OMB No. 1024-0018 Expires 10-31-87

### **United States Department of the Interior National Park Service**

# National Register of Historic Places Inventory—Nomination Form

For NPS use only received AUG | 4 1985 date entered SEP 1 2 1985

See instructions in How to Complete National Register Forms

Type all entries—complete a	pplicable sections	V	
1. Name			
historic Keuffel and Ess	ser Manufacturing Complex		
and or common			
2. Location			
	1 2 1 1	A 1	
	rand Streets, also 3rd and A	Adams Sts. NE	not for publication
city, town Hoboken	vicinity of		
state New Jersey	code 034 county	Hudson	<b>code</b> 017
3. Classificati	ion		
Category Ownership  district public structure both object in proces being cor NA	ss <u>X</u> yes: restricted	Present Use agriculture commercial educational entertainment government industrial military	museum park X private residencε religious scientific transportation other:
4. Owner of P	roperty (a) Original	K&E Buildings (b) Clo	ock Tower Apartment
(a) 301 Adams St	c. Corp., c/o Richard Mille s Rehab. Company, c/o Jeff-	r A Corp/	
(a) 166 W	West 87th Street, New York, I Avenue of the Americas, N	NY 10024	
city, town	vicinity of	state	
5. Location of	Legal Description	<u>On</u>	
courthouse, registry of deeds, et	tc. Hudson County Hall of	Records	
street & number 595 News	ark Avenue	100	
clty, town Jersey City		state 1	New Jersey
	tion in Existing	Surveys	
	S Inventory, Hoboken Survey	perty been determined eligi	ble? yes _X no
	.7, 20 nas uns pro	perty been determined engi	
date 1978 - 79		federal state	county X local
depository for survey records	Office of NJ Heritage		
city, town CN 402, Trenton	ı	state	NJ 08625

### 7. Description

Condition excellent deteriorated _X_ good ruins fair unexposed	Check one unalteredX_ altered	Check one  X original site  moved date	
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#### Describe the present and original (if known) physical appearance

#### DESCRIPTION

NOTE: This nomination includes two distinctive groupings of buildings which were associated with the Keuffel and Esser Company: the original nineteenth century manufacturing complex and the early twentieth century "West Factory", now known locally as the "Clock Tower Apartments".

The nineteenth century Keuffel and Esser complex occupies approximately two thirds of Block 51 in Hoboken, New Jersey. This complex is bounded on the east by Grand Street, on the south by Third Street, and on the west by Adams Street; this frontage creates unbroken walls that are highly expressive of late nineteenth century brick industrial architecture. The proportions and details of these structures, particularly the principal ones along Third and Grand Streets, demonstrate the influence of Classical architectural principles as interpreted during the Renaissance. These are expressed through the definition of the stories, the rhythm of the fenestration, and the use of Renaissance detailing in modern materials.

The facades of the main buildings represent the classical theme of base, capital, and entablature in the arrangement of their stories. The emphasized repetition of the openings follows the Renaissance practice of intercolumniation. The ornamentation of certain elements in metal, such as the cornice and the projecting corner tower, borrow Renaissance design motifs quite carefully.

Despite some changes and additions to these buildings, their exteriors remain largely intact and continue to express their original architectural character. The buildings are partly occupied by both residential and industrial tenants, and the present condition reflects the recent level of maintenance; they are structurally sound but some of the architectural detailing, especially the pressed metal work, has been allowed to deteriorate.

#### Third Street Elevation

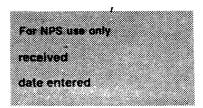
The elevation along Third Street consists of three separate brick buildings. Building A, on the corner of Third and Grand Streets, is five stories in height, is five bays in width on the Third Street elevation, and thirteen bays in length along Adams Street. Buildings B and C each have four stories, and although they were built at separate times, they have matching details. Building B has fifteen bays; Building C has eight bays on the Third Street elevation, and wraps around the corner of Grand Street for three bays.

Building A has a plain brick facade with a string course of brick dentils between the third and fourth stories, and is capped by a projecting cornice built of brick dentils and a pressed metal crown. The windows have brownstone sills and lintels, 6/6 wood frame sash windows, and iron pintles which indicate the previous existence of shutters.

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The one exceptional window is a projecting oriel on the second story to the west, which has two 1/1 windows facing south, and one each facing east and west. On the ground story the third bay from the west end has been converted to a doorway surmounted by a transom. These facade details are repeated along Adams Street, where the last bay appears to be an addition. On this elevation, there are doorways on the ground floor in the fifth and last bays. There is also a steel fire escape on the eleventh and twelfth bays, the latter of which consists entirely of fire doors.

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The four stories on Buildings B and C are strongly articulated by horizontal string courses and vertical pilaster details in the masonry which suggest the Renaissance composition of a base ground story, a columniated second and third story, and an attic fourth story. Changes in the brickwork on the fourth story also suggest that it may have been added subsequently.

The ground story is capped by corbelled brick string courses and a stone course which forms the sills for the second floor windows. The second and third stories have two story projecting pilaster sections between each window and recessed panels between the stories. At the top of the third story there are angled brick courses in a sawtooth pattern between the pilasters and a corbelled string course. The fourth story has flat brick masonry between the windows. The building is capped by a pressed metal cornice with frieze, crown, and bed sections.

The two western bays and the two central bays on Building B are emphasized above the ground story by additional brick details which project beyond the other brickwork. The resulting pavilion-like assemblages have a full segmental arch on the third story and are crowned by a pressed metal gable raised on vertical continuations of the crown molding. Within the flat area of this gable on the cental bays, the faded letters "K & E" are visible.

Most of the windows on Building B are 6/6 arched topped wood frame sash. They have stone sills which, on the second and fourth floor levels, form part of the string courses. The only variation in the windows occurs in the fourth story of the central pavilion, where there are three 1/1 sash windows. On the ground floor, the two bays closest to Adams Street comprise a single large opening served by a rolling metal door and topped by a segmental arch. The other fifteen bays at ground level have panels below the windows, and basement story openings which have been infilled with cinderblock.

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On Building C the brick details on the six Third Street bays and the three Grand Street bays match those of Building B, with a few exceptions. On the ground floor the windows extend down to the interior floor level and have recessed brick panels in the basement window level. The windows on Building C have metal industrial sashes with eight panels on the ground story and six panels on the upper story. The western bay on Grand Street has brick details like the pavilions on Building B but without the projecting cornice section.

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Perhaps the most unique feature of the complex is found at the southeastern corner of Building C, where a three story bay, commencing at the second floor level, projects outward at a 45 degree angle from both elevations. Projecting above the cornice line as well, it forms a corner tower which serves as a visible landmark along both Third and Grand Streets. An entrance to the ground floor lies diagonal to the corner, beneath the tower, and is framed with brownstone bases, rounded brick pilasters, and brownstone capitals. The doorway consists of five panel double leaf oak doors with a transom and matching oak jambs. The tower itself is covered with pressed metal sheathing elaborately detailed with late nineteenth century Renaissance-style motifs. Corbels in a scroll pattern (one of which is missing) support the tower, the underside of which forms a five-sided ceiling coffered with a geometrical pattern. Above this, a molded section turns the five sided ceiling into the four sided tower.

Each of the three upper stories of the tower has three windows facing south and east and one window facing west and north, all of which consist of arch topped 1/1 wood sash. Each story is also articulated by projecting entablatures supported by pilasters with capitals vaguely Corinthian in style. The three rounded corners of the towers are emphasized by recessed sections of the entablatures. The tower is capped by a square entablature and a balustrade with turned balusters and panelled corner sections.

#### Grand Street Elevation

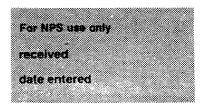
The east, or Grand Street, elevation consists of four buildings. Building C continues around the corner for three bays. Building D has sixteen bays which match the details on Building B except for the ground story windows, which are full length like those on Building C. The junction between Buildings C and D has a projecting pilaster on the upper three stories.

The southernmost bay on Building D (closest to Third Street), is a stairway bay with fire escape. The tenth and eleventh bays repeat the pavilion motif described above, with a wide entrance on the ground story and the emphasized

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detailing above. This entrance, originally for teams and drays, and leading to the courtyard, has double leaf steel doors with elaborate decorative grillwork, and is supported by a steel lintel with rosettes. The grillwork consists of horizontal panels with alternating scrolls and flat areas topped by a fleur de lys pattern. A pressed metal gable at the roofline above this entrance also has the faded letters "K & E" visible.

Two extra stories were added in the late 1940s or early 1950s atop the five northern bays of Building D. These stories include, however, a curious two bay-wide section of old brick masonry with arch topped windows which appears to be a remnant from an earlier addition. The remainder of these additional stories has flat brickwork and clustered openings consisting of three 6/6 wood frame sash, one cluster adjacent to the old windows and two clusters above. This addition also has similar windows facing south over the roof of Buildings C and D.

Building Dx is six stories in height and five bays in width. Built subsequent to Building D, its brick masonry has string courses that match those on Building D's second and fourth floor levels. The second and third stories also have two story pilaster sections between the windows and vertically recessed panels between the stories that echo in a simpler form details on Building D. Building Dx has steel industrial windows with double 24 light sections on the ground floor, and double 16 light sections above. The sixth floor was added prior to the addition above Building D, and has a continuous row of thirteen 12 light metal sash windows with wider mullions above the pilaster sections on the lower stories. This addition is capped by a flat frieze.

The last, or northernmost bay, of Building Dx is covered by a substantial fire escape stairway with corner posts that continue up to the sixth story. At each story there is a wide landing which leads from a fire door occupying part of the bay.

Building R is a one story gable-topped frame structure with five asymmetrically placed openings. The first three (from Third Street) are windows with 2/2 wood frame sashes. The fourth opening is a loading dock doorway, and the last is a narrow entrance door. Both of these appear to be alterations. The exterior of this building has little architectural significance and is in derelict condition.

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#### Interior Description

Where the original interiors of the large K & E buildings are visible, they show typical industrial details of the period. The older Bldgs. A, B, & D, have timber columns and floor structures, while the newer ones, C & Dx, have steel and concrete structural systems. Parts of the buildings have been recently subdivided with new partitions and turned into lofts. None of the structural details is particularly unique or significant.

Bldg. A, which has been used as an office, has one row of 8" square wood columns placed approximately 12" on center with short corbel tops. The girders are  $8" \times 10"$  and they support  $4" \times 12"$  floor joists which are placed 14" on center. All the original surfaces are obscured by recent coverings and partitions. A wood stairway which may be original is reached from the entrance on Third Street.

Bldg. B has two rows of 8 square chamfered wood columns set 14' on center in the long north-south section and one or two rows in the shorter east-west section. The girders here are  $8" \times 12"$  and are chamfered with lambs tongue stops. The floor joists are  $3" \times 12"$  timbers placed 14" on center and the subfloor consists of diagonally-laid 3" x 5 " boards covered with maple strip flooring.

Bldg. C has 12" round reinforced concrete columns which support a concrete girder. The concrete floor is laid in the pattern of jack arches to minimize its weight. Maple strip flooring covers the concrete.

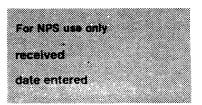
Bldg. D has 10" square columns placed 14' on center along a single central row. The girder measures 10" x 14" and is held together above the columns with recessed steel I bars. The floor joists here are 40' long 10" x 14" beams set approximately 7' on center. The girders and joists have chamfered edges which terminate near the walls with lambs tongues. The subflooring consists of 3" x 8" tongue and groove planks covered with maple strip flooring.

Bldg. Dx has 4" x 10" steel columns and 4' x 12" steel girders. support a reinforced concrete deck which also serves as the finished flooring.

#### Ancillary Buildings

There are several ancillary buildings in the courtyard area northwest of the complex; these include old and new powerhouses and an engine room.

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The principal powerhouse structure is a single story detached structure built of reinforced concrete with a gable roof. The design of the concrete on the exterior of the building expresses its structural system according to traditional post and beam construction. The overall effect of the building is that of a massive temple-like structure. On the west elevation (facing Adams Street), four recessed vertical panels reach to the base of the roof, with the corner posts being wider than the three middle ones. Within the gable, two triangular recessed panels indicate a rafter and kingpost type of construction. Three different stages of pouring the concrete are discernible through chamfered horizontal lines, and all the extended areas around the panels have chamfered The north and south elevations also have three recessed panels edges as well. and the middle posts flare out at the base to form buttresses. The building is topped by a metal clerestory roof structure which is recessed back from the east and west elevations. Fenestration is limited to metal sash windows high on the north and south elevations.

The tall brick chimney next to the powerhouse tapers as it rises. The top is capped by a decorative treatment with a string course and a lozenge pattern in the brickwork that is expressed by alternating light and dark bricks.

The engine room is a single story brick addition located within the court-yard formed by Buildings A and B. L-shaped in plan, its longer side adjacent to Building B is capped by a gable, and its shorter section, extending toward building A, has a flat roof. The most interesting features of this building are the two rounded recessed corners on the latter section which are built in a four foot wide acr to allow vehicles to pass. Above the ten foot level the radii arc gradually corbelled into right angle corners. On the north elevation there are two large industrial rolling doors topped by exposed steel lintels. Above the door on the gabled section there are two industrial windows with steel lintels and stone sills. Between the rolling doors there is also a double leaf entrance door.

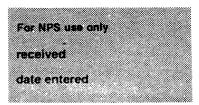
The rear elevations of Buildings A, B, Dx and the one story frame structure are visible from the courtyard. All of these are plain versions of the main facades with similar fenestration. However, there is some architectural detailing on the rear facades of the older structures.

The north elevation of Building A has a flat wall with four equally spaced 1/1 wood sash windows on the second and fifth stories. Building B has archtopped 6/6 sash windows on the west and both north elevations, with a section of paired windows near the inner corner. The west and northernmost elevations also

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have brick pilasters between the windows which rise all the way to the roof. On the northwest corner of this structure there is a square chimney which is decorated at one-third of its height with corbelled string courses which have diagonally placed bricks between the corners. These decorations terminate with a stone string course, and above this the chimney tapers to a smaller dimension. The top has a stone capping also supported by corbelled bricks. The rear or west elevation of the frame structure fronting at the north end of the Grand Street elevation is flat, but repeats the window type and pattern on the front facade. Throughout the courtyard, both freestanding and attached to the buildings are miscellaneous pipes, tanks, concrete tank holders, and lines which obscure much of any detail.

#### Clock Tower Building

The K & E Building now known as the Clock Tower Building was originally called the West Plant, and replaced earlier structures which were destroyed by fire. This building is a five story reinforced concrete structure built about 1905, and its most prominent feature is the seven story clock tower at the corner of Third and Adams Street. It occupies a landmark position similar to that of the pressed metal tower at the corner of Third and Grand Street on the original complex. The Clock Tower building occupies approximately two-thirds of Block 50, immediately to the west of the earlier grouping, and is bounded on the east by Adams Street, on the south by Third Street, and on the west by Jefferson Street. The principal facade, which occupies the entire length of the block along Third Street, and the facade along Adams Street, which extends as far north as the K&E Building A, across the street, are both part of the original construction. The long facade on Grand Street appears to contain sections from different building periods which are in the same style.

About 1975 the building, which had been abandoned by Keuffel and Esser several years earlier, was converted to subsidized housing for senior citizens. While the structure of the building and its exterior detailing remain intact, certain elements such as the windows and doors were replaced with modern materials. Thus all the windows in the building are metal frame in various configurations of two and three panel sections sometimes used in pairs and also in clusters of three. In some cases exterior balconies were created by recessing the apartment wall back from the original window line. Despite these changes the major presence of the building on the block and the architectural character from its design and construction retain major significance in Hoboken's urban fabric.

NPS Form 10-900-a (3-82)

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One of the most important aspects of the building is that both its architectural style and the structural system are visible in the reinforced concrete construction. The style of the building takes its inspiration from Renaissance architectural principles and expresses them in a distilled interpretation in concrete. The design emphasizes both the vertical and horizontal in its definition of stories and the separation of window bays. Architectural details such a balustrades and a portico articulate Renaissance detailing in a sculptural manner inherent in such use of concrete.

In the main elevations the ground story is designed to provide a visual base for the building and is capped by a projecting molded horizontal band. The upper four stories rise with projecting vertical pilasters between the bays which are detailed to resemble stone with horizontal chamfered edges between the "blocks". In between the pilasters each story is emphasized by molding bands, which are the concrete floor levels, and above these there are recessed panel sections which form the base of the window sections. Along Third Street the parapet extends upward above the central nine of the total of thirteen bays. Within this area the words "Keuffel and Esser Co." are discernible in outline beneath the paint.

The thirteen Third Street bays are of equal size, with the exception of the outer bays, which are narrower. From the clock tower, bays three to ten are now open to form balconies, with the current window plane recessed. On the second story level, the three central bays have a projecting balcony which is supported by brackets in the shape of a ship's knee. These are molded with recessed vertical chamfered sections and a banding at the base. The balustrade has squared corner posts and recessed panels with elongated vertical semi-circular openings, and is capped by a projecting horizontal band.

The seven story clock tower repeats the detailing on the main facades with horizontal banding at the top of the first story and at the parapet level and horizontal chamfers to simulate stone blocks. The three corners of the tower are chamfered to an increasing degree as the tower rises. While the corners at the base are only slightly diagonal, at the top of the sixth story the tower is nearly octagonal. The sixth story, above the parapet level banding, has chamfered detailing to simulate stone masonry with projecting keystones and archivolts above the arch topped windows. The top story is dominated by four circular clocks approximately twelve feet in diameter with painted clockfaces and Roman numerals. The corners of the clock level project in one-quarter engaged columns between horizontal banding which continues around the tower. The columns are visually supported in the story below and rounded corbels in the

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chamfered corners. The columns extend to the top of the tower with a continuous balustrade in between them which is similar to the one on the balcony mentioned earlier. A painted flagpole crowns the tower.

The elevation along Adams Street repeats the detailing along Third Street except that all the windows are flush to the wall with no recessed openings. There is one narrow bay by the clock tower and five additional full width bays. The northernmost bay on the ground floor has a three-sided projecting window installed subsequent to the original construction.

In the third bay from the northern end there is an entrance with a classically inspired portico which interprets the Doric order in concrete. Both the columns and the pilasters against the wall sit on bases with recessed panels. The entablature has molding details which simulate Doric triglyphs and mutules, the latter hinted at by alternating projecting and recessed panels in the bed of the cornice. The fascia has simple cove crown molding. The portico is capped by a balustrade similar to the ones mentioned earlier. The entrance steps are twelve foot wide granite blocks. The double leaf entrance doors are metal with decorative scrollwork in front of glass panels, and matching side and transom lights.

The Adams Street elevation continues with four single story masonry facades left over from the industrial use of the complex. The first and third are cast concrete with some molding details, and served as entrances to the service area. The second and third sections are brick, the former with three hollow arch topped openings, and the latter with a five sided projecting bay.

The long elevation on Jefferson Street has twenty-two bays similar in detailing to the other elevations but with certain irregularities. The five story first section matches the details along Third Street and has four bays, the outer two narrower in width. The remaining eighteen bays are six stories in height. The second section is also four bays wide but the floor levels here do not line up and the details are plainer. The vertical pilasters here also continue to the top of the building instead of terminating below the parapet. The final fourteen bay section is regular with details common to the Third Street elevation but without special elements such as balconies.

All the windows along Jefferson Street are flush with the exterior wall plane. The ground floor has recessed entrances in the fourteenth, sixteenth, seventeenth, and nineteenth bays. The first of these is a principal entrance

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with modern metal and glass doors, and the other three are entrances to individual apartments with single doors and windows.

The north and east facades facing the inner courtyard continue the main design characteristics of the front elevations with a strong articulation of the vertical and horizontal grid. The north elevation is irregular with a five story section toward the east having irregularly spaced window bays, and a six story section toward the west. The first five stories on the latter have recessed window terraces. The sixth story has projecting horizontal and vertical detailing; otherwise this elevation is plain.

The elevation facing east has fourteen bays which are more clearly detailed. It has projecting horizontal floor slabs and vertical pilaster sections with chamfered lines to simulate stonemasonry, as on the front. The first, eleventh, and fourteenth bays are narrow, containing stairways. The narrow section of the building facing north consists of flat concrete. It has six stories with four window bays grouped toward the center.

#### Interior Description

Interior access to this structure is not possible; its use, however, suggests that significant original interior detail, if any, no longer exists.

### 8. Significance

Period	Areas of Significance—Carcheology-prehistoricarcheology-historicagriculturearchitectureartcommercecommunications	conservation economics	music	e religion science sculpture social/ humanitarian theater transportation other (specify)
Specific dates	1875-1907	Builder/Architect Lea	derle & Co. and other	:s

Statement of Significance (in one paragraph)

#### SIGNIFICANCE

The manufacturing complex of the Keuffel and Esser Company in Hoboken, New Jersey, is significant in terms of architecture and the professions of architecture/engineering. The architectural significance is dual in nature: the buildings are of architectural importance to the urban cityscape of Hoboken, and are the city's finest extant examples of nineteenth and early twentieth century urban industrial architecture. The K&E complex is a good surviving example of the late nineteenth century single-owner industrial grouping, and its later building is an important example, as well, of early reinforced concrete industrial structures.

In a broader sense, the complex is important to the overall professions of architecture and engineering, because Keuffel and Esser's expertise in the development of blueprint paper, precision instruments, and slide rules in a sense revolutionized those and related professions.

Hoboken is one of the earliest Hudson River towns in New Jersey. Only about a mile square in size, the topography consists of a prominent hill and a bluff at the center of town on the river's edge, lowlands to the south, and marshy area toward the rear of the town, below the Hudson River Palisades. Earliest development was confined first to the river's edge, and the prominent hill on the river became known as Castle Point, the estate of the Stevens family.

In its earliest stages, Hoboken was little more than a rural suburb of New York, as well as a place of recreation for New Yorkers; prominent New York families maintained summer homes there, and thousands of New Yorkers visited the pleasure grounds at Elysian Fields, overlooking the river to the north of Castle But with improvements in navigation, the development of steamboat technology, the placement of plank roads across the New Jersey meadowlands to inland points, and most importantly, the establishment of the railhead of the Lackawanna Railroad on the south Hoboken waterfront, the town began to develop an increasingly urban character. In the mid-nineteenth century, German and northern European steamship lines located their trans-Atlantic docks along the waterfront; a significant amount of their trade involved European migration to the United States, and as a result Hoboken developed a significant German community. Thus, the Hoboken waterfront became fully developed early in the town's history, largely under the leadership of the Hoboken Land and Improvement Company, the Stevens family real estate concern. Once the southern Hoboken area was fully built up, the riverfront development jumped to the north of Castle

## 9. Major Bibliographical References

(See continuation sheet)

10. Geograph	ical Data	1		
Acreage of nominated property  Quadrangle name Jersey Ci  UT M References		1.15 acres, K&E B	_	s, Clock tower) scale 1:24000
A 1 <sub>18</sub> 5 <sub>8</sub> ,1 <sub>3</sub> ,2 <sub>1</sub> 0 4	4  5  1  0  2  8  0   Northing	B Zone D H K&E Original Bu Clock Tower Apar	ildings, Block	Northing  1
List all states and counties	for properties ove	rlapping state or co	unty boundaries $^{ m N}$	A
state	code	county		code
state	code	county		code
11. Form Preponent of the Preponent of the Charles Wyatt organization Charles Wyatt		dat	e 12/84	
street & number 78 Essex	Street	tele	ephone 201-332-	6536
city or town Jersey Cit		sta servation C	NO 07302	rtification
The evaluated significance of the national  As the designated State Historic 665), I hereby nominate this projectording to the criteria and pro	is property within the state Preservation Officer perty for inclusion in	e state is:  _X_ local  rfor the National Histor	ic Preservation Act o	of 1966 (Public Law 89–
Deputy State Historic Preservation Offic	er signature	regist / With		
title Acting Director, D	ivision of Park	s/%/Forestry	date	7.31.85
For NPS use only I hereby certify that this pr	operty is included in	the National Register Entered in the National Register	r date	9/12/85
Keeper of the National Regis	iter			/
Attest:			date	
Chief of Registration				

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Point, into the area formerly occupied by the Elysian Fields. Again, the primary focus was port-related activities, with rail-to-ship transfer facilities, drydocks, and water-related industries. Directly behind and parallel to the river, the commercial area of the town developed along the Washington Street corridor and the streets to the west of Washington Street became lined with residential row houses for merchants and businessmen, up to the point about where the present Clinton Street lies. Beyond was the marshy area, and it therefore became inevitable, considering the pressure, that the creeks and marshes would be filled and built upon. Thus, it was in this area that less expensive workers housing, warehousing, secondary commercial strips, and non water-related industries appeared, in something of a random pattern, and it was in this back of town location that Keuffel and Esser's works were established.

The first manufacturing presence of Keuffel and Esser in Hoboken dates from 1875, when the partners rented a vacant loft building at the southwest corner of Grand and Third Streets. (This building stood until 1983, when it was destroyed by fire; ruins and some reconstruction of the building are extant.)

Keuffel and Esser erected their first manufacturing building in Hoboken in 1880, a three story building at the northeast corner of Adams and Third Streets. This building was an Italianate style building with a distinctive oriel on the second floor corner bay on the Third Street elevation. It was in this building that K&E first manufactured blueprint paper. This building was subsequently enlarged by the addition of two stories in the middle of that decade, as well as by erection in 1884 of the principal frontage from 404 to 412 Third Street, designed by Lederle and Company, of New York. This five story, 17 bay building was distinguished by a more pronounced Italianate styling and had a decorative parapet above the cornice in the central two bays of this segment. This structure was used primarily for the manufacturing of surveying instruments. subsequent addition to this building extended the same treatment along Grand Street, with a similar decorative cornice parapet on this elevation as well. both parapets the company name was identified: "K&E". An additional frame manufacturing structure occupied the northwest corner of Third and Adams Street, opposite the original building.

In 1905 the frame buildings at Third and Adams were destroyed by fire, and Keuffel and Esser engaged the Turner Construction Company to erect a new building which would serve as both manufacturing space and as the company's head-quarters. This building, which was among the first and largest buildings to be erected of reinforced concrete, was distinguished by a seven story clock tower in the Italianate/Renaissance style, as interpreted in reinforced concrete.

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This building became known as the West Factory; its informal name, the "Clock Tower" building was not officially applied until the 1970s.

Today, the two distinctive building styles and periods of Keuffel and Esser's presence in Hoboken remain as the major physical presence expressive of Hoboken's nineteenth and early twentieth century industrial past. As such, they are major visual landmarks in the cityscape.

Few other companies in the United States are so distinctly identified with the professions of architecture, engineering, drafting, and the processes of precision measurement as the firm of Keuffel and Esser.

The partnership of Wilhelm Keuffel and Herman Esser, both descended from immigrant German families, and both residents of Hoboken, dates from July 19, 1867, when they opened an office on Nassau Street in New York City to specialize in the importation of precise instruments and exotic materials of need to the professions of architecture, engineering, and drafting. Prior to this time, such supplies as were available were sold along with more commonplace articles in hardware and mill supply stores. No other company had made these specialized sales their speciality, and Keuffel and Esser's business flourished, their products being used in drawing the plans for the Brooklyn Bridge as well as numerous other important construction products throughout the country. In 1868 they brought out their first catalog, and the following year their products were awarded a medal for excellence by the American Institute. They soon outgrew their office, and opened a showroom and office at 127 Fulton Street in New York.

The move from retail provision of these supplies to their manufacture dates from 1870, when Keuffel and Esser rented a small loft on Dutch Street in New York, where triangles were cut from sheets of the newly developed India hard rubber. They soon outgrew this space, and looked to their hometown of Hoboken for additional space. The idea of the new business was to specialize in fine instruments and exotic materials needed by engineers and architects. This included an assortment of finely machined ruling pencils, compasses and dividers, and such other items as protractors of horn and nickel silver, trammels of rosewood or mahogany, and ink in small glossy cakes from India and China.

By 1889 the Keuffel and Esser partnership had grown so rapidly that it was dissolved and the Keuffel and Esser Company was incorporated in New Jersey, although their headquarters remained in New York. (The headquarters, as well, were moved to Hoboken when the Clock Tower building opened in 1907.) The

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company continued to expand their line of measuring instruments, and by 1891 K&E was manufacturing the first slide rules to be made in this country.

Herman Esser retired from the business in 1902, and Wilhelm Keuffel died in 1908, at which time leadership of the firm was taken over by Carl M. Berengau, vice president and treasurer of the firm, as well as a manufacturer of telescopes. The company's manufacturing facilities continued to expand, primarily northward along Grand Street.

During World War I, the company produced most of the submarine periscopes for the U.S. Navy as well as fine control instruments of all kinds, including the optical glass used in those articles. In World War II, K&E specialized in the production of anti-aircraft range finders for Army and Navy. engineers, optical reading theodolites with glass circles were developed. Perhaps the single most unique aspect of K&E operations was the raising of an exotic spider, whose body produced fine silken threads used as cross-hairs in periscope and gun sights.

By 1928, the Keuffel and Esser complex had a floor area of over 250,000 square feet, with nearly 1,000 employees. It also had manufacturing or sales facilities in Chicago, St. Louis, and San Francisco as well as in Chatham, New There were ancillary buildings located elsewhere in the general neighborhood of the Hoboken plant, although they were not contiguous to the principal complex.

The first sign of obsolescence of the Hoboken buildings came in 1942, when the original complex was shut down and operations transferred to other local and out of town facilities. By the mid-1960s the Hoboken operations were beginning to be relocated to suburban New Jersey areas: a plant was opened in Rockaway Township in 1967, and the administrative and executive offices were moved to a site in Morris Township in 1968. The final presence in Hoboken ended with the closing of the "West Factory", or Clock Tower Building on December 31, 1970.

The original complex, from the time of cessation of Keuffel and Esser operations, held various itinerant manufacturers, and at the present time there are still both manufacturing and residential loft spaces within the structures. The Clock Tower building was the subject of a much publicized conversion to senior citizen housing in the mid-1970s, and was hailed as a premier example of adaptive reuse of obsolete industrial facilities. It did, however, suffer a minor loss of original architectural integrity, as the window plane was broken NPS Form 10-900-a

## **United States Department of the Interior National Park Service**

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in many instances to provide exterior balconies for the apartment units. Generally though it was a complimentary rehabilitation.

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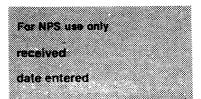
#### KEUFFEL AND ESSER CHRONOLOGY

1867	Partnership formed by Wilhelm Keuffel and Herman Esser
c1875	Partnership rents vacant loft at SW corner 3rd & Grand, Hoboken.
1880	Partnership opens 3 story building at NE corner Adams and 3rd.
1880	K&E makes their first blueprint paper.
1884	New building by Lederle and Co.: 4 story L-shaped building.
1885	K&E begins manufacture of surveying instruments.
1889	Partnership dissolved, Keuffel and Esser Company formed.
1891	K&E manufactures first slide rules in this country.
1095	Fire destroys wooden buildings and warehouse, 3rd between Adams and Jefferson.
1907	West Factory (Clock Tower) opens; K&E headquarters moved from New York City to Hoboken.
c1918	K&E produces most of submarine periscopes for U.S. Navy.
1941–45	K&E produces anti-aircraft range finders for U.S. Army & Navy.
1942	Original K&E complex sold; operations remain in Clock Tower.
1967–68	K&E builds new plant at Morristown.
1970	K&E ceases operations in Hoboken.
1976	Clock Tower Apartments open.

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Keuffel & Esser Manuf. Complex,

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NEW JERSEY 08625 FRENTON, STREET BUREA WEST STATE PROTECTION, 109 ENVIRONMENTAL PRESERVATION,

OF

MENT OF HIS

K & E Plant HISTORIC NAME: COMMON NAME: LOCATION: 400-14 Third (300-18 Grand, BLOCK/LOT

301-7 Adams

MUNICIPALITY:

COUNTY:

USGS QUAD:

UTM REFERENCES:

OWNER/ADDRESS:

Zone/Northing/Easting

DESCRIPTION

Construction Date: late 19th C.

Source of Date:

Architect:

Builder:

Style: Commercial Form/Plan Type:

Number of Stories: Five at Adams, Four

on Third & Grand, also six stories at Grand

Foundation:

Brick Exterior Wall Fabric:

Fenestration: Mainly six over six, except factory sash in 312-18

Grand section.

Roof/Chimneys:

Additional Architectural Description:

The oldest section at Adams and third has an oriel in the second story in the Westermost Third Street bay. Windows are six over six. This section has a denticulated wood cornice and most nearly suggests the italianate style. Lintels are flat and flush.

The section along 400-14 Third and 300-10 Grand is later and has a plain cornice and segmental arch window openings. Most notable is a three story cast-iron oriel that projects out from both sides of the facade over the corner entry at Third and Grand

The top two stories at about 308-12 Grand are brick additions with six over six sash. (cont'd below)

PHOTO Negative File #

(Indicate North) · Map

310-18 Grand is a five story factory sash building with large rectangular bays and two sets of two story brick piers above the first story. An addition in similar style forms the sixth story.

SURROUNDIN Open Space Industrial	[] Woodla		lential [ ]	[ ] Scattere Agricultural vay Commercial		
	·					
SIGNIFICAL	ICE:					
South acı	coss Third, make it in	as well as	its relatī	v to the buil onship to the	ne newest	
	,					
REGISTER H	CONDITION: E	Excellent [ ] Yes [ ] Pos Is [ ] Develo	ssible [ ]		t of District	

SITING, BOUNDARY DESCRIPTION, AND RELATED STRUCTURES:

RECORDED BY: J. P. Sholeen ORGANIZATION:

DATE: 8/22/78

HISTORIC NAME: Keuffel & Esser LOCATION: 300 Adams Street

COMMON NAME: Clock Tower Apartments

BLOCK/LOT 5011-15,21-34

MUNICIPALITY: Hoboken

USGS QUAD: OWNER/ADDRESS: COUNTY: Hudson UTM REFERENCES:

Zone/Northing/Easting

**DESCRIPTION** 

609) 292-2023

Construction Date: 1906

Source of Date: building parapet

Architect:

Builder:

Style: Commercial

Form/Plan Type: "L" shaped

Number of Stories: Five - Fourteen bays on

Third, Seven on Adams

Foundation:

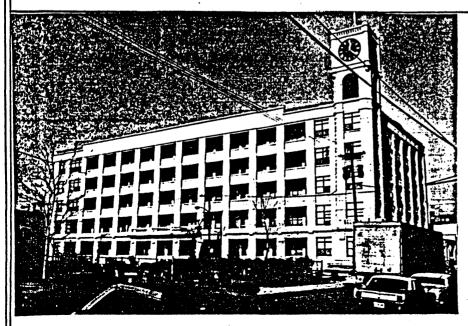
Exterior Wall Fabric: Concrete, painted yellow

Fenestration: Three vertical panes over spandrels in wide rectangular bays. Recessed slidinx doors in second through fifth stories in nine Roof/Chimneys:bays along Third Street.

Additional Architectural Description:

The most impressive feature is a clock tower which rises out of the corner of the building at Adams and Third.

The large building was apparently extended along Jefferson St. The area to the east of that extension and to the north of the Third and Adams wing is an open area with concrete gateways that now functions as a children's park/playground.



Map (Indicate North)

grouping is cater corner to the Southeas	t.
SURROUNDING ENVIRONMENT: Urban [ ] Suburban Open Space [ ] 'Woodland [ ] Residential [X] Industrial [ X Downtown Commercial [ ] High	Agricultural [ ]
Scattered residential along Jefferson.	
SIGNIFICANCE: .	
One of the most impressive structures in and clarity of expression of structure.	Hoboken in terms of size
,	·
ORIGINAL USE: Light Industrial PHYSICAL CONDITION: Excellent [x] Good [] REGISTER ELIGIBILITY: Yes [] Possible [] THREATS TO SITE: Roads [] Development [] No Threat [x] Other [] COMMENTS:	PRESENT USE: Apartment bldg.  Fair [ ] Poor [ ]  No [ ] Part of District [ x ]  Zoning [ ] Deterioration [ ]
One of the more heavily publicized conver	sions of recent years.
REFERENCES:	
RECORDED BY: J. P. Sholeen	DATE: 8-22-78

SILING, DOUNDARY DESCRIPTION, AND RELATED STRUCTURES:

ORGANIZATION:

Across from Senior Citizen's Housing to South. The old K&E plant is to the East and a similar nineteenth century factory

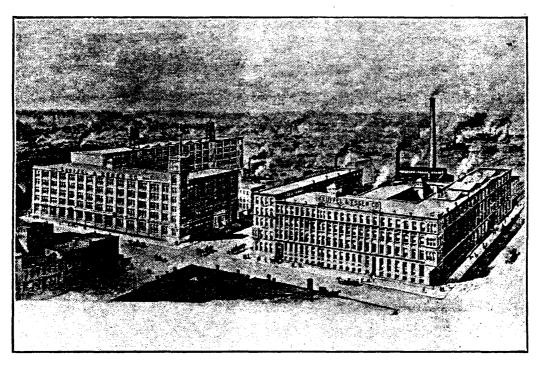
KEUFFEL AND ESSER COMPLEX, HOBOKEN, N.J. (Hudson County) c.1890

Building "A" on corner, Building "B" adjacent.

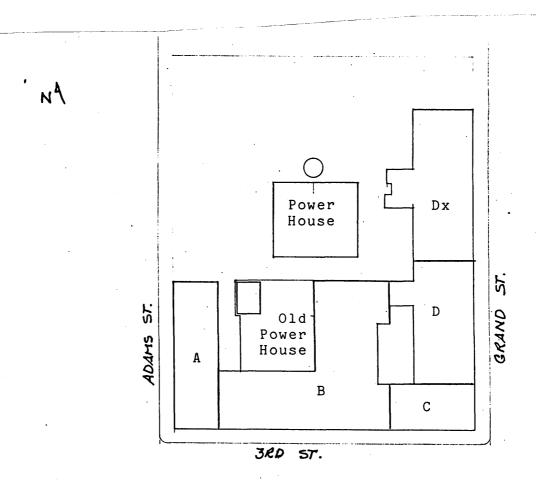


KEUFFEL & ESSER COMPANY.

KEUFFEL AND ESSER COMPLEX, HOBOKEN, N.J. (Hudson County) c 1907. Clock Tower Building at left. Buildings "A"-"D" at right.



KEUFFEL & ESSER COMPANY, HOBOKEN, N. J.



Keuffel & Esser Manufacturing Complex City of Hoboken Hudson County, New Jersey

