

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 any 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.

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1. Name of Property

Historic name Henry B. Neef House Neef, Henry B., House
Other names/site number DO09:0245-001

2. Location

Street & number 2884 Iowa Street Not for publication
City or town Omaha Vicinity
State Nebraska Code NE County Douglas Code 055 Zip code 68112

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, 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.)
Michael J. Amel Date July 23, 2010
Signature of certifying official
Director, Nebraska State Historical Society
State or 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 this property is:
 entered in the National Register.
 see continuation sheet.
 determined eligible for the National Register.
 see continuation sheet.
 determined not eligible for the National Register.
 removed from the National Register.
 other, (explain): _____

Edson H. Boall 9.16.10

Jan _____
Signature of Keeper Date of Action

Henry B. Neef House

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5. Classification

Ownership of Property

(Check as many boxes as apply)

X Private

Public-local

Public-state

Public-federal

Category of Property

(Check only one box)

X Building(s)

District

Site

Structure

Object

Number of Resources within Property

(Do not include previously listed resources in the count.)

Contributing

Noncontributing

1

1

Buildings

0

0

Sites

2

0

Structures

0

0

Objects

3

1

Total

Name of related multiple property listing

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

NA

Number of contributing resources previously listed in the National Register

6. Function or Use

Historic Functions

(Enter categories from instructions.)

DOMESTIC: Single Dwelling

Current Functions

(Enter categories from instructions.)

Domestic: Single Dwelling

7. Description

Architectural Classification

(Enter categories from instructions.)

LATE 19th CENTURY and 20th CENTURY REVIVALS:

Tudor Revival

Materials

(Enter categories from instructions.)

Foundation Concrete Block

Walls Gyp-Lap faced with Stucco, Brick

Roof Asphalt

Other Steel Frame, Ornamental Iron, Concrete,

Sheetrock

Narrative Description

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

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.
X 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.
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 a 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.

Narrative Statement of Significance

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

Areas of Significance

(Enter categories from instructions.)

Invention

Architecture

Period of Significance

1929

Significant Dates

1929

Significant Person

(Complete if Criterion B is marked above.)

Cultural Affiliation

Architect/Builder

Birger Kvenild

9. Major Bibliographical References

Bibliography

(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
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 for additional data:

- X State Historic Preservation Office
Other State agency
Federal agency
Local Government
University
Other
Name of repository:

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10. Geographical Data

Acreeage of property Less than 1 acre

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

	Zone	Easting	Northing		Zone	Easting	Northing
1.	15	0252608	4579019	3.			
2.				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 Nebraska SHPO Staff (contact Jessie Nunn / National Register Coordinator)
organization Nebraska State Historical Society date 12/17/2009 (revised 6/2009)
street & number 1500 "R" Street telephone 402-471-4775
city or town Lincoln state NE zip code 68501-2554

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 the SHPO or FPO.)

name/title Tammy L. Mitchell
street & number 2884 Iowa Street telephone 402-681-9491
city or town Omaha state NE zip code 68112

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determined eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended, (15 USC 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

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In the late 1920s, the concept of the "all-steel house" swept across the nation from Richard Tappan's Jamaica-Hillside development in New York to Richard Nuetra's Lovell Health House in the Hollywood Hills, and even to Omaha, Nebraska. Clearly, Omaha's Gate City Iron Works and similar companies had something to gain by opening new markets for their products, but it was the innovation—rather than overt capitalism—that really captured the attention of the Americans. Steel houses came in various styles, shapes, sizes and systems of construction, but collectively they were an invention that promised to solve some of the most fundamental problems in American domestic life. While ultimately finding only limited success, there is little doubt the concept of the steel house played a significant role in how Americans imagined their future during the boundless optimism of the late 1920s and into the uncertainty of the Great Depression. The Henry B. Neef House is the best, and perhaps the only, property in Nebraska that is associated with the rise of the "steel house" between 1926 and the opening of the Century of Progress World's Fair in 1933. It is, therefore, eligible for the National Register under Criterion A in the area of invention at the statewide level of significance. The period of significance is 1929, the year of aggressive marketing by Gate City Iron Works and publicity in the *Omaha World-Herald*.

As a model home used by Gate City Iron Works to promote steel and ornamental iron in residential construction, the Henry B. Neef House is also eligible for the National Register of Historic Places under Criterion C in the area of architecture as Nebraska's best documented and likely earliest steel-frame home. In addition to its unique steel frame, the Neef House is also architecturally significant for its variety of ornamental iron accoutrements. The period of architectural significance is 1929, which marks the year the Neef House was completed.

Historical Context for Criterion A and Criterion C: The Steel House in the United States, 1926-1933

As Henry B. Neef established himself in Omaha a new trend in residential construction was developing that would eventually prove attractive for the Gate City Iron Works manager. On November 7, 1926, the *New York Times* reported on a new house being constructed in the Jamaica-Hillside area of Queens, New York by the Jones & Laughlin Corporation and architect Robert Tappan. While this was hardly the first "model house" to be put up by a construction company, the Jamaica-Hillside house was particularly newsworthy because the Jones & Laughlin Corporation was not a lumber company but a large *steel* concern. Apparently, the company had, "been devoting considerable time to a study of the possibility of manufacturing frame structures for dwellings at a moderate price."⁴ Between the announcement of the Jamaica-Hillside House in 1926 and the infamous stock market crash in October of 1929, a select handful of companies and architects pushed the use of steel in house construction to new heights.

The construction of steel-framed houses captured the imagination of the American public through coverage in the *New York Times*, *Pittsburgh Press* and *Chicago Tribune* among countless other newspapers, trade journals and popular magazines. Their interest is understandable. The last great advance in residential architecture had been the introduction of balloon frame construction. Thought to have been invented in Chicago in approximately 1830, by the 1920s its application was almost universal. With balloon framing, heavy timbers joined through complicated mortise and tenon joints were replaced with lightweight 2x4 pine studs set in box joints sixteen inches apart:

Light sticks, uninjured by cutting mortices or tenons, a close basket-like manner of construction, short bearings, a continuous support for each piece of timber from foundation to rafter, and embracing and taking advantage of the practical fact, that the tensile and compressible strength of pine lumber is equal to one-fifth of that of wrought iron, constitute improvements introduced with this frame.⁵

⁴ "Model Steel House for Jamaica, L. I." in *New York Times*, November 7, 1926.

⁵ Clifford Edward Clark Jr., *The American Family Home, 1800-1960* (Chapel Hill, NC: University of North Carolina Press, 1986), 18.

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Balloon framing allowed for the enormous variation in shapes of eclectic Victorian-era architecture, while a growing milling industry ensured a ready supply of windows, doors and trim pieces to embellish a new home. The resulting structure was cheaper to build, stronger in direct winds, and less costly to the environment and the pocketbook than the enormous timbers that were becoming harder to acquire. Balloon framing also made homeownership possible for multitudes that would never have considered the possibility before.

Meanwhile, innovation in steel-framed architecture led to the development of skyscrapers in land strapped cities such as Chicago and New York in the late 19th century. Prior to the use of steel framing and curtain wall construction, buildings were limited in the height they could achieve due to their heavy masonry wall construction, the inability to achieve water pressures that would allow for running water on top floors, and tenants lack of desire to walk up more than a half dozen flights of stairs. With the advent of the elevator and improvements in plumbing, and more importantly as steel construction that could bear the necessary load of supporting the building was developed, skyscrapers became prominent fixtures of cities, and the race was on to see how high they could reasonably go. Steel's tensile and compression strength was crucial to this development.

Steel had been prominently used in industrial applications, both in buildings and machinery. Its strength was unmatched by any other alloy. Perhaps it is not surprising, then, that some architects and steel companies saw steel as the next great advance in residential architecture. Steel companies like Gate City Iron Works had something to gain by opening new markets to their products, but steel also offered innovative architects like Richard Neutra a new material that was capable of expressing fresh architectural forms. Most steel-frame houses constructed during in the late 1920s, however, were nowhere near as bold stylistically as Neutra's Lovell Health House in the Hollywood Hills. For the most part, the innovative steel framework was hidden under brick and stucco veneers and period revival forms.

"Not a Stick of Wood is Used": Residential Architecture by Steel Companies, 1926-1929

Despite the announcement of the steel-framed Jamaica-Hillside House by Robert Tappan late in the year, the leading trade journal *American Builder* was virtually silent on the subject of steel residential architecture during 1926. No structural steel or sheet steel manufactures were included in the honor roll of manufactures for the National Demonstration Model Homes Campaign when it was launched in September of 1926.⁶ The campaign called for the construction of 360 "model homes" across the country through the non-competitive cooperation of 34 leading manufactures and associations. A month later the only mention of steel in the Specifications and Typical Working Plans for the campaign included "incidental iron" (i.e. steel beams, cast iron flue doors, bolts, joists, and ornamental iron). The specifications for framing expressed the dominance of balloon framing and wood in house construction:

Framing Lumber—Shall be well seasoned and free from loose knots or imperfections that would impair durability, sawed true to dimension and properly sized...Girders, floor joists, studding, plates, sills and roof rafters shall be Southern Pine or Douglas Fir No.1 Common...No woodwork of shall be placed within 1" of any chimney.⁷

While steel remained "incidental" in 1926, the specifications for the Model Homes Campaign did reveal some of the weaknesses of wood frame construction and the potential improvements in homebuilding that steel might offer including durability and fire-resistance. The Jamaica-Hillside House was touted as being fireproof and continued coverage of

⁶ "Honor Roll of Manufactures of Quality Materials Chosen for the National Demonstration Model Homes" in *American Builder* (September 1926), 29.

⁷ "New Standards of Popularity and Approval: Complete Specifications and Typical Working Plans for the National Demonstration Model Homes to be Erected in 28 Important Cities," in *American Builder* (October 1926), 20-22.

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Richard Tappan's planned activities pushed the safety benefits of steel frame construction. In October of 1927, the *New York Times* reported that, "Recent disasters such as the Mississippi flood and the St. Louis tornado have emphasized the necessity according to the American Institute of Steel Construction, of developing private steel dwellings that are fireproof, rotproof and verminproof."⁸ Appeals to safety and sanitation make an impact on Americans during any period, but in the 1920s they also played heavily into the language of the Progressivism.

New York architect Robert Tappan was making headway with steel frame residential architecture in 1926 and 1927, but it was not until 1928 that *American Builder* began to take notice of the fledgling trend. When the publication did finally devote space to steel frame houses, it was not Tappan but the Walter Bates Steel Corporation (WBSC) of Gary, Indiana that first received mention. Walter Bates, originally of the Bates Expanded Truss Company, secured two pages in the March issue to discuss steel-framed residences. In the article, Bates touched on all the arguments for steel-frame construction that would grace advertisements, newspapers articles and trade journals over the next few years. According to Bates, steel-framed houses were safe and sanitary, could be built for "approximately" the same cost as wood-framed houses, would reduce plaster cracking, lower insurance rates and provide the same flexibility in design as wood construction.⁹

It would not be long before the WBSC had competition. In April of 1928, *American Builder* highlighted the activities of contractor C. H. Dexheimer, who was "attracting the attention of contractors, architects and homebuilders," by using "metal lumber" to build houses in Toledo, Ohio.¹⁰ Dexheimer was only an independent contractor, but the next big name in steel-frame residential construction had the backing of "one of the largest steel fabricating companies in the world."¹¹ Introduced only as an unnamed subsidiary of an unnamed company in the "What's New?" section of *American Builder*, the Steel Frame House Company would come to dominate steel frame residential construction by the fall of 1928.

The Steel Frame House Company (SFHC) was in fact a subsidiary of the McClintic-Marshall Corporation of Pittsburgh, Pennsylvania, which at the time of its purchase by Bethlehem Steel in 1931 was the second largest structural steel fabricator in the nation, outdone only by the American Bridge Company (a subsidiary of U.S. Steel).¹² Interestingly, the SFHC seems to have grown from an agreement between Richard Tappan and McClintic-Marshall to build steel-frame residences across the country, except in New York where Tappan teamed with the Jones & Laughlin Corporation. The *Pittsburgh Press*, however, seemed to forget previous steel-framed houses in New York, Indiana and Ohio in October of 1928, when it proudly reported under a photograph of the McClintic-Marshall plant in Leaside, Pennsylvania:

Just as it is fitting that the first steel framed house should have been built in Pittsburgh, The Steel City, so it is fitting that the steel framing for the dwelling has been fabricated in Pittsburgh District Mills... Materials for all buildings contracted by the Steel Frame House Co. [are] fabricated at these plants.¹³

The exaggeration about its status as the "first" steel-framed house is understandable, considering the *Pittsburgh Press* sponsored the "Press Model Home," in the Edgewood Acres area of Pittsburgh. While this received attention in and around Pittsburgh prompting headlines like "Visitors Throng to Inspect Model Home," it was another steel-frame home constructed in the Pittsburgh area that was the breakthrough project for the SFHC. The company's Shaffer House was

⁸ "New Steel House Plan: Robert Tappan Designs an Indestructible Private Dwelling" in *New York Times*. 16 October 1927.

⁹ Bates, Walter. "All-Steel House Demonstrated," in *American Builder* (March 1928), 138-139.

¹⁰ "A Fire Resistant Residence," in *American Builder* (April 1928), 154.

¹¹ "What's New?" in *American Builder* (May 1928), 138.

¹² "Business: Steel Deal," in *Time Magazine* (Monday, February 16, 1931) accessed online at <http://www.time.com/time/magazine/article/0,9171,741089,00.html>.

¹³ "Steel for Press Model Home Fabricated Here," in *Pittsburgh Press*, October 21, 1928, Society Section, Page 8.

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selected for the cover of the November 1928 issue of *American Builder*. The cover photo was accompanied by a feature length article "Steel Frame Construction Perfected for Homes," explaining the importance of the house:

The idea of adapting the steel frame of skyscrapers to the construction of fireproof homes is not new, but its successful development has taxed the ingenuity of engineers and architects for many years. In the attractive Mission Hills section of Mount Lebanon, a suburb of Pittsburgh, a steel frame house is being erected for Mr. W. H. Shaffer, Jr. which represents an exceptionally important turning point in the development of the steel frame idea. The steel frame employed is the first of its type that meets the practical demands of the architect, builder and owner.¹⁴

That very same month, *Popular Science* exclaimed, "It's Here—the All-Steel House," in an article featuring the work of Richard Tappan and WBSC. In November of 1928, the steel-framed house as promoted by the steel industry had officially arrived on the American scene, and according to *Popular Science* contributor Arthur A. Stuart the potential impact seemed nothing short of revolutionary:

In the last fifty years there has occurred a revolutionary change in the production of the necessities of life... In only one field have we shamefully lagged behind its possibilities, and that is in the first essential of any civilization—the building of homes. We still build houses much as they were built in the middle ages... Before they can hope to change the character of small house building in America, steel men realize, they must change the methods of building. To that end their engineers, draughtsmen and architects are striving to evolve a plan for the swift erection of small houses that may become an American phenomenon like the swift erection of skyscrapers.¹⁵

The SFHC and the WBSC however, were not the only steel companies contributing to the innovation of the steel house. In Omaha, Nebraska, a local company named Gate City Iron Works was erecting a steel-framed house for their manager Henry B. Neef. Completed by March of 1929, the Neef House was a close contemporary of the Schaffer House which was only a steel skeleton for the November 1928 cover photo in *American Builder*. (See also "Timeline of Steel Frame Houses from 1926 to 1930" and "Those Designing and Constructing Steel Framing for Houses from 1926 to 1930 in Supplementary Materials). While the SFHC and WBSC many have captured national attention in *American Builder* and *Popular Science*, Gate City Iron Works was receiving attention in Nebraska and the surrounding region for its innovative construction.¹⁶

"...in the steel frame house: Fenestra of course!"

Advertisements for construction products featuring the Schaffer House or WBSC houses are illustrative of the aura of excitement and future possibility presented by steel frame residential construction during the late 1920s. Naturally, steel-framed houses were a showcase for other innovations and inventions in residential building. As early as July of 1928, an advertisement for Sheet Steel featuring a photograph of the steel framing for the WBSC House in Gary, Indiana exclaimed:

The All Steel Residence is a Practical Reality... The All-Steel residence is no longer a mythical thing to be dreamed about and hoped for. It is here in reality. In all parts of the country there is a growing trend toward a

¹⁴ Roger, Tyler S. "Steel Frame Construction Perfected for Homes," in *American Builder* (November 1928), 74-78.

¹⁵ Stuart, Arthur A. "It's Here—the All Steel House," in *Popular Science Monthly* (November 1929), 33-34.

¹⁶ "Finish All Steel House," *Omaha Sunday World-Herald*, 17 March 1929.

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broader and broader utilization of Sheet Steel in the construction of residences... Sheet Steel very efficiently supplements the frame, in construction of what may be justly termed the 'all steel' house.¹⁷

Sheet Steel was trying to get a foothold in what seemed to be the wave of the future in home construction, but other products could claim a direct link to the phenomenon. For instance, the Detroit Steel Products Company proudly noted the use of their Fenestra steel casement windows in the SFHC's Schaffer House.¹⁸ In the same November 1928 issue of *American Builder*, an ad for Steeltex, a steel fabric product to reinforce plaster backing, claimed its connection to the Schaffer house, with the heading "America's most talked-about house uses STEELTEX."¹⁹ Steel frame residential construction had definitely hit a chord in the optimistic cultural and economic climate of the late 1920s.

Because many steel frame houses constructed during this period were model homes, they naturally showcased the most up-to-date materials and construction techniques from frame to finish. Fenestra windows and Steeltex even crossed lines of potential completion and were incorporated into the designs of houses constructed by the SFHC, the WBSC and the Henry B. Neef House. As such, steel frame houses of the 1920s were more than just an innovative approach to construction; they were also a three-dimensional catalog for the leading products of the day. (See also "Selected Steel Frame Houses: Construction Materials and Methods" in Supplementary Materials).

No Limitations? Individualism and Craftsmanship vs. Prefabrication and Standardization

A SFHC advertisement in *American Builder* reveals some of the conflicting ideas inherent in the use of steel framing in residential architecture. It explains "Many Different Plans of Standardization Available," but then immediately continues, "No special plans are necessary with Steel Framing. It does not limit the architect, builder or home owner in design."²⁰ At least momentarily, the SFHC was hoping to have it both ways by appealing to large scale-developers in need of standardization *and* architects and home owners trying to put their own unique stamp on the built environment. The SFHC would eventually forgo references to standardization in favor of flexibility in design by belaboring the lack of limitations on the architect, but the WBSC continued to court the market for standardized housing through their catalog:

Our 24-page catalog "Walter Bates Steel House Frames" shows stock designs for four, five, six, seven and eight room houses. Also construction details are shown... Be the first one in your community to erect and sell a Walter Bates Steel Frame House. Get started a new industry is here!

The SFHC's publication "Steel Framing for Dwellings" was, in contrast, described as an "illustrated booklet" that "describes this new system in detail."²¹ The WBSC was selling a product, while the SFHC was selling a system.

Despite an apparent widespread interest in steel-frame homes, there was also bound to be backlash to any proposal that dramatically changed the American home. All companies involved in steel frame house construction worked hard to alleviate concerns about the use of steel, be they architectural, economical or psychological. As the Gate City Iron Company pamphlet on the Henry B. Neef House put it, steel frame house construction "is a revolution in home building methods the public must see to be convinced." Moreover, no matter how stringently companies like the SFHC and Gate City argued there would be no limitations on design, not everyone was convinced. Moves by Richard Tappan and the

¹⁷ Sheet Steel Advertisement in *American Builder* (July 1928), 77.

¹⁸ Fenestra Advertisement in *American Builder* (November 1928), 132-133.

¹⁹ Steeltex Advertisement in *American Builder* (November 1928), 124-125. Steeltex, introduced in 1927, was a product of the Pittsburgh-based National Steel Fabric Co. (Pittsburgh Steel Co.)

²⁰ Steel Frame House Company Advertisement in *American Builder* (May 1929), 20.

²¹ SFHC Advertisement in *Pittsburgh Press*, October 21, 1928, Society Section, Page 8.

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WBSC to corner the market for standardized homes only complicated matters. An excerpt from a rather sardonic 1929 *New York Times* article found in the "Topic of the Times" section gets to the heart of why some Americans might balk at the thought of steel houses:

Those who throw up their hands in artistic horror at every fresh evidence of standardization in American life will be shocked by a plan to standardize homes. They will lament the romantic thatched cottage and make unkind remarks about Babbitt warrens. But the designer of the new type of house has arguments to confute their logic.

...Mr. Tappan got the idea of putting up machine-made houses, built of steel and concrete...[and] found it possible to standardize 75 per cent of the essential parts of the home. Variations in the remaining 25 per cent permit each house to be distinctive...it was found that the steel frame of a small house could be constructed for less than a wooden one, in much less time, and without the need of employing skilled labor.

A description of the way in which the houses are put together sounds as simple as instructions for building toys for small boys...

The standardization of American houses would definitely have been a concern during the 1920s, a decade that saw the nationalization both of commodities and culture, but skilled labor also had some potential cause for alarm. Articles like the one above or headlines like "New Steel Frame House Dispenses with Carpenters" would make even the most confident craftsman briefly consider his or her own impending obsolescence.²² By 1932, even lumber retailers were feeling the pressure, launching a campaign, "designed to offer protection against new competitive building materials."²³ In New York, changes in building and fire codes were not just, "limiting the use of lumber," but also, "permitting the use of other building materials where lumber heretofore has been employed."²⁴ Understandably, the unions and lumber associations expressed solidarity on the matter of steel frame houses. In a response to Tappan's Hillside-Jamaica project, the New York Lumber Trade Association worried the project, "would have practically eliminated the employment of carpenters," but also took comfort in, "the vigorous support of union carpenters," in their protest of the project.²⁵

Despite such reservations, many steel-framed houses constructed during the 1926-1929 period, including the Henry B. Neef House, actually offered a compromise between craftsmanship / individuality and prefabrication / standardization. In his history of the Meridian-Kessler Neighborhood in Indianapolis, Paul C. Diebold notes that while the steel-framing system used in the SFHC's Wallick House was open to standardization, this particular house was among, "...the most extreme examples of the search for individual styles that give the neighborhood its wealth of charm. We can only wonder what oddities local builders would have come up with had the economy of the 1920s held out."²⁶ The downturn in the economy after the stock market crash in 1929 would indeed affect residential architecture, no matter what material was used for in its construction.

The Cultural Context: Steel Residential Construction Outside of the Steel Industry (1926 – 1933)

The SFHC, WBSC and Gate City Iron Works were either in the steel fabrication business themselves, or directly connected to a steel fabrication company. These companies had a direct stake in promoting their product for use in residential construction. However, architects and entrepreneurial ventures outside the steel industry also entered the

²² "New Steel Frame Houses Dispense with Carpenters," in *Hartford Courant*, May 12, 1929, Page B2.

²³ "Lumber Retailers To Extend Activity," in *New York Times*, December 19, 1932.

²⁴ *Ibid.*

²⁵ *Ibid.*

²⁶ Diebold, Paul C. *The History and Architecture of Meridian-Kessler*, Indianapolis: Meridian-Kessler Neighborhood Association, 2005.

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conversation moving the idea of steel residential construction into discussions ranging from the creation of a modern architectural aesthetic to solving the housing crisis during the early years of the Great Depression.

A repeated claim by steel companies in the homebuilding business during the late 1920s was that steel framing in no way hindered the architect's or owner's ability to realize their design goals, no matter what the style. And surely, the Schaffer House, Wallick House, Neef House, and even the various WBSC houses all proved that the popular style of the day, Period/Tudor Revival, could successfully be stretched over a steel frame. Despite the general agreement among these companies, not everyone working in steel residential architecture during its early period (1926-1929) was so conformist when it came to style. By 1927, architect Richard Neutra had begun the Lovell Heath House in Los Angeles that would be completed in 1929.

Neutra paid lip service to the idea of production-line manufacturing, particularly in his appreciation for Henry Ford's automobiles, but his actual architectural creation in the Hollywood Hills was anything but.²⁷ Instead of hiding the steel frame under a traditional style, Neutra allowed his use of steel to be structurally and aesthetically expressed. As Neil Jackson explains in his discussion of the Lovell Heath House and the Maison de Verre, "Although these were not the first houses to employ a steel frame, they were the first to express the characteristic qualities of the Modern Steel House: a Modernist vocabulary, a sense of structural opportunism and an expression of the steel aesthetic."²⁸ He then goes on to explain that, in contrast, previous steel-framed houses did not externally express the structural benefits achieved by using steel; that these houses could have built of masonry or timber.²⁹ While seemingly at opposite ends of the spectrum, the relative success of both the steel companies and architects like Neutra in garnishing attention for their designs proved beyond a doubt that steel, while structurally rigid, was stylistically flexible.

However, the reeling United States economy during the 1930s pushed steel frame residential construction in new directions. Affordable housing and job creation quickly became more important factors in residential construction than product marketing and architectural expression. President Herbert Hoover's White House Conference on Home Building and Home Ownership in December of 1931 set the tone for discussions surrounding residential construction during the early years of the Great Depression. In May of 1932, Hoover praised a "small home forum" held by the American Institute of Steel Construction that discussed how steel could be used for more than just framing, but for walls of houses as well.³⁰ Two months later architects, engineers and production executives gathered in Los Angeles at the Allied Construction Industries Standardized Housing Conference. The conference culminated in the announcement of a plan to mass-produce steel-framed and concrete homes to be sold (with land) for under \$2,000.³¹ That same summer, *The New York Times* also announced the launch of General Houses, Inc., a company with a plan to create "Fordized Housing" in the United States. Much like car companies of the day, General Houses, Inc. planned to sell prefabricated all-steel houses on an installment plan, even suggesting that, "buildings can be 'traded in' for new models."³²

In the meantime, Phillip Johnson and Henry-Russell Hitchcock had successfully introduced the International Style to the United States with *Modern Architecture: International Exhibition*, held at the Museum of Modern Art in New York in 1932. While Neutra's Lowell Heath House was one of the few residences at the 1932 exhibition, Johnson's 1933 *Work of Young Architects in the Middle West* focused almost exclusively on the housing problem in the United States.³³ The exhibition

²⁷ Jackson, Neil. *The Modern Steel House*, London: E & FN Spon, 1996, 3.

²⁸ Jackson, Neil, *The Modern Steel House*, pg.3

²⁹ Ibid.

³⁰ "Small Home Forum Praised by Hoover," in *New York Times*, May 26, 1932.

³¹ "Plan A New Type of Small Homes," in *New York Times*, June 10, 1932.

³² "'Fordized' Housing Plan of New Group: General Houses, Inc. Formed," in *New York Times*, June 23, 1932.

³³ Elderfield, John. *Phillip Johnson and the Museum of Modern Art*, 51.

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featured models, plans and photographs of residences and housing projects all designed, however modestly, in the International Style. Among the exhibitors was Howard T. Fisher, who had recently joined General Houses, Inc. as their leading architect.³⁴ Modernistic designs were clearly becoming the standard for steel residential construction. Guided by Fisher's modern designs, General Houses Inc. graphically declared Revivals and Bungalows dead in a 1933 promotional pamphlet.³⁵

Only a few years earlier, steel-framed houses were far from modernist in appearance, prompting one New York engineer to lament in 1930 that, "steel houses already built resemble frame houses and this defect must be overcome," before steel could be fully utilized for residential construction.³⁶ Surely many of the steel-frame houses constructed between 1926 and 1929 are unidentifiable without close inspection, including the Henry B. Neef House. However, the rise of the International Style in architecture, and the modernist aesthetic more generally, offered a way to set steel construction apart from traditional frame houses. The new style better expressed steel-framing for innovative architects like Nuetra and flat roofs and cubist forms worked better for the prefabricated housing promoted by affordable housing forums and emerging companies like General Houses, Inc and American Houses, Inc.

By the time of Chicago's Century of Progress World's Fair opened in 1933, the inclusion of modernistic all-steel houses such as the General Houses' House, the House of Tomorrow and the Stran-Steel House were a foregone conclusion. During World War II, however, steel became a regulated commodity and the development of steel houses was halted. After the War, returning GIs needed homes in which to raise their families. Prefabricated steel houses such as Lustrons and other ventures would reopen the residential steel construction discussion.

The Henry B. Neef House

Henry Bexten Neef and Gate City Iron Works

Henry Bexten Neef was born in Pekin, Illinois on July 13, 1894.³⁷ In 1907, when he was thirteen, his family moved to Omaha, Nebraska where he would reside for the rest of his life. After serving in the U.S. Navy during World War I, Neef worked as a draftsman and later a manager at Mid-West Iron Works in Omaha until he co-founded Gate City Iron Works in 1921. On January 31, 1923, he married Helen Regina Gooch of Omaha. They would have two children, one born in 1923 and the other in 1928. Neef was active in fraternal and charitable societies, as well as professional organizations and was a member of the Miller Park Presbyterian Church, located eight blocks south of his home on 2884 Iowa Street. He was a member of the Page Fence Association, both as a member of the executive committee and the standardization committee. He was also a member of the Omaha Chamber of Commerce. As an active Mason, and a member of the John Mercer Lodge, he became involved with the Masonic Home. Neef was Chair of the Construction Committee for the campus of the Masonic Home on 52nd Street, and contributed \$15,000 toward the construction of one of the cottages, which was subsequently named for him. Finally, Neef also served on the Masonic Home Board of Trustees from 1944 until his death in 1950.

Henry Neef co-founded and managed Gate City Iron Works, located at 11th and Seward Streets in Omaha. When Neef died in 1950, the Gate City Iron Works changed ownership several times over the following years. For a short time it was owned by Syd and Betty Cate, who came to Omaha from Idaho. On April 1, 1954 Gate City, along with its Boise, Idaho

³⁴ "Architect's Show Shuns the Ornate," in *New York Times*, April 11, 1933.

³⁵ General Houses, Inc. "Promotional Mailing," Chicago: General Houses, Inc., 1933.

³⁶ "Our Future Homes May be of Steel!" in *New York Times*, October 26, 1930.

³⁷ Baldwin, R.M. *Who's Who in Omaha, 1928 - Biographical Sketches of Men and Women of Achievement*, "Henry Bexten Neef" (Omaha, Nebraska: 1928.), 140.

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subsidiary, was acquired by the Husky Oil Company of Delaware. In 1963, the Bannack Steel Corporation acquired the company, but it was repurchased by Husky just three years later.³⁸ It changed hands again in 1981 when Valmont Industries purchased it, but by 1989 the company had gone out of business.

Gate City Iron Works claimed to offer the largest and most complete stock of steel shapes in the entire Midwest in the mid-1930s. The eleven-acre plant contained a large stock yard, fabricating shop, bar, sheet and wire warehouses, and an ornamental iron fabricating plant. The company prided itself on its artistry, which they stated was a product of their vast experience and their use of modern methods and equipment.³⁹ Designers could submit their ideas for decorative pieces, or the customer could sketch his or her thoughts and have the company design them. The company's ornamental wrought iron work was made from copper-bearing steel, which ensured a longer life of the product and protection from rust and corrosion. Several finishes were available, including natural iron, aged bronze, and a colorful polychrome for the more ornate pieces. Being located directly adjacent to four railroad lines, which in turn connected with ten trunk lines in Omaha, ensured that items could readily be shipped throughout the country. They also had a fleet of six delivery trucks for local deliveries.

Considering the growing national interest in steel-framed housing during the late 1920s, it is not surprising that a young steel entrepreneur in Omaha would see residential architecture as a potential new area for growth in his business. And how better to demonstrate the possibilities of building with steel products than to build a model home for himself to act as a public testimonial of his faith in the innovation. Although one could speculate that perhaps the birth of a second daughter in 1928 necessitated more room for the family or that the business was doing particularly well, the only thing that is clear is that Henry B. Neef saw the construction of his new home in 1929 as an opportunity to experiment and potentially expand his business.

Bilger Kvenild

Neef selected architect Bilger Kvenild to design his model home. Kvenild was born in Norway, and studied architecture at Trondhiem's Technical College, graduating in 1901. After travel and further study in Germany, France and England, Kvenild immigrated to the United States. Although it is unclear precisely when Kvenild came to Omaha, his wife Magrit and two year old son, John, immigrated to Omaha in September 1913.⁴⁰ Birger Kvenild was listed in the 1914 Omaha City Directory as a draughtsman with W. E. Stockham, and living at 3510 Pine Street.⁴¹ He built the house for his wife, Magrit, the listed owner, in 1913 according to Omaha Building Permits. He would maintain an office in this home.⁴²

Beginning in 1918, Kvenild focused his architectural practice almost exclusively on residences. He regarded the architect as an artist or craftsman who should supervise every detail of construction, including the engineering and contracting aspects. Kvenild also worked for the city of Omaha as the secretary and architect for the Omaha Planning Commission, and participated in the design of the city's streets, boulevards and other developments.⁴³

³⁸ "Husky Oil Company of Delaware: List of Details" Leeman Brothers Collection, Twentieth Century Business Archives, Harvard Business School, Baker Library, Historical Collections, accessed online.

³⁹ *Ornamental Iron for Enduring Beauty and Strength* (Omaha, Nebraska: Gate City Iron Works, undated catalog), 1.

⁴⁰ Ellis Island Passenger Arrival Records, 1892-1924.

⁴¹ Omaha City Directory, 1914.

⁴² Kenneth Bjork, *Saga in Steel and Concrete: Norwegian Engineers in America* (Northfield, Minnesota: Norwegian-American Historical Association, 1947), 414.

⁴³ *Ibid.*

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"Nebraska's First Steel Frame Residence"

In March 1929, the Henry B. Neef House was completed, and just like any of the steel frame houses being constructed across the United States during this period it received a good deal of attention. The project was announced in the *Omaha Sunday World-Herald*. A photograph of the house was accompanied by a paragraph describing the project and inviting the public to view the building.

The all-steel constructed house built by Henry B. Neef and designed by B. Kvenild, architect, is finished and has been opened for inspection. The home, which attracted attention throughout the middle west during its construction, is shown above. It is located at Iowa Street and Martin Avenue on North Thirtieth Street, Florence Field. It is the first all-steel frame house to be built in Omaha. The house is said to be fireproof, lightning proof and vermin proof. The plan of construction is adaptable to any type or design of structure.⁴⁴

Gate City Iron Works also published a pamphlet on the Neef House, extolling the virtues of building residences in steel:

Skyscrapers demand steel for strength; steel and wrought iron for interior and exterior finish and trim because of space economy and fire resistance; concrete for floors to simplify the problems of sanitation, fire prevention and wear – and so on down the specification list.

Commerce and industry have tested steel as compared with other structural materials over a period of years and find it has the advantage of every respect. Now the steel frame home is the natural result of building trends. It is not an experiment, for it follows right in the footsteps of those structural masterpieces, the skyscraper and the tower building, neither of which would be possible without steel. The steel frame home may be considered a "miniature skyscraper" in every sense of the word.⁴⁵

In addition to touting the strength and fire resistance aspects of steel construction, the pamphlet also explains the ease with which a steel frame house can be constructed. While a wood frame house might require a number of skilled carpenters and framers, the steel members of the framework of a steel house are measured to size in the factory, and notched in appropriate places for the framing pieces to be joined together and bolted to the foundation. In theory, they argued, a few men with hand tools could erect the house quickly. In general, they gave the impression that it would practically build itself.

The company also asserted that aside from the framing, which could only be seen in the basement, the house was finished like any other traditional house. Gate City Iron Works did emphasize, however, that appearance aside, the materials they used were modern and innovative. They used three-quarter inch Sheetrock in order to avoid the delays often associated with waiting for plaster to dry.⁴⁶ They also used "Steel-Tex", a paper with steel fabric reinforcement, laid over the steel floor joists. A two inch layer of concrete was then poured on top of the paper and the weight created a natural sagging which reinforced the center between the joists and provided extra strength. On the concrete floors and driveway, Minnequa Triangle Mesh was used to reinforce the concrete and to prevent cracking. The stairs were made entirely of steel, with treads filled with concrete and covered with linoleum.⁴⁷ The Gate City Iron Works was also a purveyor of steel Fenestra brand windows. Fenestra casement windows were used throughout the house, along with roll

⁴⁴ *Omaha Sunday World-Herald*, 17 March 1929.

⁴⁵ *Nebraska's First Steel Frame Residence*. Omaha, Nebraska: Gate City Iron Works, undated advertisement.

⁴⁶ The interior walls and ceilings of all other steel frame houses of the time were finished with plaster on metal mesh wire fabric (See also "Selected Steel Frame Houses: Construction Methods and Materials" in Supplementary Materials).

⁴⁷ *Ibid.*

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screens, window adjusters and latches. The steel windows were thought to be a huge improvement over wood windows, as they would not shrink or swell, and could not rot or warp.

The "Welded Steel-Frame House"

While the Neef House is certainly Nebraska's best and earliest example of the broadly conceived innovation of the "all steel house" during the late 1920, it may also represent a significant and specific aspect of that innovation on a national scale. In 1928-1929 the Shaffer House required no cutting, welding, fitting or riveting," while in the Neef House, "each joint throughout the frame is either bolted or welded."⁴⁸ On the one hand, welding suggested structural soundness, a major selling point for steel residential construction. On the other hand, welding required skilled laborers, thereby increasing construction time and costs, which did not necessarily help the argument for the use of steel. Either way, of the similar houses constructed between 1926 and 1929, only Gate City Iron Works acknowledged and promoted welding in steel frame residential construction in its advertisements for the Neef House.

However, welding apparently did not catch on as quickly as Gate City Iron Works might have hoped, as indicated by a 1932 *New York Times* article "Welded Steel Houses." The article explains:

All-welded steel frame houses are regarded as a possibility of the future according to a report prepared for the Engineering Foundation by William Spraragen, secretary of the American Bureau of Welding...In the United States, several hundred steel structures have been totally or partially welded. No failure has occurred on a welded joint.⁴⁹

The article notes the Southern California Edison Company building in Los Angeles and the Dallas Light and Power Company building, but does not discuss any examples of the use of welding in residences. At least in New York in 1932, welded steel houses were still just a "possibility" despite the fact that examples like the Neef House had already existed since at least 1929. No doubt there is a premium on being first when it comes to historical significance, but the phenomenon of steel domestic architecture had many firsts. While it may never be known who actually built the first steel houses of one type or another, it is clear that many parties were contributing to the collective innovation of the all-steel house in the late 1920s including Gate City Iron Works in Omaha, Nebraska. Nearly ten years later, the company was still advertising itself as the "pioneer" of the "welded steel-frame house."⁵⁰ (See Supplementary Materials, Page 28).

"Ornamental Iron for Enduring Strength and Beauty"

Innovations aside, this "model home" was a showroom for all of the decorative and ornamental products that the Gate City Iron Works could also provide. Wrought iron gates grace the doorways between several rooms, creating grand entrances. Grilled frames and arches were used in doorways and recessed spaces on the interior and exterior. Drapery rods and tie backs were supplied in the rooms, as well as light fixtures, both permanent installed sconces and lanterns, as well as floor lamps. Medicine cabinets and ironing board cabinets were all steel. The fireplace's damper, andirons and fender seat were all custom-designed for the house by the company's design team. The banister and newel post, as well as all the spindles, were hand wrought at the Gate City Iron Works, including the rosettes and flowers that embellished them. Outside, the house featured a weathervane, a sundial, a columned arbor that outlined a pond, laundry lines, a flag pole, copper gutters, a decorative iron fence along the front of the property and Page Chain Link Fencing along the back.⁵¹ Every possible decorative iron or steel product that could be conceived and used on a residential structure was used.

⁴⁸ *Ibid.*, 75 and Gate City Iron Works, "Nebraska's First Steel Frame Residence," pamphlet, c. 1929, 3.

⁴⁹ "Welded Steel Houses," in *New York Times*, 5 June 1932.

⁵⁰ Gate City Iron Works, "Ornamental Iron for Enduring Strength and Beauty," catalog, c. 1938, 25.

⁵¹ *Ibid.*

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Photos of the Neef House and its wares were featured in Gate City Iron Work catalogs throughout the next decade. (See Supplementary Materials, Pages 24-27).

More broadly, it is noteworthy that while many steel frame houses of the era were trending toward standardization, Gate City Iron Works still focused on the potential for artistry in ornamental iron. The advertizing pamphlet published during the construction of the Neef House reads, "Particular attention is invited to the ornamental iron work both inside and outside the building... It is an accommodating material that may be shaped not only to construction but to the fancy of the individual owner."⁵² The extensive use of ornamental iron in the Neef House illustrates how Gate City Iron Works was able to offer some prefabrication in residential construction with sacrificing artistry and craftsmanship. As such, the Neef House represents one of the most important themes in steel house construction during the late 1920s: the debate between standardization and individuality. The beauty and prolificacy of ornamental iron also sets the Neef House apart architecturally from its contemporaries, whether they are steel-framed or traditional wood-frame residences.

Comparative Properties

Steel Residential Construction in Nebraska

It is unclear how many people may have come to view the innovative Neef House, but clearly the house was unique for Omaha and Nebraska. Houses including steel in their construction would have been extremely rare in Nebraska in 1929. For instance, in Lincoln, Nebraska's capital and second largest city, only a handful of houses constructed before that date are known to use steel in some form.⁵³ However, with one exception, these predate the national phenomenon of steel residential architecture as represented by the Neef House and may be classified as either eccentric or elite. Included in this group are the c. 1906 Wettling House at 1906 Washington and the 1909-1911 Ferguson House at 1445 K Street. The former is a Four-Square listed as "Fireproof Const'n, except exposed steel supporting tile, R'f. Conc. Fl's & top ceiling," on the 1928 Sanborn Fire Insurance Map. Outside of this, however, very little is known about the Wettling House. Its construction did not garner much attention and it is not associated with any known trend in residential construction.

The 1909-1911 Ferguson House, on the other hand, is very well documented and was listed in the National Register in 1972. According to the National Register nomination, "Steel beam framework was used in the second story plate while in all the first level floors a concrete slab system is used. This marks a very early use of these materials in residential construction."⁵⁴ Despite its status as one of Nebraska's earliest houses to utilize steel, it was listed for its association with prominent Lincoln capitalist William H. Ferguson and for its architectural significance as Nebraska's best representation of the Renaissance Revival style as applied to a residence. In contrast to the Neef House which was built to demonstrate how steel could be used for residential construction on a wide scale, the Ferguson House's second-story steel frame was an innovation reserved only for the very wealthy.

A potentially more comparable property in Lincoln would be the house constructed at 3224 East Pershing in Lincoln's prominent Woodsshire Neighborhood for Raymond N. Westover of the Westover Steel Co. in 1927. Westover was certainly a contemporary of Henry B. Neef and the construction of his house falls with the period of steel residential construction and marketing by steel companies (1926-1929), but the Westover House, while considered fireproof only utilized steel in its reinforcing concrete and potentially a handful of frame members.⁵⁵ As such it does meet the definition

⁵² *Nebraska's First Steel Frame Residence.*

⁵³ Zimmer, Ed. Email Correspondence, 09 November 2009. Zimmer is the Historic Preservation Planner (CLG Coordinator) Lincoln-Lancaster County Planning Department.

⁵⁴ Kolberg, Persijs. "National Register of Historic Places Nomination, William H. Ferguson House," 1972.

⁵⁵ Zimmer, Ed. Email Correspondence, 09 November 2009; 1928 Sanborn Insurance Map, Lincoln, Nebraska.

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of an all-steel or steel-framed house. Moreover, there is no evidence that it was marketed as a model home that promoted an innovative system of construction like the Neef House. Outside of Lincoln, Nebraska no other houses constructed before or during 1929 even partially employing a steel-framing system have been documented by the Nebraska Historic Resources Inventory and Survey Program.⁵⁶ Even if there is an extant property that compares structurally to the Neef House, it seems unlikely that it could so powerfully convey its association with the phenomenon of the "all-steel house" in the United States during the late 1920s and early 1930s.

Steel Houses and the National Register of Historic Places

A handful of pre-WWII steel have been listed in the National Register at all levels of significance in the areas of architecture, engineering, technology, industry and invention. These include:

1. Properties associated with the Century of Progress World's Fair (Chicago, 1933-1935)
 - A. Beverly Shores—Century of Progress Architectural District in Indiana
 - B. Winslow Ames House (American Houses, Inc.) in Connecticut
 - C. House of Steel (General Houses, Inc.) in Connecticut [Nomination Pending]
 - D. Ensign House (Stan-Steel Corp.) in the 9th St. West Historic District in West Virginia
2. Houses of the Hobart Welded Steel House Company (1932-1942) in Ohio
3. Houses of the General Houses, Inc. and American Houses, Inc.
 - A. American Houses, Inc.: Earnest and Helen Eggiman House (1936 Motohome) in Wisconsin
 - B. General Houses, Inc.: Parkbelt Homes (1938) in the Greenbelt Historic District in Maryland
4. Lovell Health House (Richard Neutra, 1927-1929) in California.

None of these homes compare to the structurally innovative, but stylistically traditional, homes constructed in the late 1920s by Richard Tappan, the Steel Frame House Co., the Walter Bates Co., Gate City Iron Works, or others. If any homes falling within this category are listed in this National Register, they are in historic districts and not recognized individually. The Shaffer House and Neef House many not look as innovative as the houses featured at the Century of Progress World's Fair and those that followed in the 1930s. These later all steel houses combined the steel frame technology with Sears-inspired catalog marketing and a modern aesthetic to create obvious interpretations the "House of Tomorrow." However, they were simply building on the innovative systems and aesthetics of their predecessors.

Among the stylistically traditional houses constructed during the early period of steel residential construction (1926-1929), the Henry B. Neef Home in Omaha, Nebraska was not the most significant or widely discussed in American culture. However, today it serves as a state-wide and regional exemplar of the advent of the "all-steel house" and the aura of innovation and future possibility that it represented in the late 1920s and early 1930s. Moreover, it was one of the first residences within the broadly conceived invention of steel houses to utilize welding in its steel framework.

Conclusion

Companies like Walter Bates Construction Company, Steel Frame House Company and Gate City Iron Works, produced and promoted stylistically traditional steel-framed houses for a very short period of time. While steel residential

⁵⁶ NeHRSI (formerly NeHBS) is administered by the Nebraska State Historic Preservation Office, 1974-present (ongoing).

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construction never developed into the widespread market these enterprising steel concerns may have hoped for, the arrival of the "all steel house" during the economic boom of the late 1920s captured a great deal of attention in the United States and created optimism about the future. Like most inventions, this one had wide-reaching significance. It generated excitement and discussion in fields of commerce, industry, community planning, social history, engineering, and architecture. The Henry B. Neef House represents Nebraska's earliest and best property associated with this significant innovation in American history, and is therefore eligible at the statewide level under Criterion A in the area of invention.

Furthermore, the Henry B. Neef House is eligible for listing in the National Register of Historic Places under Criterion C at the statewide level for its architectural significance. It is a unique and unrivaled example of steel frame residential architecture in Nebraska. The house has excellent historic integrity. There have been only extremely minor changes in the building, including the screening of the porch and the loss of some of the more minor ornamental iron pieces. A vast majority of iron ornamentation that originated with the house is still intact, including some items that seem very transient in nature, such as curtain rods, decorative grilles and various lamps. Even the lawn ornamentation remains. Any other example of a steel frame house in Omaha, or Nebraska at large, dating from this period, would be unable to compete with the Neef House's innovative structural design or its extensive ornamental iron accoutrements.

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- "Steel for Press Model Home Fabricated Here," October 21, 1928.
- Steel Frame House Company, Advertisement, October 21, 1928.

Reading Eagle (Penn.) (accessed at <http://news.google.com/newspapers>, 14 Dec. 2009)

- * "Synthetic Homes Take Queer Forms," September 16, 1927.

Berkley Daily Gazette (accessed <http://news.google.com/newspapers>, 14 Dec. 2009)

- *"Mills Plan to Sell Steel for Dwellings' Use," January 22, 1926.
- *"Predict Building of Fireproof Homes," October 27, 1927.

Hartford Courant (accessed a <http://news.google.com/newspapers>, 2 Feb. 2010)

- "New Steel Frame House Dispenses with Carpenters," May 12, 1929.

*Indicates article was used for Supplementary Materials only.

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Geographical Data

Henry B. Neef House

Name of Property

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Boundary Description

Florence Field, Lot 8, Block 9 (triangular, irregular), Omaha, Douglas County, Nebraska

Boundary Justification

The boundary includes the entire lot historically associated with the Henry B. Neef House and follows historic property divisions.

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Photographs

Henry B. Neef House

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- Photo 01 of 25.** West (front) and south façades, facing northeast.
- Photo 02 of 25.** West (front) façade main entrance, facing northeast.
- Photo 03 of 25.** East (rear) elevation, facing west.
- Photo 04 of 25.** East (rear) elevation balcony off of stairwell, facing west.
- Photo 05 of 25.** North façade, garage and enclosed porch, facing south.
- Photo 06 of 25.** North façade enclosed porch wrought iron railing detail, facing southwest.
- Photo 07 of 25.** Basement ceiling with visible steel framing, facing southeast.
- Photo 08 of 25.** Living room including original fireplace, fireplace tools, and wrought iron lamp, facing northwest.
- Photo 09 of 25.** Wrought iron door and surround leading to sun room, facing south.
- Photo 10 of 25.** Living room looking into foyer and dining room, facing north.
- Photo 11 of 25.** Doorway from dining room looking into foyer, facing southwest.
- Photo 12 of 25.** Dining room looking at bay casement windows, facing west.
- Photo 13 of 25.** Interior of enclosed porch on north façade and French doors leading to dining room, facing southeast.
- Photo 14 of 25.** Kitchen countertop and cabinets, facing southeast.
- Photo 15 of 25.** Kitchen stove area and ceiling vents, facing southwest.
- Photo 16 of 25.** First story half bathroom off of kitchen, facing west.
- Photo 17 of 25.** Foyer with doorway to dining room and stairway to second floor, facing east.
- Photo 18 of 25.** Wrought iron flower detail on stairway, facing north.
- Photo 19 of 25.** Stairway looking down on landing, wrought iron drapery rods and original door to balcony, facing east.
- Photo 20 of 25.** Second story full bathroom, original wall tiles, sink, and drapery rod, facing east.
- Photo 21 of 25.** Western side of lot, original pedestal and rail for sundial, facing west.
- Photo 22 of 25.** Western side of lot, original steel gazebo, facing southwest.
- Photo 23 of 25.** Eastern side of lot, non-contributing concrete outbuilding, facing northeast.
- Photo 24 of 25.** Wrought iron fence along Iowa Street, facing south.
- Photo 25 of 25.** Driveway gate, facing southeast.

All photographs taken by Patrick Haynes, Nebraska State Historical Society on October 23, 2009.

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Supplementary Material

Henry B. Neef House

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The use of ornamental wrought iron in the modern home gives a most pleasing combination of grace, beauty, dignity and strength.

This old granite treasure chest, probably made in Holland or Spain about 1650, and bored for two and a half centuries, shows the sturdy wrought iron stretched by time.

Wrought iron gates erected 1797 at Chiswick, Philadelphia. Their beauty and dignity is as marked today as when installed.



Enduring
BEAUTY
and STRENGTH

Architects and builders are turning more and more to wrought iron for the expression of lasting beauty and for pleasing grace of design coupled with age-long durability.

Artistry in wrought iron comes only with experience, and it is this experienced craftsmanship, plus modern manufacturing methods and equipment, that makes Gate City ornamental wrought iron so satisfactory to architect, builder and owner.

Only a few of our many installations can be shown in this catalog. Most of them are from our own designs, others from architects' and customers' suggestions and sketches. Our ornamental wrought iron work is made from copper-bearing steel to insure longer life from rust and corrosion. Many finishes are available, from natural iron and old bronze to colorful polychrome.

Send us your sketches and specifications for estimating, or ask for our suggestions. When referring to designs shown here, please specify design number.

GATE CITY
IRON WORKS

Ornamental Iron
Structural Steel
OMAHA, NEBRASKA

Photo 1: Top left photo showcasing the wrought iron surround and door leading from the living room to sun room in the Neef House. Photo Credit, *Ornamental Iron for Enduring Beauty and Strength* (Omaha, Nebraska: Gate City Iron Works, undated catalog), 1.

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Henry B. Neef House

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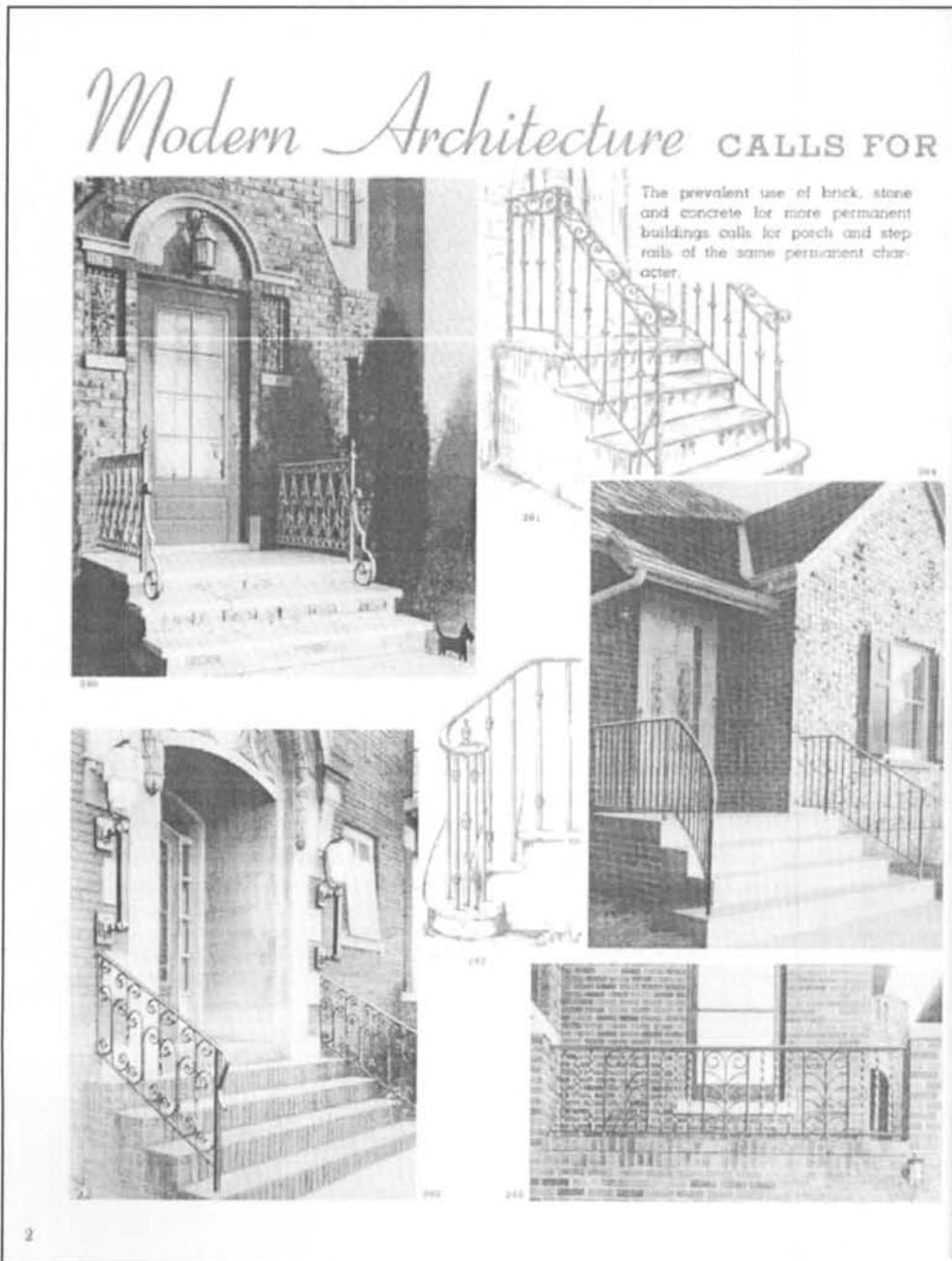


Photo 2: Top left photo displaying the entrance to the Neef House. Photo Credit, *Ornamental Iron for Enduring Beauty and Strength* (Omaha, Nebraska: Gate City Iron Works, undated catalog), 2.

United States Department of the Interior
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Supplementary Material

Henry B. Neef House

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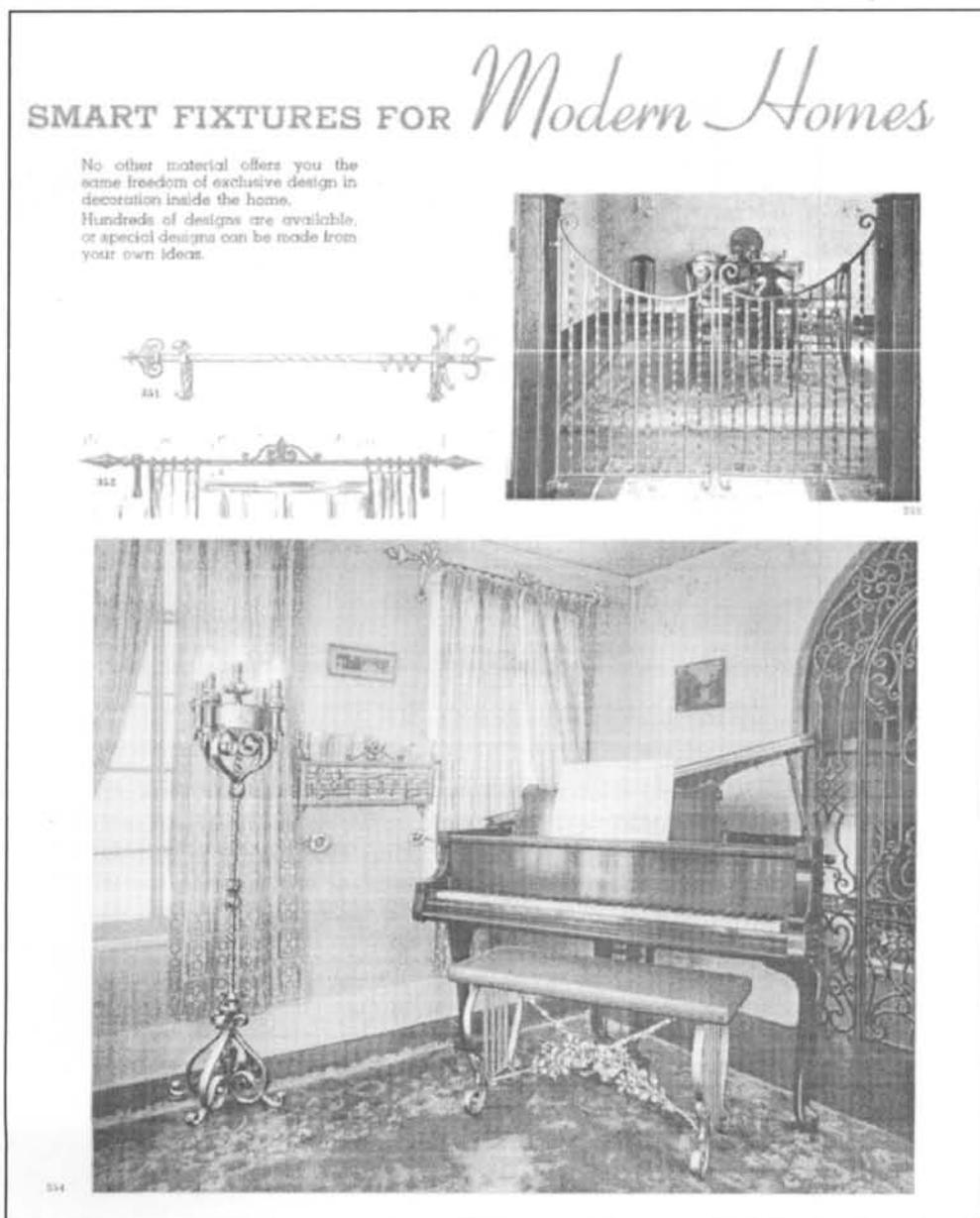


Photo 3: Bottom image depicting the wrought iron products incorporated into the Neef House. This view of the Neef House faces to the northwest, with part of the living room fireplace visible through the door on the right. Photo Credit, *Ornamental Iron for Enduring Beauty and Strength* (Omaha, Nebraska: Gate City Iron Works, undated catalog), 13.

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Ornamental Wrought Iron Fences—



179

No other fence will add as much of dignity, prestige and lasting protection to private and public grounds as genuine wrought iron.

The variety of design, the graceful lines, the strength, and the long life of Gate City wrought iron fences can be seen in the many installations throughout the Middle West. Only a few of these installations are shown here.

Many additional designs are here for your selection, or we will design and build a fence from your sketch or suggestion.

Write for our complete catalog on wrought iron fences and gates—protection through the centuries.



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193. This beautiful entrance combines gate, arch and gateway of wrought iron, and is controlled by an electric gate opening device.



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Photo 4: Center right photo showing the gate, fence, and electric gate opener at the Neef House. Facing to the southeast across the backyard of the Neef House. Photo Credit, *Ornamental Iron for Enduring Beauty and Strength* (Omaha, Nebraska: Gate City Iron Works, undated catalog), 18.

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Henry B. Neef House

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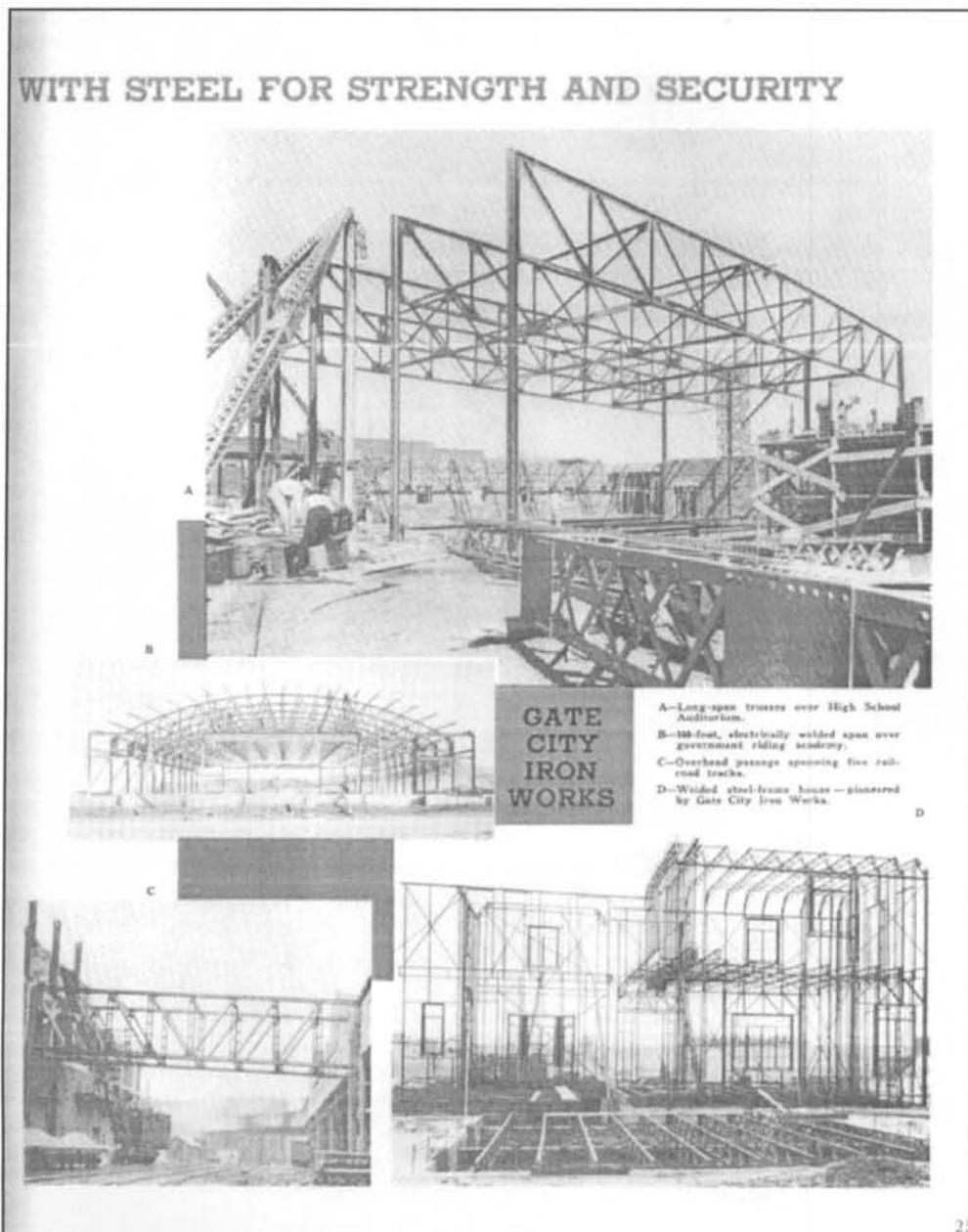


Photo 5: The catalog entry Item D (lower right) reads, "Welded steel-frame house—pioneered by Gate City Iron Works." Photo Credit, *Ornamental Iron for Enduring Beauty and Strength* (Omaha, Nebraska: Gate City Iron Works, undated catalog), 25.

Those Designing and Constructing Steel Framing for Houses from 1926 to 1930

Property Name	Address	City	Cost	Dates	Architect	Builder/ Contractor	Jones & Laughlin Corporation; Pittsburgh, PA	McClintic- Marshall Corp.; Pittsburgh, PA (Steel Frame House Co.)	Walter Bates Steel Corp.; Gary, IN	Gate City Steel; Omaha, NE	Stran-Steel Corp; Detroit, MI
Jamaica-Hillside house	E. side of 215th Place, 300' N. of Hillside Ave.	NYC, NY (Queens)		Nov. 7, 1926 (NYT); Oct. 16, 1927 (NYT)	Tappan, Robert (NY)	South Shore Engineering Corp.	X				
proposed homes	unknown	Queens (L.I.), NY; Bronx, NY; Amityville (L.I.), NY; Copiague (L.I.), NY		May 29, 1927 (NYT)	Tappan, Robert (NY)	Edwin F. Howell and the Smith Building Co.	X				
steel frame house	unknown	Cleveland, OH	\$45,000	1927 (AISC Bull.); Nov. 1928 (PS)							
Forest Hills house	unknown	Queens (L.I.), NY		Oct. 15, 1927 (PP); Oct. 29, 1927 (BDG); Apr. 8, 1928 (NYT); Nov. 1928 (PS)	Tappan, Robert (NY)		M (junior or "T" beams)	X			
Walter Bates House #1	W. 6th Ave. & Roosevelt St.	Gary, IN		March, 1928 (AB); Nov. 1928 (PS)	J.M. Cohen			X			
Edgewood Acres (Pittsburgh Press) house	SE of Wilkensburg on Ardmore Blvd. (lot 434 of Edgewood Acres)	Pittsburgh, PA		June 28, 1928 (PP); Sept. 9, 1928 (PP)	Broderick, J.C. (Broderick Firesafe Homes, NY)	A&S Wilson Co.	M (junior or "T" beams)	X			
proposed model home	unknown	Akron, OH		Aug. 22, 1928 (NYT)	Tappan, Robert (NY)?		M (junior or "T" beams)	M			
Henry B. Neef House	2884 Iowa St., Florence Field Subdiv.	Omaha, NE	\$6,500	Oct. 15, 1928 (COBP); March 17, 1929 (OWH)	Kvenild, Birger (Omaha, NE)				X		
Walter Bates House #2	545 Taft St.	Gary, IN		Nov. 4, 1928 (CDT)				X			
steel frame house	unknown	Detroit, MI		Nov. 1928 (PS)	Tappan, Robert (NY)		M (junior or "T" beams)	X			
W.H. Shaffer, Jr. House	Mission Hills section of Mt Lebanon, PA (a suburb of Pittsburgh, PA)	Pittsburgh, PA		Nov. 1928 (AB)	Lyon & Taylor (NY)	L.O. Maines Construction Co. (Pitt.)	X (junior or "T" beams)	X			
Stran-Steel house	unknown	Detroit, MI		1929 (SSH CWFB)							X
J. Archibald House	Corner of Woodstock Ave. & Shenidan Rd.	Kenilworth, IL		Dec. 8, 1929 (CT)	Maher & McGrew (Evanston, IL)						
Steel Frame House Co. - multiple locations	unknown (except Indianapolis house; see Frederick Wallick House, above)	Philadelphia, PA; Lancaster, PA; Toledo, OH; Columbus, OH; Indianapolis, IN; Syracuse, NY; Rochester, NY		July 1929 (AB)			M (junior or "T" beams)	X			
Frederick Wallick House	5701 Pennsylvania Ave.	Indianapolis, IN		July 1929 (AB); March 1930 (AB)	Wallick, Frederick (Indianapolis, IN)	Wallick, Frederick	M (junior or "T" beams)	X			

NYT = New York Times

AISC Bull. = American Institute of Steel Construction Bulletin

PS = Popular Science

PP = The Pittsburgh Press

BDG = Berkeley Daily Gazette

AB = American Builder

COBP = City of Omaha Building Permits

OWH = Omaha World Herald

CDT = Chicago Daily Tribune

SSH CWFB = Stan-Steel Chicago World's Fair Brochure

















































