

**NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY - NOMINATION FORM**

RECEIVED SEP 26 1975  
DATE ENTERED OCT 5 1977

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS  
TYPE ALL ENTRIES - COMPLETE APPLICABLE SECTIONS

**1 NAME**

HISTORIC *Kent Iron Furnace*

AND/OR COMMON

*Sloane-Stanley Museum*

**2 LOCATION**

STREET & NUMBER

*N. of Kent Ave  
U.S.  
Route 7*

NOT FOR PUBLICATION  
CONGRESSIONAL DISTRICT

CITY, TOWN

*Kent*

VICINITY OF

*6th - Toby Moffett*

STATE

*Connecticut*

CODE

*09*

COUNTY

*Litchfield*

CODE

*005*

**3 CLASSIFICATION**

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input checked="" type="checkbox"/> MUSEUM
<input type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL <input type="checkbox"/> PARK
<input checked="" type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL <input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	<input type="checkbox"/> PUBLIC ACQUISITION	<input type="checkbox"/> ACCESSIBLE	<input type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input checked="" type="checkbox"/> YES RESTRICTED	<input type="checkbox"/> GOVERNMENT <input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY <input type="checkbox"/> OTHER

**4 OWNER OF PROPERTY**

NAME *State of Connecticut  
Connecticut Historical Commission*

STREET & NUMBER

*59 South Prospect Street*

CITY, TOWN

*Hartford*

VICINITY OF

STATE

*CT*

**5 LOCATION OF LEGAL DESCRIPTION**

COURTHOUSE  
REGISTRY OF DEEDS, ETC. *Kent Town Hall*

STREET & NUMBER

*South Main Street*

CITY, TOWN

*Kent*

STATE

*CT*

**6 REPRESENTATION IN EXISTING SURVEYS**

TITLE *Connecticut Statewide Inventory of Historic Resources*

DATE

*1975*

FEDERAL  STATE  COUNTY  LOCAL

DEPOSITORY FOR  
SURVEY RECORDS

*Connecticut Historical Commission*

CITY, TOWN

*Hartford*

STATE

*CT*

*Kent Furnace  
power canal,  
at iron  
the west  
part of  
maining*

*See  
earl  
mak  
of  
inc  
3  
a  
som  
con  
tie  
(in  
lnta  
of  
hic  
187  
17  
and  
The  
was  
he  
co  
De  
ho  
3  
wh  
1  
ch  
st  
fir  
new*

## DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DEGRADED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input checked="" type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

### DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Kent Iron Furnace site is on the grounds of the Sloane-Stanley museum of early American tools. The museum has an exhibit illustrating the process of iron-making, a diorama of the site as it appeared in the 19th century, and specimens of iron, slag and artifacts from the furnace. In addition to the furnace, the site includes ruins of a power canal and foundations of a saw and grist mill.

The most important of the remains is the stack itself. Built at the bottom of a hill, the stack's base is 28' square. The sides slope inward as they rise to a height of 32'. On three sides are pointed-arched portals, the main opening somewhat larger than those on the side. The thick walls of the stack are constructed of large rough granite blocks laid as random ashlar. Iron plates and tie rods provided security against expansion. Inside, the diameter of the bosh (immediately above the hearth) is 9'; two layers of fire brick are partially intact. A large amount of brick and other debris has accumulated at the bottom of the stack.

The first furnace on this site was built in 1826 with a cold blast and was 28' high. In 1846 this was replaced by a hot-blast furnace somewhat larger, and in 1870 this was rebuilt to the present dimensions. The blast was generated by a 17' diameter breast wheel which operated a "blowing tub" two pistons of 50" bore and 5' stroke and an equalizer cylinder which maintained a constant pressure. The air was heated by means of tubes coiled within a brick oven 20' high which was built on top of the stack. From there the air was driven downward to the hearth through five Scotch tuyeres (air nozzles), 3" in diameter, cooled by coils of water pipe.

Beside the wheelhouse other buildings on the site included several wood sheds to house the supply of charcoal, which was burned with anthracite in the ration of 3:1. The stack itself, of course, was enclosed by wooden frame structures which protected the stack from rain and facilitated the operation of the furnace. The hill behind served as a ramp for carts carrying ore, lime and charcoal. At this level was the charging floor. Below it was the casting house, where molds for the pigs were formed in beds of sand and where iron and slag were drawn off. These structures were loosely built and were considered semi-permanent, since frequent fires or restructuring of the operation made their alteration or replacement necessary.

## SIGNIFICANCE

PERIOD		AREAS OF SIGNIFICANCE
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHAEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY
<input type="checkbox"/> 1400-1499	<input checked="" type="checkbox"/> ARCHAEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMIC
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING
<input checked="" type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION
<input type="checkbox"/> 1900	<input type="checkbox"/> COMMUNICATIONS	<input checked="" type="checkbox"/> INDUSTRIAL
		<input type="checkbox"/> INVENTION

SPECIFIC DATES 1870 - last rebuilt

### STATEMENT OF SIGNIFICANCE

In the middle of the 19th century one of the most important sources of iron in operation in 1840, and many more. The area supplied four essentials for power to operate the blast. The area by making transportation cheaper as the iron works declined in the 1870s. Pennsylvania steel was the obvious local ore was becoming harder to find. furnaces of the region were dependent on local ore.

The Kent Furnace is significant as a typical of the furnaces of the early stage in the nation's industrial development for the historian or industrial archaeologist. organization of work and resources. The furnace is also interesting for its role in iron-making before the age of the Bessemer process. It is an indispensable part of the region's industrial heritage. the furnace is enhanced by its archaeological exhibit.

Initially, the raw materials for iron were dug from the side of a mountain. These were sites for charcoal-making. The teamsters were needed to assemble the ore the six miles to the furnace. finished iron to the railroad. The Company, a company composed of local iron furnace, ground it in the nearby. Although its output - 14 tons per week - impact on its immediate vicinity. productive, however, when local iron run out and deep shafts were dug. Connecticut and New York. Even with coal as well as charcoal to the operation finally shut down in 1870.

Most Kent iron was used in the heavy industrial equipment. Despite produced by a process which relatively sensitive to the presence of these

CODE  
005

### IT USE

MUSEUM  
 PARK  
 PRIVATE RESIDENCE  
 RELIGIOUS  
 SCIENTIFIC  
 TRANSPORTATION  
 OTHER

977

NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY - NOMINATION FORM

DATE ENTERED: OCT 5 1977

CONTINUATION SHEET

ITEM NUMBER 7 PAGE 1

The Kent Furnace National Register of Historic Places nomination includes the stack, ruins and mill race adjacent to the stack along the Housatonic River and the Sloane-Stanley Museum. The acreage (approximately 17) incorporates the whole site of the Kent Furnace operations. Detailed archaeological investigations have not been made to identify all ruins and building sites.

Description of the boundary: 12.26 acres of the Connecticut Historical Commission Sloane-Stanley Museum property and an additional 7 acres (approximately) described by the extension of both the southwestern and northeastern boundaries of the Connecticut Historical Commission property to the near bank of the Housatonic River.

NATIONAL  
INVENT

CONTINUATION

Kent Furnace  
Kent, CT

17.26 acres

UTM Ref: 18Q

## SIGNIFICANCE

E ONE  
 CHECK ONE  
 ORIGINAL SITE  
 MOVED DATE

PERIOD	AREAS OF SIGNIFICANCE - CHECK AND JUSTIFY BELOW					
PREHISTORIC	ARCHAEOLOGY PREHISTORIC	COMMUNITY PLANNING	LANDSCAPE ARCHITECTURE	RELIGION		
1400-1499	ARCHAEOLOGY HISTORIC	CONSERVATION	LAW	SCIENCE		
1500-1599	AGRICULTURE	ECONOMICS	LITERATURE	SCULPTURE		
1600-1699	ARCHITECTURE	EDUCATION	MILITARY	SOCIAL/HUMANITARIAN		
1700-1799	ART	ENGINEERING	MUSIC	THEATER		
1800-1899	COMMERCE	EXPLORATION/SETTLEMENT	PHILOSOPHY	TRANSPORTATION		
1900	COMMUNICATIONS	INDUSTRY	POLITICS/GOVERNMENT	OTHER (SPECIFY)		
		INVENTION				

### PHYSICAL APPEARANCE

of the Sloane-Stanley museum of  
 illustrating the process of iron-  
 the 19th century, and specimens  
 In addition to the furnace, the site  
 s of a saw and grist mill.

ck itself. Built at the bottom of  
 ides slope inward as they rise to  
 rched portals, the main opening  
 hick walls of the stack are

as random ashlar. Iron plates and  
 Inside, the diameter of the bosh  
 ers of fire brick are partially  
 ris has accumulated at the bottom

1826 with a cold blast and was 28'  
 st furnace somewhat larger, and in  
 is. The blast was generated by a  
 lowing tub: two pistons of 50" bore  
 maintained a constant pressure.  
 ithin a brick oven 20' high which  
 e air was driven downward to the  
 es), 3" in diameter, cooled by

site included several wood sheds to  
 d with anthracite in the ration of  
 sed by wooden frame structures  
 itated the operation of the furnace.  
 rrying ore, lime and charcoal. At this  
 the casting house, where molds for  
 e iron and slag were drawn off. These  
 ured semi-permanent, since frequent  
 their alteration or replacement

SPECIFIC DATES 1870 - last rebuilt BUILDER/ARCHITECT

### STATEMENT OF SIGNIFICANCE

In the middle of the 19th century, the Housatonic region of Connecticut was one of the most important sources of iron in the country. Twenty-seven furnaces were in operation in 1840, and many more in adjacent areas of New York and Massachusetts. The area supplied four essentials - iron ore, lime, hardwood for charcoal and power to operate the blast. The development of railroads stimulated the industry by making transportation cheaper and by creating a demand for iron. Yet most of the iron works declined in the 1820's and 1890's, and although competition from Pennsylvania steel was the obvious reason, there were intrinsic problems also: local ore was becoming harder to mine, charcoal was getting scarce, and the blast furnaces of the region were dependent upon a non-mechanized, small-scale technology.

The Kent Furnace is significant because it is one of few remaining stacks. Typical of the furnaces of the region, it is an impressive artifact of a particular stage in the nation's industrial development. The physical remains are important for the historian or industrial archaeologist intent on reconstructing the organization of work and resources which characterized the industry. Yet the furnace is also interesting for anyone who wishes to gain a feeling for the process of iron-making before the age of steel mills. Finally, the furnace site is significant because iron-making had such a great impact on the lives of the people in the region. It is an indispensable part of the local heritage. The value of the furnace is enhanced by its accessibility and by the museum's educational exhibit.

Initially, the raw materials for the furnace were all produced in Kent. Ore was dug from the side of a mountain in South Kent, and all the mountains in the area were sites for charcoal-making. Lime was also quarried in Kent. Numerous teamsters were needed to assemble the resources in one place: 10 to 12 teams hauled ore the six miles to the furnace, and others brought charcoal and lime and hauled finished iron to the railroad. In order to feed the horse and oxen, the Kent Iron Company, a company composed of local men, grew its own grain on land around the furnace, ground it in the nearby mill, and fed it to the animals in its own barns. Although its output - 14 tons per day - seems small, the furnace had considerable impact on its immediate vicinity. Such local vertical integration proved less productive, however, when local resources began to falter: by 1880 surface ore had run out and deep shafts were dug. The company brought in ore from other mines in Connecticut and New York. Even earlier, however, the furnace was being charged with coal as well as charcoal to conserve the dwindling supply of hardwood. The operation finally shut down in 1892.

Most Kent iron was used in the manufacture of railroad locomotives and other heavy industrial equipment. Despite its destination, however, the iron was produced by a process which relied on a very traditional technology. Iron is sensitive to the presence of other elements - manganese, carbon and sulphur.

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
DEC 16 1975
RECEIVED
DATE ENTERED OCT 5 1977

CONTINUATION SHEET	ITEM NUMBER	PAGE
--------------------	-------------	------

Kent Iron Furnace	8	one
-------------------	---	-----

particularly - and different results are produced by different proportions: Kent iron was made to order in six degrees of hardness. The quality of the product depended directly upon the skill and judgment of the ironworkers: among other things which affected the outcome were the number of cartloads of each material and the rate at which they were dumped into the furnace, the speed of the waterwheel, the size of the charcoal and ore chunks and even the way in which the carts discharged their load, since proper mixing of the components was as important as their proportion. Unlike the newer methods of steel, iron-making was not capable of unlimited increase in the scale of operations, nor could the processes be made independent of the skill of the workers. For these reasons, as well as their reliance on basically local resources, iron furnaces such as Kent were out of step with the development of industrial capitalism.

OCT 5 1977

NATIONAL PARK SERVICE

# NATIONAL REGISTER OF HISTORIC PLACES INVENTORY-NOMINATION FORM

RECEIVED

JAN 5 1977

DATE ENTERED

OCT 5 1977

CONTINUATION SHEET

ITEM NUMBER

PAGE

Kent Iron Furnace  
Kent, Connecticut

10

1

17.26 Acres

UTM References: A 18/6273<sup>380</sup>~~22~~/<sup>740</sup>4621~~222~~

B 18/62724<sup>480</sup>0/<sup>480</sup>4621<sup>475</sup>

C 18/627<sup>080</sup>~~27~~/<sup>630</sup>4621<sup>422</sup>

D 18/6272<sup>250</sup>~~42~~/<sup>860</sup>4621<sup>457</sup>

places  
 ice adjacent  
 Sloane-  
 incorporates  
 Detailed  
 to identify

Connecticut  
 party and an  
 the  
 tern boundaries  
 ty to the

Hill, W. W. & Charles, 1945, pp. 17, 23, 30; cont. in IX, No. 1.

Kathy, Herbert C. and Charles, Miss Hart. The Early Iron Industry of Connecticut.  
New Haven: Pack and Hoel, 1935.

Rolando, Victor. "Steel Furnaces of Connecticut," unpub. MS. Connecticut Historical  
Commission, Hartford, CT.

**10 GEOGRAPHICAL DATA**

ACCREAGE OF NOMINATED PROPERTY 17.26 *see memo dated 1.5.77*  
UTM REFERENCES

A	1	9	1	6	1	2	7	1	2	8	0	1	3	6	1	2	1	1	6	8	0		
ZONE EASTING												NORTHING						E		ZONE EASTING		NORTHING	
C												D											

VERBAL BOUNDARY DESCRIPTION

**11 LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES**

STATE	COUNTY	COUNTY	COUNTY
STATE	COUNTY	COUNTY	COUNTY

**12 FORM PREPARED BY**

NAME & TITLE: Bruce Clouette, Consultant

ORGANIZATION: Connecticut Historical Commission DATE: October 31, 1975

STREET & NUMBER: 59 South Prospect Street TELEPHONE: (203) 566-1005

CITY OR TOWN: Hartford STATE: CT

**13 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION**

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL  STATE  LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE: *Johnson* DATE: 12/12/75

TITLE: STATE HISTORIC PRESERVATION OFFICER

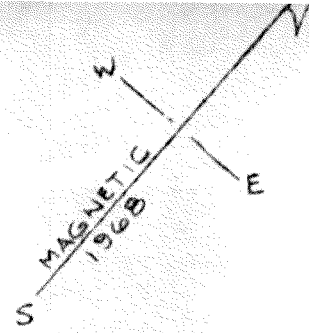
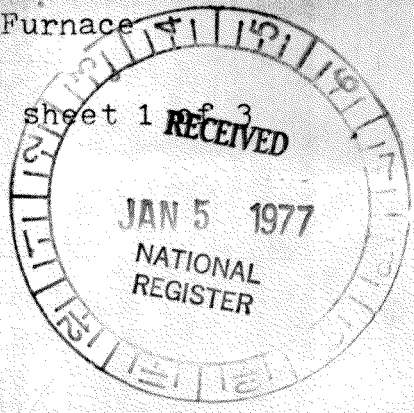
FOR NPS USE ONLY: I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE: 106-106

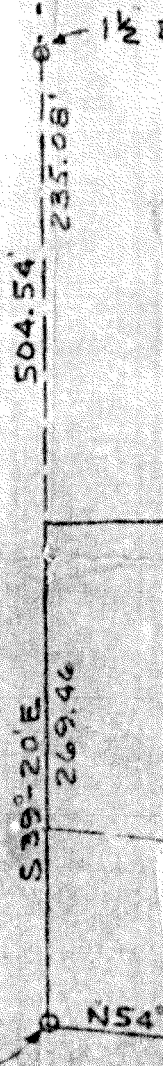
DATE: 12-21-75

Kent Iron Furnace  
Kent, CT

Site plan, sheet 1 of 3

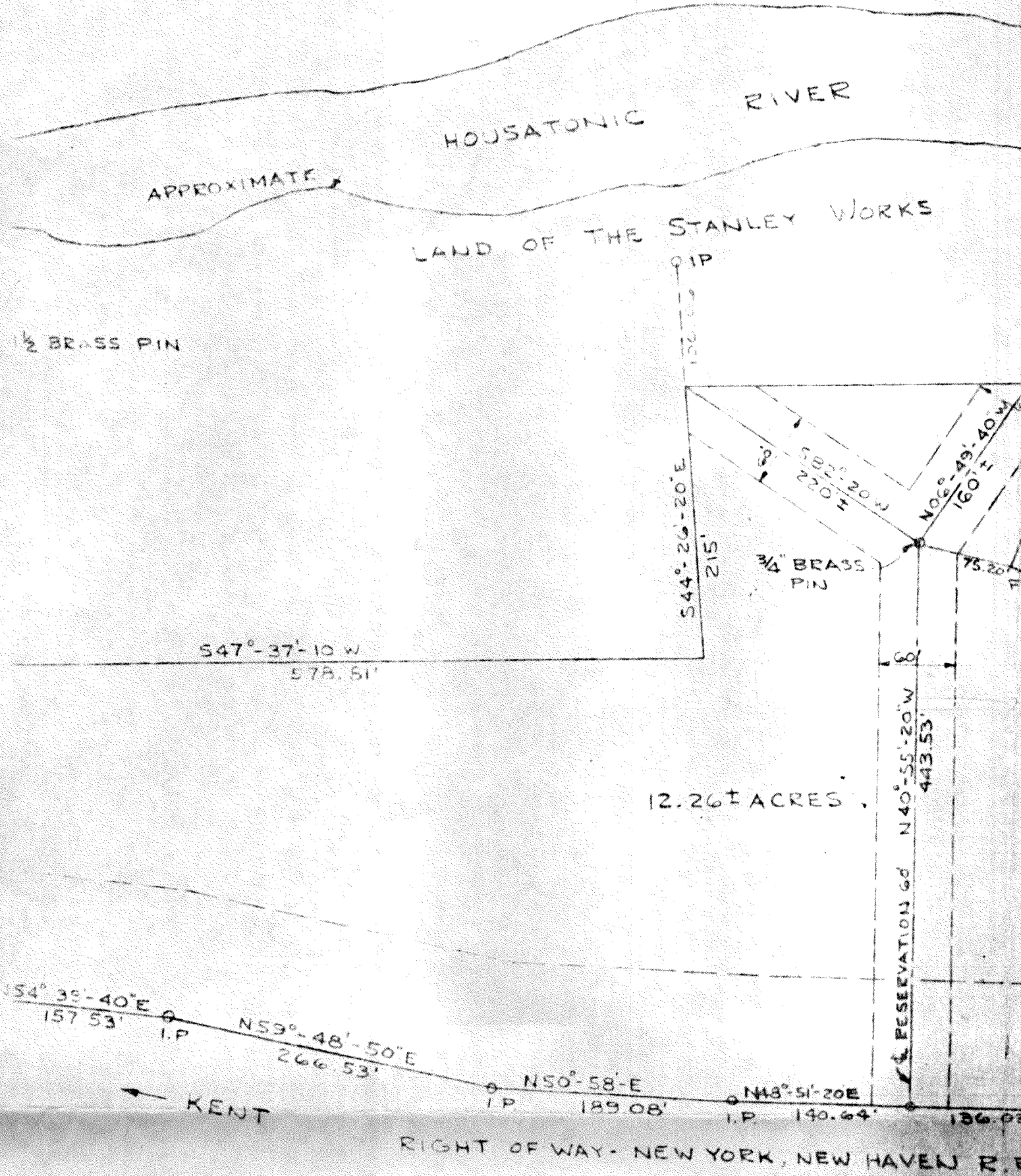


LAND N/F  
JOHN E. CASEY



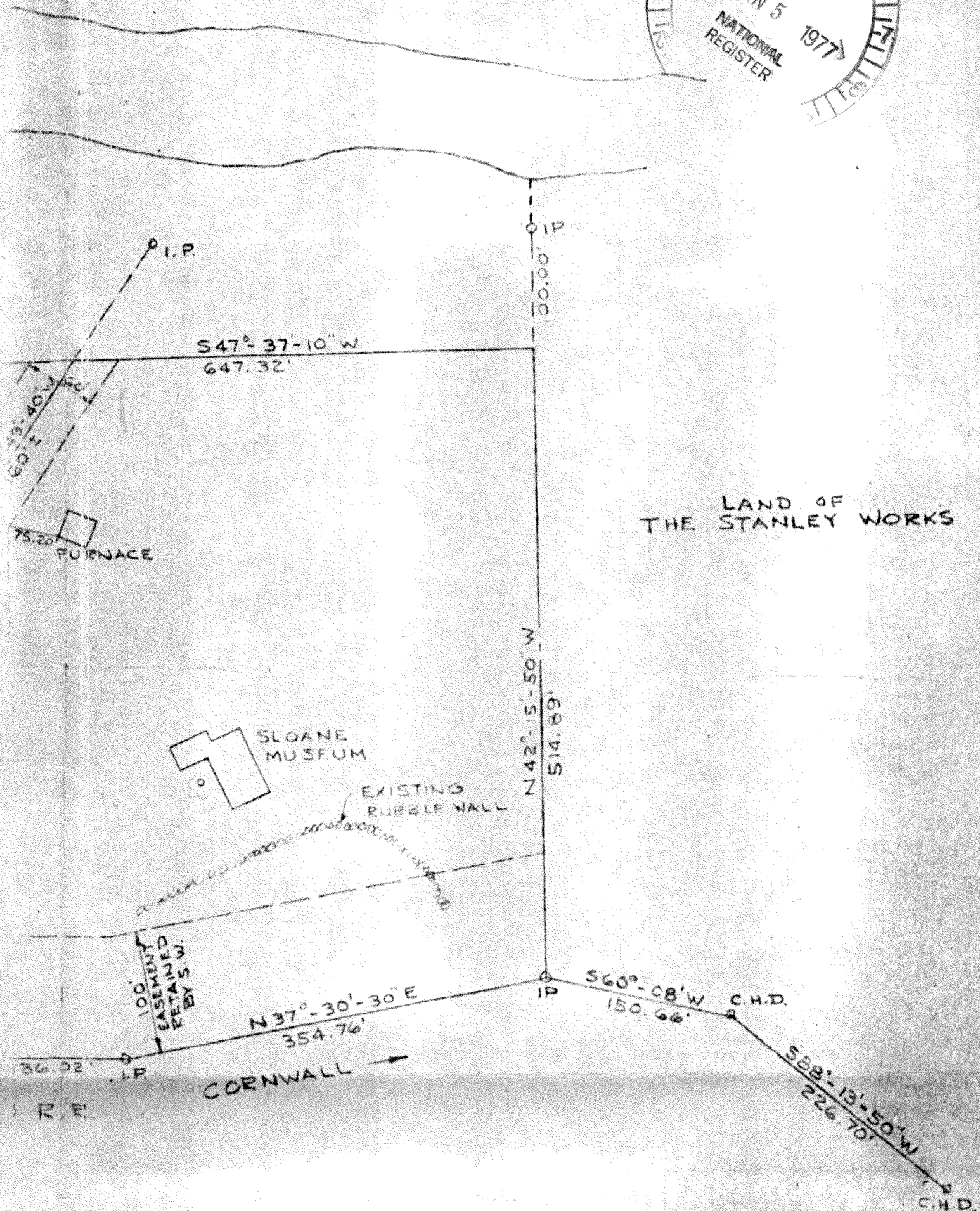
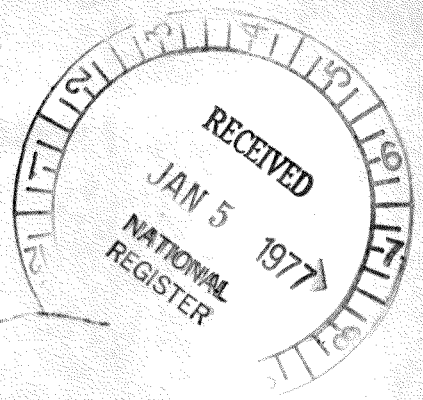
1/2 BRASS PIN  
AT BASE OF  
3' OAK TREE





Kent Iron Furnace  
Kent, CT

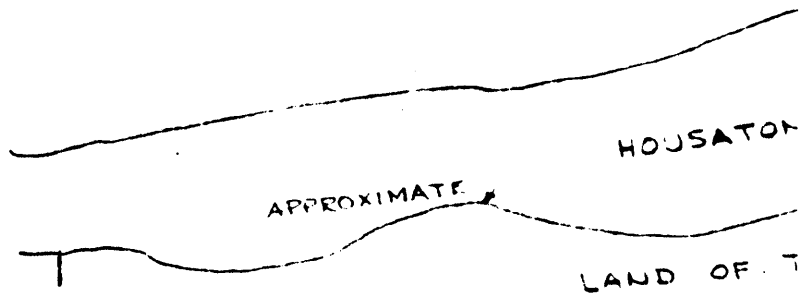
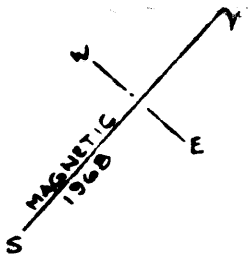
Site plan, sheet 3 of 3



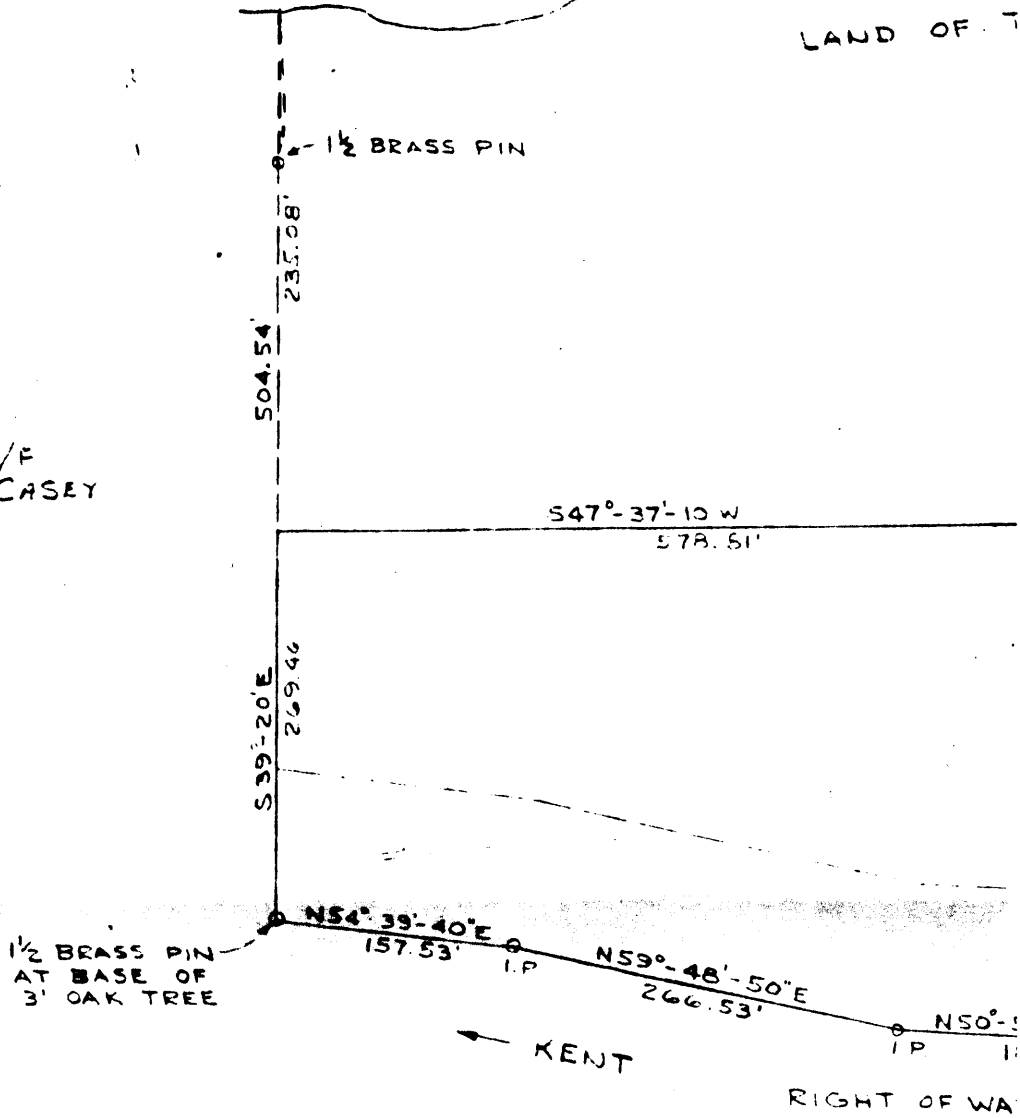
THE STANLEY WORKS  
PLAN  
OF LAND  
CONVEYED TO  
THE STATE OF CONNECTICUT  
KENT CONN.

KENT IRON FURNACE  
KENT, CT LITCHFIELD COUNTY

①



LAND 1/2  
JOHN E. CASEY



HOUSATONIC RIVER

LAND OF THE STANLEY WORKS

APPROXIMATE EXTENT OF RUINS OF POWER CANAL, SAW AND GRIST MILLS

O.I.P.

O.I.P.

S47°-37'-  
647.32'

S44°-26'-20"E  
215'

3/4" BRASS PIN

FURNACE

S°-37'-10" W  
578.61'

12.26± ACRES



N40°-55'-20" W  
443.53'

RESERVATION 60'

100' EASEMENT RETAINED BY S

N59°-48'-50"E  
266.53'

N50°-58'-E  
189.08'

N43°-51'-20"E  
140.64'

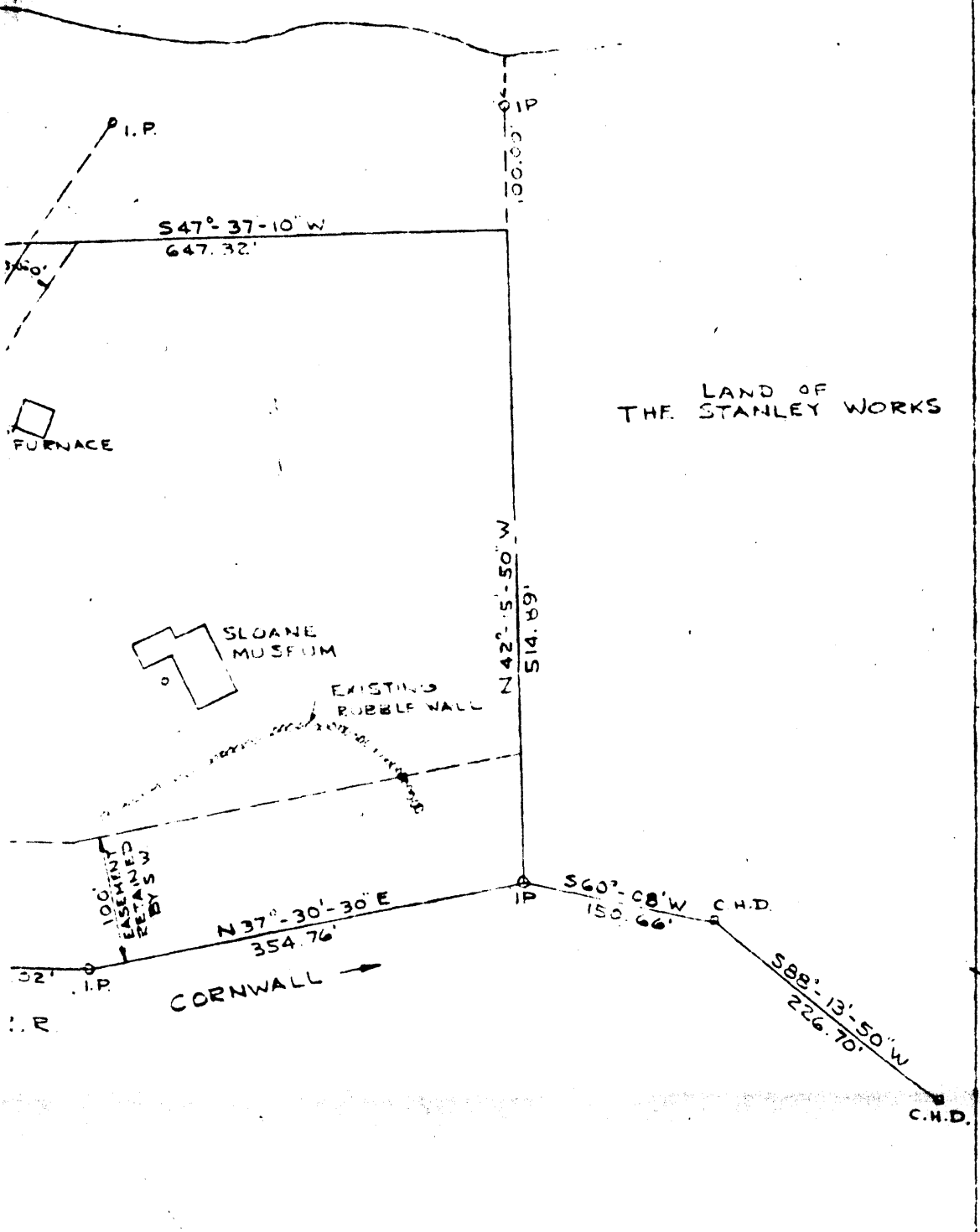
136.02'

N37'

NT

RIGHT OF WAY - NEW YORK NEW HAVEN R.R.

CORNW



THE STANLEY WORKS  
 PLAN  
 OF LAND  
 CONVEYED TO  
THE STATE OF CONNECTICUT  
KENT CONN.

SCALE 1"=100'  
 C.H. NICKERSON P.E. TORRINGTON, CT.  
 DEC. 26, 1968

RTIFY THAT THIS MAP IS SUBSTANTIALLY CORRECT.