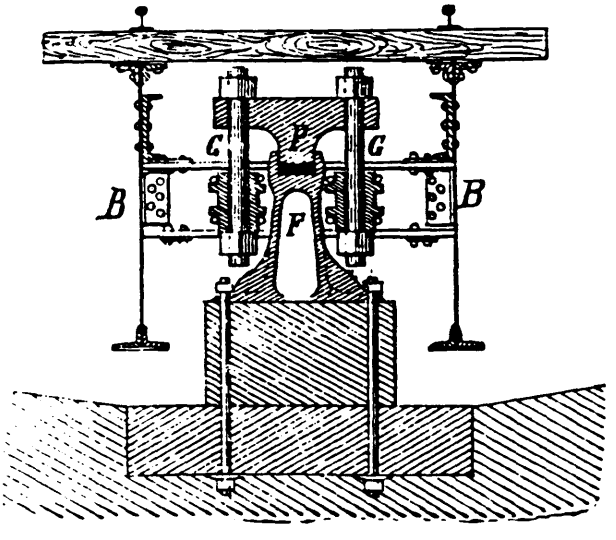


Fig. 2. Cross-sectional drawings of the centre pier and bearings, 1889.

– NAC, Barnett Collection

FIGURE 16
FROM BUSH 1990

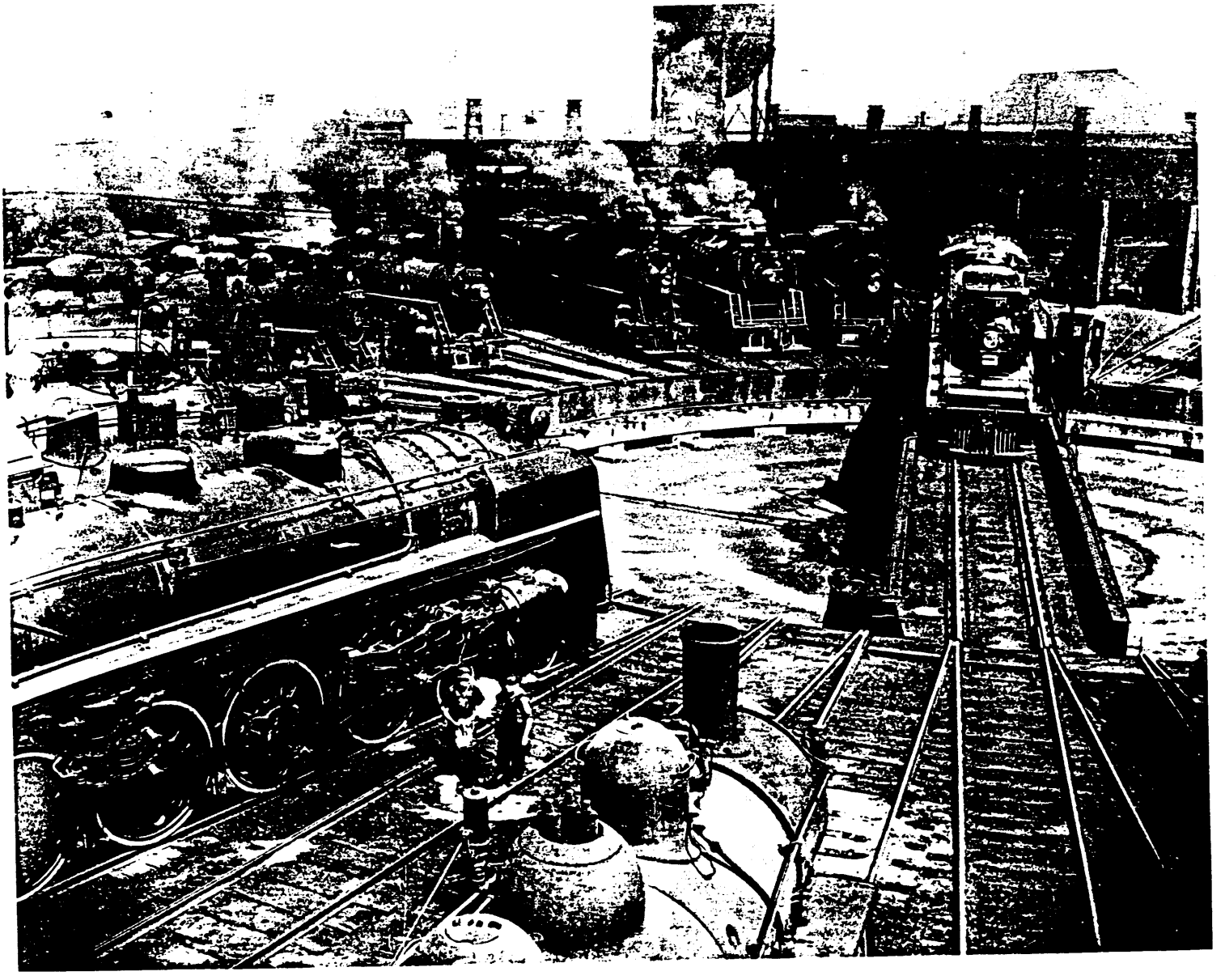
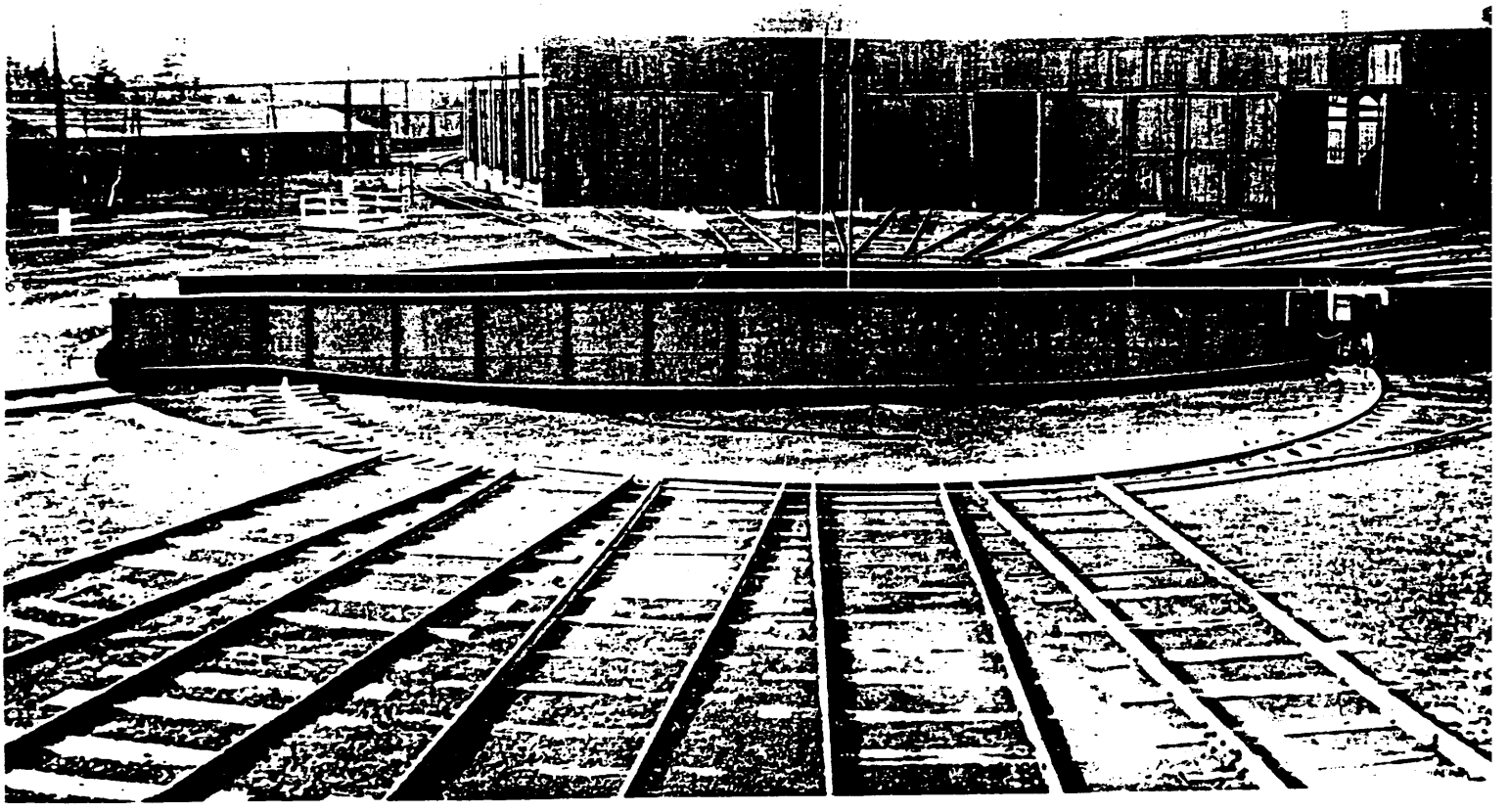


FIGURE 17

ROUNDHOUSE AND TURNTABLE AT TURCOT, MONTREAL, QUEBEC.

FROM HOLLINGSWORTH 1983



Note the extensions of the CNR turntable at Joliette, photographed in 1933. The original guide rail remains in place, although the pit wall has been expanded. – CNR Archives

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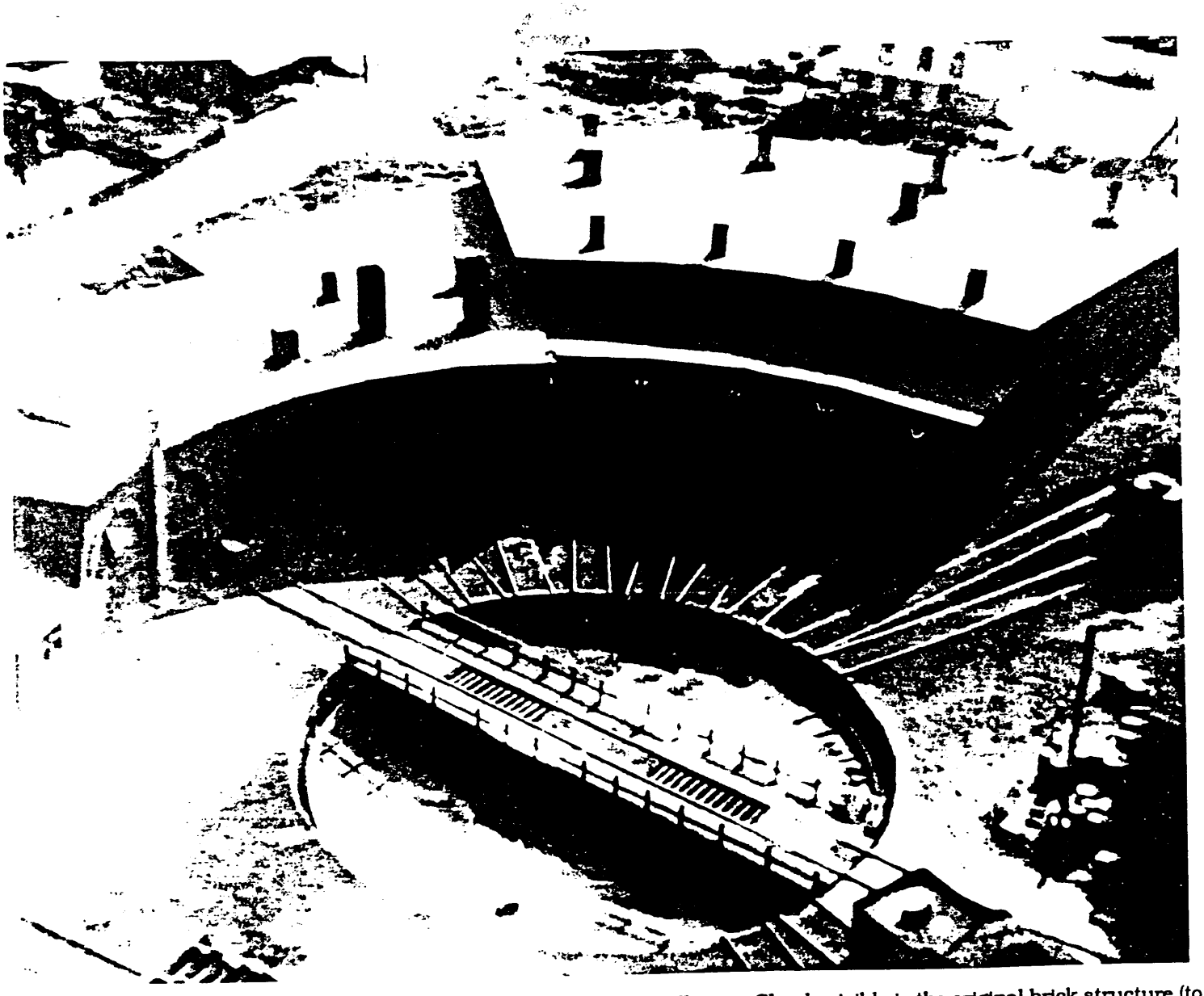
FIGURE 18

FROM BUSH 1990



This rare aerial view shows the New London, CT turntable and roundhouse. Clearly visible is the original brick structure (to the left with the arched doors). The newer addition was wood and provided longer stalls (for more modern engines). The building just barely visible to the lower right is the flammable storage building. Photographer unknown, courtesy John Paganoni collection.

FIGURE 19

FROM McGUIRK 1992

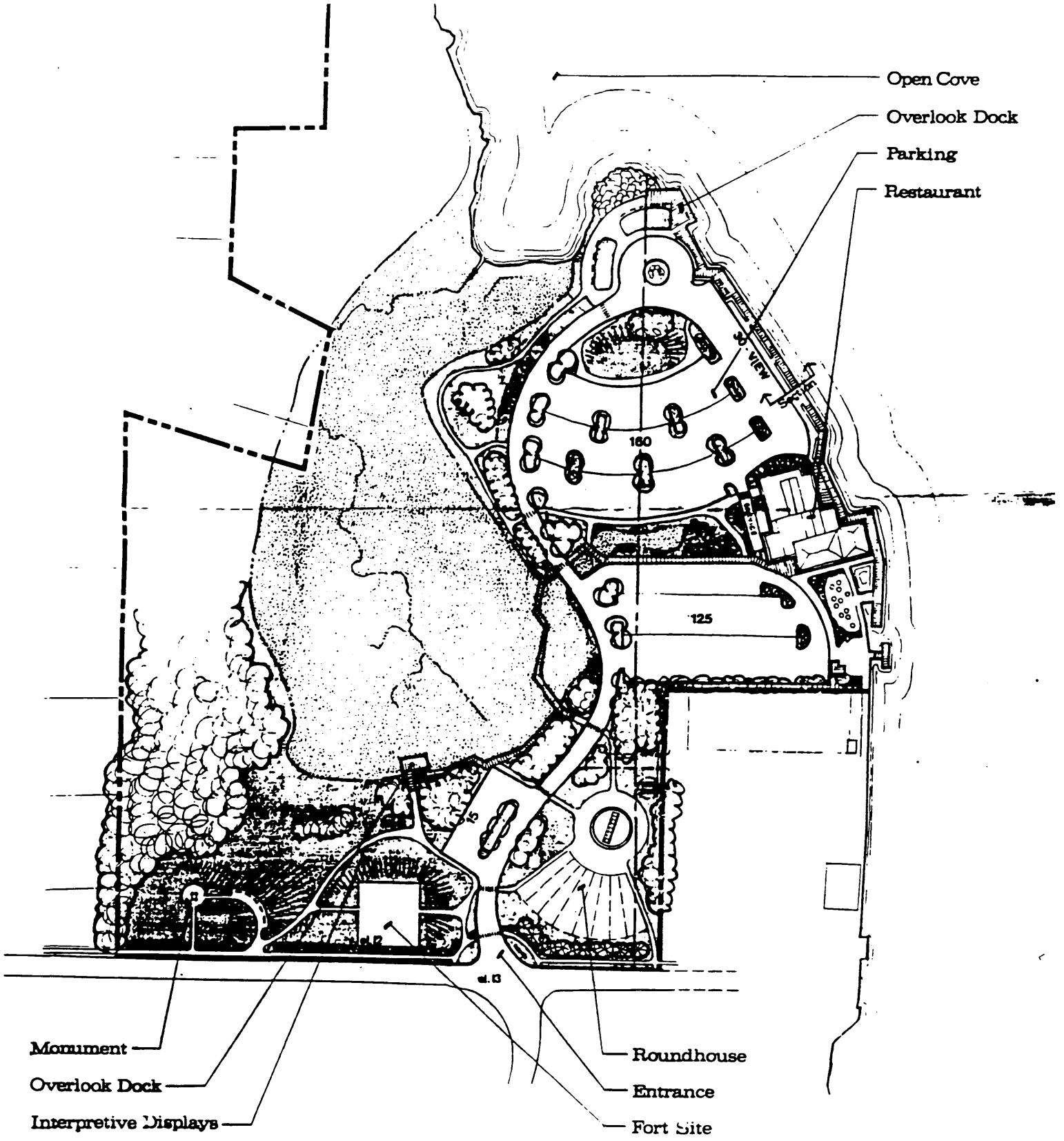


FIGURE 20

FIGURE SHOWING THE VALLEY RAILROAD ARCHAEOLOGICAL EXHIBIT AT FORT SAYBROOK MONUMENT PARK. FROM JULI, IN PRESS.