NPS Form 10-9 Oct. 1990)	00			OMB No. 10024
Inited State Iational Par	es Department of the Interio rk Service	or	RECEIVED 228	
	Register of Historic F tion Form	Places	DEC 1 9 2008	
. Name o	f Property		NAT. REGISTER OF HISTORIC PLAC NATIONAL PARK SERVICE	ES
istoric na	me 130 Mohegan Aven	ue		-
ther nam	e/site num <u>ber</u>			
. Locatio	'n			
treet & to	WN 130 Mohegan Avenu	ue	NAn	ot for publica
ity or tow	N New London		Ν	A vicinity
	equest for determination of eligibili	lity meets the documentation star	t, as amended, I hereby certify that this 🛛 ndards for registering properties in the Natio	nal Register
prope	storic Places and meets the proce	edural and professional requirem he National Register criteria. I red (ents set forth in 36 CFR Part 60. In my opini commend that this property be considered si dditional comments.)	ion, the
	storic Places and meets the proce erty I meets I does not meet th ationally I statewide I locally. (edural and professional requirem he National Register criteria. I red (ents set forth in 36 CFR Part 60. In my opini commend that this property be considered si dditional comments.)	ion, the
prope □ na Signa	storic Places and meets the proce erty I meets I does not meet th ationally I statewide I locally. (ature of certifying official/Title	edural and professional requirem he National Register criteria. I red (Dee continuation sheet for a <u>Security Direct</u> , SHPO	ents set forth in 36 CFR Part 60. In my opini commend that this property be considered si dditional comments.)	ion, the ignificant
propu □ na Signa <u>Con</u> State	storic Places and meets the proce erty I meets I does not meet th ationally statewide locally. (ature of certifying official/Title necticut Commission on Culture a e or Federal agency and bureau	edural and professional requirem he National Register criteria. I red (Dee continuation sheet for a <u>Securitiene Divect</u> , SHPO and Tourism. Historic Preservatio	ents set forth in 36 CFR Part 60. In my opini commend that this property be considered si dditional comments.)	ion, the ignificant ervation Office
propu □ na Signa <u>Con</u> State	storic Places and meets the proce erty I meets I does not meet th ationally statewide locally. (ature of certifying official/Title <u>necticut Commission on Culture a</u> a or Federal agency and bureau y opinion, the property I meets I	edural and professional requirem he National Register criteria. I red (Dee continuation sheet for a <u>Securitiene Divect</u> , SHPO and Tourism. Historic Preservatio	ents set forth in 36 CFR Part 60. In my opini commend that this property be considered si dditional comments.) <u> w (1-25-08</u> Date <u> n and Museum Division/State Historic Prese</u> egister criteria. (See continuation sheet f	ion, the ignificant ervation Office
propu □ na Signa Con State In my comr Signa	storic Places and meets the proce erty I meets I does not meet th ationally statewide locally. (ature of certifying official/Title <u>necticut Commission on Culture a</u> or Federal agency and bureau y opinion, the property I meets I ments.)	edural and professional requirem he National Register criteria. I red (See continuation sheet for a <u>Secentre Direc</u> , SHPO and Tourism. Historic Preservatio	ents set forth in 36 CFR Part 60. In my opini commend that this property be considered si dditional comments.) <u> w (1-25-08</u> Date <u> n and Museum Division/State Historic Prese</u> egister criteria. (See continuation sheet f	ion, the ignificant ervation Office
propula na Signa Con State In my comr Signa State	storic Places and meets the proce erty I meets does not meet the ationally statewide locally. (ature of certifying official/Title <u>necticut Commission on Culture a</u> a or Federal agency and bureau y opinion, the property meets ments.) ature of certifying official/Title e or Federal agency and bureau ature of certifying official/Title	edural and professional requirem he National Register criteria. I red (See continuation sheet for a <u>Security Divid</u> , SHPO and Tourism. Historic Preservatio	ents set forth in 36 CFR Part 60. In my opini commend that this property be considered si diditional comments.) <u> w (1-25-08</u> Date n and Museum Division/State Historic Prese egister criteria. (See continuation sheet f	ion, the ignificant ervation Office
propula na Signa Con State In my comr Signa State State Nationa hereby certify	storic Places and meets the proce erty I meets does not meet the ationally statewide locally. (ature of certifying official/Title <u>necticut Commission on Culture a</u> a or Federal agency and bureau y opinion, the property meets ments.) ature of certifying official/Title e or Federal agency and bureau	edural and professional requirem he National Register criteria. I red (See continuation sheet for a <u>Security Divid</u> , SHPO and Tourism. Historic Preservatio	ents set forth in 36 CFR Part 60. In my opini commend that this property be considered si diditional comments.) <u> w (1-25-08</u> Date n and Museum Division/State Historic Prese egister criteria. (See continuation sheet f	ion, the ignificant ervation Office

130 Mohegan Avenue	Pa	ge 2	New	London,	Conn.			
Name of Property	S			nty and Sta				
5. Classification	a de tars	A. C. C.	11 - T	i nation				
Ownership of Property (check as many boxes as apply)	Category o (check only one box)	(Do no	Nur t include p	mber of previously I	f Reso	ources in	s with the cou	hin Propert
		c	ontrib	uting		Nonco	ontrib	uting
x private	x building(s)		1			_		_ buildings
public-local	district	_	_					sites
Dublic-State	🗌 site	1 - S_	_		_		_	structure
Dublic-Federal	structure 🗌							objects
	🗌 object	-	1			0		Total
			1					
(Enter "N/A" if property is not part of a m	and to be the start of means 3.4	in the						
(Enter "N/A" if property is not part of a m								
NA			NA					
			Curr	ent Fund ronly cate		m instru	ctions)	
NA 6. Function or Use Historic Function		8. Jen - 4	Curr (Enter		gories from			nt)
NA 6. Function or Use Historic Function (Enter only categories from instructions)			Curr (Enter	r only cate	gories from			1t)
NA 6. Function or Use Historic Function (Enter only categories from instructions)			Curr (Enter	r only cate	gories from			nt)
NA 6. Function or Use Historic Function (Enter only categories from instructions)			Curr (Enter	r only cate	gories fro			nt)
NA 6. Function or Use Historic Function (Enter only categories from instructions)			Curr (Enter	r only cate	gories fro			nt)
NA 6. Function or Use Historic Function (Enter only categories from instructions) DOMESTIC: residential			Curr (Enter DOME	r only cate	gories from	tial	(vaca)	nt)
NA 6. Function or Use Historic Function (Enter only categories from instructions) DOMESTIC: residential 			Curr (Enter DOME	stills	gories from	tial	(vaca)	nt)
NA 6. Function or Use Historic Function (Enter only categories from instructions) DOMESTIC: residential			Curr (Enter DOME Mate (Enter found	erials	gories from esiden gories from CONC	minstrue	(vaca)	nt)
NA 6. Function or Use Historic Function (Enter only categories from instructions) DOMESTIC: residential			Curr (Enter DOME Mate (Enter found	erials ronly categorials ronly categorials lation	gories from esiden gories from CONC PRESS	minstrue RETE SED ST	(vaca) ctions) EEL	nt) 1980s ROOF)
NA 6. Function or Use Historic Function (Enter only categories from instructions) DOMESTIC: residential			Curr (Enter DOME Mate (Enter found Walls	erials ronly categorials ronly categorials lation	gories from esiden gories from CONC PRESS	m instruction RETE SED ST GLE, V	(vacan ctions) EEL	1980s ROOF)
NA 6. Function or Use Historic Function (Enter only categories from instructions) DOMESTIC: residential 7. Description Architectural Classification (Enter only categories from instructions)			Curr (Enter DOME Mate (Enter found Walls	erials ronly categorials ronly categorials lation	gories from esiden gories from CONC PRESS T SHING	minstrue RETE SED ST GLE, V TAR	(vacan ctions) EEL	1980s ROOF)

X See continuation sheet(s) for Section No. 7

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section _7_ Page _1_

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, CT

Description

The building at 130 Mohegan Avenue is a one-story modernistic/ International Style dwelling constructed of prefabricated pressedsteel panels. This small "machine for living" was erected in late 1933 by the Chicago-based company General Houses, Inc. It sits along Connecticut Route 132 (Mohegan Avenue) in New London, one in a row of six early 20th century dwellings, all now owned by Connecticut College. Four of the six buildings are two- to three-story wood-frame homes; the remaining two are early modern prefabs featuring steel construction (Photograph 1). This row of buildings, in the southeastern corner of the college's campus, is separated from the main campus by a large parking lot and by landscaped areas with mature trees and shrubs. Despite the presence of a busy highway nearby, the setting retains much of its pre-World War II residential character.

The metal house is a rare surviving example of General Houses' original patented frameless construction, in which flanged 14-gauge steel panels, approximately 4 feet by 9 feet, are bolted to the foundation, to one another, and to roof panels of similar steel construction. Although the original flat roof, an important characterdefining feature, has been hidden by a second, gabled roof, it and the bulk of the house's historic material remain, and the building retains a high degree of integrity in terms of location, design, setting, materials, workmanship, feeling, and association (Photographs 1-2).

The house has a rectangular plan, 21 feet by 37 feet, with the narrower elevations at east and west. A single-bay garage, 13 feet by 20 feet, also of steel-panel construction, is attached at the northwest corner of the house, with its narrower elevations also at east and west. The rear of the garage extends beyond the house to the west by 8 feet (two panels), resulting in an asymmetrical structure

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 2

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, CT

Description (continued)

with two attached, yet distinct, rectangular blocks (Photograph 1). The pitched roof, added in the 1980s, has its gables at east and west. The original steel chimney extends approximately 6 feet above the original roofline on the north side.

The house's main entry is near the center of the north facade, at the angle formed by the intersection of that facade and the garage entry. A wooden portico, most likely original, is set into the angle (Photograph 3).

The rear entry is at the center of the west facade (Photograph 4); it gives onto a brick patio. There is a rooftop deck, no longer accessible, atop the garage, with a metal railing, only partly intact, approximately 4 feet in height. (The original ladder leading to the deck, a nautical-style metal unit attached to the garage's exterior, is no longer present, and there is currently no access to the deck.)

The foundation is a poured concrete slab, rising above the ground line by approximately 8 inches. Thirty-eight exterior wall panels, all 4 feet by 9 feet, are bolted to the foundation and to each other, with narrow wooden spacers fitted between each panel. Thin metal u-channels cover the joints. The wall panels carry the structure's load, with the joined vertical flanges doing much of the work performed by studs in a more traditional building. For additional strength, two I-beams span the width of the house at the roof level. Steel roof panels, of essentially the same construction as the wall panels, are bolted to the top horizontal flanges of the wall panels, to the I-beams, and to one another. The original steel roof, covered with layers of wood and built-up tar, appears to remain in place; the gabled roof atop it is constructed of wood and sheathed with asphalt shingles. Flanged steel corner units and a cornice—an unornamented pressed-steel band—complete

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 3

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, CT

Description (continued)

the construction. Metal gutters, with drainpipes at various intervals, are attached to the cornice.

The exterior wall panels are of five types: full wall panel, window panel, entry door panel, double-door panel, and fireplace panel. Their distribution is as follows:

— North elevation, main block (including 3 panels shared with garage): 5 wall panels, 2 window panels, entry door panel, fireplace panel;

- East elevation, main block: 3 wall panels, 2 window panels;

- South elevation, main block: 3 wall panels, 6 window panels (one window missing);

- West elevation, main block: 1 wall panel, 3 window panels, double-door panel;

- Garage elevations: 9 wall panels, 1 window panel.

In addition, there is a garage door frame, 24 feet by 9 feet, with an aperture for a wooden garage door. The door is 8 feet by 7.5 feet and features three small lights, 9 inches by 16 inches, near the top.

Windows are double-hung with wooden frames and sash, clearly the original Silentite windows manufactured by the (now defunct) Iowabased Curtis Companies for General Houses. Storm windows, not original material, have been attached to the frames on the exterior. On the south side, one window has been removed; a synthetic board bolted to the steel panel covers the aperture.

The interior plan is simple and open, consistent with the modern design concepts employed by General Houses. One enters through the main entry directly into the living area, 10 feet by 16 feet 6 inches,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 4

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, CT

Description (continued)

which is open to the kitchen-dining area at rear, 10 feet by 14 feet. These spaces essentially fill the western half of the house. The east side includes two bedrooms-one 8 feet 10 inches by 16 feet, the other 10 feet 10 inches by 16 feet-plus a bathroom, 5 feet by 6 feet 6 inches, off a small hall, 3 feet by 7 feet 6 inches (Floor Plan).

Floors are carpeted in the living area and bedrooms. Vinyl flooring covers the kitchen-dining area. None of the original flooring material, which according to historic documents would have been either wood or linoleum, appears to exist.

Interior walls are 20-gauge pressed-steel panels, painted, with horizontal and vertical steel stiffeners attached to the panels' backs. They are held in place by narrow metal strips, which cover the interior joints and are screwed into the wooden spacers between the exterior panels. Batts of insulation material fill the air space, approximately 4 inches, between exterior and interior panels. Ceilings are the underside of the steel roof panels, painted, in the livingdining-kitchen areas. Similar ceilings likely exist in the bedrooms but are hidden by false ceilings, probably made of gypsum board.

The wood-burning fireplace panel in the living area is a unit specially designed by General Houses. With a cold air intake at the bottom and a warm air register at the top, it is designed, like a Franklin stove, to produce heat through both radiation and convection. The one-piece steel unit has a projecting mantel, and there is a built-in, sliding metal-mesh fireguard screen (Photograph 5).

The interior features three large floor-to-ceiling closet/wardrobe units, undoubtedly the original wooden units designed by General Houses and manufactured by Curtis Companies. One appears in the living

Page 3

130 Mohegan Avenue Name of Property

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.
- x 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 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.)

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 #

New London, Conn. County and State

Areas of Significance

(enter categories from instructions)

INDUSTRY

SOCIAL HISTORY

ART

ARCHITECTURE

ENGINEERING

Period of Significance 1932-1939

Significant Dates 1933, 1934

Significant Person (only if Criterion B selected)

AMES, WINSLOW

Cultural Affiliation

Architect/Builder (use last names first for individuals) FISHER, HOWARD T./GENERAL HOUSES, INC.

See continuation sheet(s) for Section No. 8

Primary location of additional data:

x State Historic Preservation Office

- Other State agency
- Federal agency
- Local government
- Other Name of repository:

See continuation sheet(s) for Section No. 9

Page 4

130 Mohegan Avenue Name of Property

10. Geographical Data

Acreage of Property 0.1 ACRE

UTM References

(Place additional boundaries of the property on a continuation sheet.)

1	1/8	1	7/4/2/2/6/6						4/6/8/4/1/5/0						
Zone			Easting				Northing								
3	1		1	1	1	1	1	1	1	1	1	1	1		
Zone E		Eas	sting	1	١	Inol	hing	1.11		1				- A	

2 /		1	1	1	1	1		1	1	1	1	1
100		Zone	Ea	astir	ŋg		Nort	hing	1			
4 /		1	1	1	1	1	1	1	1	1	1	1
Zon	e E	asting		M	lort	hing	1	1			1	

USGS Topographic Quad name NEW LONDON

New London, Conn.

County and State

Verbal Boundary Description (Describe the boundaries of the property.)

The nominated property includes the house known as 130 Mohegan Avenue, along with land bounded as follows: north by a line 10' from the garage's north wall, east by Mohegan Avenue (Connecticut Route 132), south by a line 8' from the south wall, and west by a line 42' from the garage's west wall.

Boundary Justification (Explain why the boundaries were selected.)

The boundary includes the house and a reasonable amount of surrounding land, which forms the setting for the house.

11. Form Prepared By

name/title Douglas Rovalty

organization Connecticut College date July 1, 2008

street & number 270 Mohegan Avenue

city or town New London, Conn.

email address doug.royalty@conncoll.edu

Additional Documentation

The National Register requires each nomination consist of the following beyond this 4-page cover form: x Continuation Sheets for narrative

- x A USGS topographic quad map (7.5 or 15 minute series) indicating the property's location
- A Sketch map for historic districts or properties having large acreage or numerous resources
- A Photo identification map for districts; one map can serve both as sketch and photo ID map.
- x black and white photographs of the property. See policy statement for acceptable use of digital photographs

The Connecticut Commission on Culture and Tourism requires the following for all nominations:

x An additional set of black and white photographs that remains at the SHPO

- x Floor plans of properties whose significance is based on their plans
- x Color slides or PowerPoint images and presentation of the property to the Connecticut State Review Board

Property Owner name/title Connecticut College street & number 270 Mohegan Avenue telephone (860) 447-1911 zip code 06320-4194 state CT city or town New London email address (if available) NA

See continuation sheet(s) for Section No. 10

telephone (860) 439-5083

state CT zip code 06320-4194

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 5

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, CT

Description (continued)

area just off the main entry (Photograph 6), and there is one in each of the bedrooms (Photograph 7). Cabinets of similar construction, with brass door pulls, appear in the kitchen. A single closet, in the main living area, appears to have provided space for the original boiler, now gone. The boiler would have sent conditioned air into a ceiling duct and out through registers, now covered, in the tops of wall panels in the living area, kitchen, bedrooms, and bathroom.

Baseboard radiators, not historic material, have been attached to the bottoms of many interior panels. In addition, casings for electrical conduit, also not historic material, have been attached to the interior wall and ceiling panels in various places.

A number of bathroom fixtures, including the porcelain toilet and lavatory, a mirrored medicine cabinet, and a light fixture, appear to be original material.

Conditions at the steel house, which has been vacant since 2004, range from poor to good. All mechanical systems have been removed, and there are clear signs of deterioration as a result of deferred maintenance: peeling paint inside and out; an unsightly (though not structurally troublesome) layer of rust on the exterior steel walls; corrosion, some of it resulting in section loss, at the sill level of the exterior wall panels; and significant corrosion of at least two living room ceiling panels, the result of roof leakage. Yet most of the house's original features remain and, in the main, appear to be restorable. While the gabled roof hides the original flat roof, it is removable, and there have been only a small number of additional alterations. Many important character-defining elements, particularly those on the interior, are in good condition.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 1

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

STATEMENT OF SIGNIFICANCE

Summary

The building at 130 Mohegan Avenue is a largely intact and excellent example of a "house of tomorrow" from the early 1930s-a prefabricated steel-panel home of modern design based on principles of economy, efficiency, affordability, and quality. Produced by General Houses, Inc., the company founded and led by the pioneering architectengineer-builder Howard T. Fisher, it exemplifies the concerted, if now largely forgotten, effort to bring new building materials, innovative construction methods, industrial production techniques, fresh business models, and theories of modern design to bear on the problem of affordable housing during the Depression.

The building meets National Register criteria A, B, and C, and is significant under the themes of social history, art, architecture, engineering, and invention. The period of significance is 1932-39.

Criterion A: That are associated with events that have made a significant contribution to the broad pattern of history.

The steel house is historically significant at the national level of significance as a product of the modern prefabricated housing movement that swept across America in the early 1930s. In those years many architects, industrialists, entrepreneurs, and journalists, among others, viewed prefabrication—in conjunction with modern architectural design—as the answer to the country's Depression—era housing crisis. Meanwhile, Americans, many inspired by the model homes on display at the "Century of Progress" Expositions in 1933 and 1934, eagerly anticipated a new era of high-quality, affordable housing. While commercial success eluded the pioneering prefabricators of the day,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 2

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

the prefab movement fostered numerous innovations in home design and construction and laid the groundwork for subsequent construction systems, and patterns of development, that would shape the U.S. for decades.

Criterion B: That are associated with the lives of persons significant in our past.

The steel house is also significant at the state level for its association with Winslow Ames, the founding director of New London's Lyman Allyn Art Museum, who commissioned the building in 1933 and, with his wife, Anna, owned it until 1949. Ames was a noted museum director, curator, author, and educator who played a leading role in Connecticut's cultural scene during the 1930s and, in essence, introduced New Londoners to modern art and architecture. The steel house is one of four buildings, all surviving in close proximity, that are associated with Ames and his achievements during this period.

Criterion C: That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Finally, the steel house is historically significant at the national level as one of the earliest modern homes in New England and as a rare surviving example of the innovative design, engineering, and construction methods employed by General Houses, Inc., a leader in the modern prefab movement in the 1930s. General Houses' founder and chief architect, Howard T. Fisher, was a pioneer of prefabrication who developed multiple building systems during his early career as General

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 3

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Houses' chief. The steel house is a product of Fisher's first patented system-for a frameless all-steel house-and represents General Houses' initial focus on small, affordable homes for working Americans.

Building History

The steel house at 130 Mohegan Avenue, erected in late 1933, is one of two early modern prefabricated houses commissioned by Winslow Ames, the founding director of New London's Lyman Allyn Art Museum, and his wife, Anna. The second house, built by General Houses' New York-based rival, American Houses, Inc., in early 1934, is a steel-frame building with panels (now encapsulated) of asbestos cement. Today known as the Winslow Ames House, it was rehabilitated in the early 1990s and was placed on the National Register of Historic Places in 1995. It sits just a few yards north of the steel house at 132 Mohegan Avenue.

Published sources indicate that the steel house is most likely the fourth building completed by General Houses—and the first outside the company's home turf of Chicago and its suburbs—after homes constructed in Winnetka, Ill., Elmhurst, Ill., and Chicago (later moved to River Forest, Ill.).¹

For 15 years under the Ameses' ownership, the steel house was occupied by a series of residential tenants. In 1949 the Ameses sold it and the Winslow Ames House to Connecticut College for Women, now Connecticut College. For 46 years the college continued to rent the house to various tenants, mainly faculty and staff members.² (The Winslow Ames House was similarly occupied until the late 1980s.³ Since 1994 it has been used by the college as office space.)

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 4

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

The college made only minor repairs and updates to the building over the years but for one significant character-altering modification in the 1980s: the construction of a wooden pitched roof, which today sits atop the original flat steel/built-up roof.⁴

HISTORIC BACKGROUND

The Modern Prefabricated House in the 1930s

The term "prefabrication" didn't enter the lexicon until the early 1930s, when efforts to industrialize and modernize housing attained the status of a movement in the U.S.⁵ While only a relatively small number of prefabricated houses were built during the interwar yearsand while many of the era's key figures have been largely forgottenthe movement was real, and its legacy significant.

Although the word "prefabrication" may have been new in 1933, when the house at 130 Mohegan Avenue was designed and erected, prefabrication as a practice was not. Precut houses were known to have been shipped across the Atlantic to the colonies in the 17th century. In the 19th century, English manufacturers shipped prefabs to Australia and other parts of the British Empire; often, these buildings were made of corrugated iron. During the Gold Rush in the U.S., East Coast entrepreneurs sent kit houses by rail to San Francisco. And in the early decades of the 20th century a host of companies-Sears Roebuck, Aladdin, and E.F. Hodgson, among others-sold plans and precision-cut lumber for do-it-yourself houses to thousands of Americans.⁶

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 5

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

What was new in the early 1930s were advanced industrial processes, an array of innovative building materials—and modern architecture, with its emphasis on rectilinear forms, smooth, unadorned surfaces, open floor plans, and functional efficiency. These advances made possible the transition from prefabrication's first stage, the precut house, to its second, the panelized house.

The movement's initial wave in America can be traced to the 1920s, when a number of forward-thinking architects, planners, and writers promoted the concept of mass-produced housing as a response to the inadequate supply of new homes, the often substandard housing conditions in America, and the widely perceived ineffectiveness of the homebuilding industry. As historian Brian Horrigan has written, these early proponents "espoused the idea of the house as a technologically perfected artifact"-a reengineered product that could be produced at low cost with a high degree of quality control.⁷

The wave crested quickly, in the early 1930s, as architects, builders, and others rushed to offer up the "house of tomorrow" as a solution to the Depression-era housing crisis (and, not coincidentally, as a way to restart America's industrial engine). There were many variations on the concept, but in those years the house of tomorrow was typically modern in design and materials, and was intended to be produced assembly-line-style in the manner of the automobile. In general, steel was considered to be the most promising construction material.⁸

Most of the early modern prefab schemes never made it past the prototype stage (if they survived beyond the concept stage), but a small number of entrepreneurs in the 1930s did put together fullservice businesses and set about marketing their products to the American public. Perhaps the most ambitious and prominent members of

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 6

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

this group were the architects Howard T. Fisher, whose Chicago company, General Houses, Inc., designed and built the steel house at 130 Mohegan Avenue, and Robert W. McLaughlin, whose New York-based American Houses, Inc. erected the steel house's "sister" prefab, the Winslow Ames House.

These early modern "merchant prefabricators" took their architectural cues, and some of their philosophical underpinnings, from Europe's modernists. These famously included members of Germany's Bauhaus School, in particular the school's founder, Walter Gropius, as well as the Swiss-French architect Le Corbusier. By the 1920s they had codified the design precepts-rectilinear forms, smooth, machine-tooled (or apparently so) surfaces, lack of exterior ornamentation, emphasis on volume rather than mass, integration of outdoor and indoor spacethat came to define the International Style.

The urgent housing needs of the Great Depression catalyzed the prefabrication movement, even as the construction business ground to a near-standstill amid the economic crisis. This was only logical: With 87% of households earning less than \$2,500 a year in 1932, the traditionally built house, which started at around \$5,000, was unthinkable for the vast majority of Americans.⁹ Prefabrication looked like the answer.

By 1932 the media were promoting prefabrication as the solution to a number of problems in addition to the high cost of new construction: a rapidly deteriorating housing stock, overcrowded cities, idle factories, the prospect of social unrest. Newspapers ran stories with headlines like "Mass Production of Homes in View" and "Sees Future Homes Bought Like Autos" on their front pages.¹⁰ Fortune magazine produced a lengthy and much-discussed series of articles that made the

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 7

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

case for prefabrication, promoting what would later be called "an ethos of mass production."¹¹ Few doubted that American industryparticularly the automobile industry-was the appropriate model, and the phrase "Houses like Fords" became something of a rallying cry.

In 1931, Lawrence Kocher, the managing editor of *The Architectural Record*, and the architect Albert Frey teamed up to design and build a house they called the Aluminaire for an exhibition in New York City. The prefabricated metal building, erected in just 10 days, embodied Le Corbusier's principles and sparked interest in modernism, new materials, and new construction methods.¹²

In 1932 both McLaughlin's American Houses, Inc. and Fisher's General Houses, Inc. were incorporated. General Houses built its first home-a small, modern panelized cottage-in Winnetka, Ill., in March, 1933.¹³ (Others joined the hunt over the next few years: By September, 1936, a survey by American Architect and Architecture listed 48 prefabrication systems, though perhaps only a quarter of those employed modern design or new building materials.¹⁴)

Public interest reached its apex with the "Century of Progress" World's Fair expositions that were held in Chicago in 1933 and 1934.¹⁵ Millions of people toured the fairs' dozen or so model homes-most of them modern in design and materials-that were meant to herald the new era of efficient, low-cost housing. Almost all of the fairs' houses were factory-produced to some degree, and prefabrication was a significant part of their allure.

The small steel-panel house erected by General Houses was seen by many as the exhibition's key building, an inexpensive yet thoroughly modern home that, it seemed, could be replicated on a large scale. As Brian

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 8

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Horrigan wrote, it was the Century of Progress Exposition house "that seemed to housing observers to be the true augury of the future."16

It was a frameless one-story cottage on a concrete slab foundation, with a flat roof, assembled from 4-foot by 9-foot painted steel panels.¹⁷ The house at 130 Mohegan Avenue is not a replica, but it closely resembles the fair house in size, plan, materials, and construction.¹⁸

The mass market did not materialize for General Houses or any other 1930s prefabricator, though General Houses was among the few to enjoy a measure of success in the decade leading up to World War II. But it was a success measured in the hundreds of houses (and perhaps only two dozen all-steel houses) rather than the thousands or even millions envisioned.¹⁹ The company faced a host of ultimately insurmountable hurdles: inflexible building codes; opposition from labor unions, banks, and the traditional construction industry; distribution and marketing difficulties; lack of government support; frustrating homeloan conditions; a public surprisingly unwilling to embrace modern design; the escalating price of steel; no economies of scale; and a dismal (at best) economy. By decade's end General Houses had reinvented itself as a purveyor of traditional-looking wooden Cape Cod-style homes, and the modern prefab movement of the 1930s had quietly faded away.

Less than 1% of all single-family homes constructed in the 1930s were prefabricated,²⁰ and only a portion of those were modern prefabs, yet the movement's significance extends far beyond the modest output of the builders involved. Many of those who entered the field were motivated by the potential for great profits, but there was a strong element of social consciousness attached to the movement. Open floor

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 9

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

plans, economical use of space, lack of unnecessary ornamentation, attached garages, rooftop decks, large expanses of glass—all spoke to the modernists' desire to create a more healthful, more satisfying living environment. As historian and preservationist H. Ward Jandl wrote, the houses of tomorrow "focused attention on how to improve the way we live."²¹

Postwar housing demand further stimulated the industry, with the number of prefabricators jumping to 280 in 1946.²² Many of these outfits-including General Panel Corp., founded by Walter Gropius and Konrad Wachsmann; Green's Ready-Built houses, with designs by George Fred Keck; and the famed Lustron Corp., which produced steel-panel houses-built on the techniques, processes, systems, and designs pioneered by the modern prefabricators of the 1930s. Other builders, notably William J. Levitt, developed on-site assembly-line construction techniques that owed a debt to the 1930s mass-production housing movement.

In 1949 prefab manufacturers shipped some 35,000 houses and were anticipating significant growth in 1950.²³ There would be growth, but the postwar prefab boom began to fade by the mid-1950s. In the more than five decades since then, interest in prefab housing has waxed and waned, but a core group of progressive architects and cost-conscious builders has kept alive the ideals of the movement begun in the 1930s.

Few buildings dating to the movement's beginning exist today. Only a small number of American Houses' modern prefabs, known as Motohomes, are known to exist-one of them being New London's Winslow Ames House. The number of General Houses buildings, though unknown, is likely to be on a similar level. Almost certainly, nowhere else but in New

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 10

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

London can one find side-by-side examples of the work of the 1930s' two leading prefabricators. For this and many other reasons, the steel house at 130 Mohegan Avenue is an extraordinarily valuable artifact.

Winslow Ames and Modernism in New London

Winslow Ames (1907-1993) had a long and noteworthy career as a museum director, curator, author, and teacher. As the director of New London's Lyman Allyn Museum in the 1930s, he was a key figure in the effort-much of it emanating from Connecticut-to bring modern art and architecture to the American public's attention.

The son of an American diplomat, Ames was born in Chile on July 3, 1907, and spent his early childhood overseas. He and his family returned to the United States in 1914, settling in Staten Island, N.Y. He graduated from Phillips Andover Academy and Columbia College, where he received a degree in art history in 1929.

In 1929 and 1930, Ames did graduate work in museum studies at Harvard University, where he studied under and worked with the director of Harvard's Fogg Art Museum, Edward Waldo Forbes. He received his master's degree in the spring of 1930 and almost immediately was offered the directorship of the yet-to-be-opened Lyman Allyn Museum.²⁴

After a sojourn to Europe, where he collected works for the museum, Ames married Anna Rebecca Gerhard of Philadelphia. In the summer of 1931 the couple moved to New London, where Winslow Ames would spend a decade as the Lyman Allyn Museum's director-and where he would, in essence, become the public face of art and culture in southeastern Connecticut.²⁵

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 11

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Ames was part of an influential circle of men, all associated with Harvard (particularly its fine arts program), who would help set America's cultural agenda over the next several decades. They included Henry-Russell Hitchcock, the noted architectural historian; Philip Johnson, the famed architect and critic; Alfred Barr, the founding director of the Museum of Modern Art in New York; Francis Henry Taylor, the director of New York's Metropolitan Museum of Art; Virgil Thomson, the composer; Julien Levy, the promoter of and dealer in surrealist art; Lincoln Kirstein, founder of the New York City Ballet; and A. Everett "Chick" Austin Jr., the director of the Wadsworth Atheneum in Hartford.

Another Harvard-trained modernist was Howard T. Fisher, a Harvard College graduate who in 1927 and 1928 did graduate work at Harvard's School of Architecture. As a working architect, a writer, and as founder and chief architect of the housing prefabricator General Houses, Inc., Fisher and his staff would put into practice the principles of modern architecture he advocated-for example, through the design and construction of Winslow and Anna Ames's steel house at 130 Mohegan Avenue.

Ames's work quickly drew notice and gave the Lyman Allyn Museum a recognition out of proportion to its size (not to mention the size of the museum's host city). Throughout the 1930s, he brought a wide variety of impressive exhibitions to the Lyman Allyn, ranging from shows of old master drawings to displays of everyday objects of good design that sold for less than \$10. As Eugene R. Gaddis, the biographer of Chick Austin, wrote, "Something unusual was always happening at the Lyman Allyn."²⁶

In late 1933 something unusual began to happen on two plots of land

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 12

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

just north of the Lyman Allyn: the erection of not one but two modern, prefabricated "houses of tomorrow." Upon their completion, the houses would be two of the most visible signs of Winslow Ames's dedication to the modern aesthetic.²⁷

Winslow and Anna Ames resolved to build their prefabs after Winslow Ames and a friend had attended the Century of Progress Exposition in Chicago during the summer of 1933. According to Ames's unpublished autobiography, Ames met with both General Houses, Inc. founder Howard T. Fisher and American Houses, Inc. founder Robert W. McLaughlin.

"We read Fortune in those days as well as Time," Ames wrote, "and F. was full of prefabricated housing. We got rather excited, though we did not need a house, by Amer. H. and Gen. H.... The upshot was that Ann, able to touch some of her mother's estate at age 25, decided to build one each of AH and GH as rental properties on two small lots on Mohegan Avenue."²⁸

Construction began on General Houses' all-steel building at 130 Mohegan Avenue in November, 1933. Next door at 132 Mohegan Avenue, the building now known as the Winslow Ames House, designed and erected by American Houses, went up almost simultaneously.

The two houses, with their flat roofs, rooftop terraces, attached garages, and unusual building materials, created somthing of a stir in New London. On Dec. 3, 1933, The Day of New London covered the construction with a story titled, "Steel Fabricated House in Mohegan Avenue, Enclosed, Attracts Attention."²⁹ Another newspaper headline read, "New Londoners Stare at Houses of Asbestos and Steel as Winslow Ames Joins Revolt in Home Building Trend." That story began:

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 13

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Most of the neighbors lift their eyebrows and question his sanity, but Winslow Ames, director of the Lyman Allyn Museum in New London, believes implicitly in an impending revolution in the home building industry, signalized by two prefabricated houses he is erecting on Mohegan Avenue. They are going up on ground adjoining the museum and are startlingly original in type: one is asbestos cement; the other entirely of steel.³⁰

The Ameses reportedly paid \$4,500 for the General Houses building and \$7,500 for their American Houses home.³¹ They rented the two houses to various tenants until 1949, when they sold both buildings to Connecticut College for \$9,000.³² In his unpublished autobiography, Ames wrote somewhat wistfully about the houses and the promise of prefabrication. "In the end, after having had tenants for many years," he wrote, "we sold both homes to Connecticut College. No significant profit. We concluded that prefabrication one house at a time was no great economy."³³

While the revolution in homebuilding did not occur in the 1930s, the Ameses' two prefabs stand as testimony to Americans' desire to bring modern design and industrial processes to bear on the housing crisis of the Depression. More specifically, they testify to Winslow Ames's forward-looking approach to his work in New London as an advocate for groundbreaking and challenging art and architecture. Along with the nearby Deshon-Allyn House (1829; listed on the National Register of Historic Places in 1970), where the Ameses lived during their time in New London, and the Lyman Allyn Museum building (1932), they form a built landscape that bears witness to Ames's numerous achievements in New London.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 14

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Howard T. Fisher's General Houses, Inc.

General Houses, Inc. was a leader in the modern prefabricated housing movement in the 1930s. A fully realized corporation that set out to design, market, finance, erect, and service houses, General Houses represented the first, best hope for industrialized housing in the 20th century.

Under Howard T. Fisher, General Houses developed, and over the years modified, a building type and method of construction that produced the archetypal early modern prefab—a panelized home, built from standardized parts, that reflected both the aspirations of modern architecture and the Machine Age faith in industry, technology, and mass production. While prefabricated housing systems might not at first glance lend themselves to individual artistry, Fisher's accomplishments can be seen as the work of a master.

Today, an unknown but necessarily small number of buildings remain to document the work of Fisher's General Houses. The house at 130 Mohegan Avenue in New London is a rare and illuminating example of the company's early work.

Howard Taylor Fisher (1903-1979) was born into a prominent Chicago family. His father, Walter L. Fisher, was an influential lawyer and conservationist who was active in the civic development of the city.³⁴ In 1926, Howard graduated from Harvard, magna cum laude, with a degree in art history and subsequently began graduate studies in architecture at Harvard. In 1928 he left Cambridge without receiving a master's degree. Upon his return to Chicago, he became a registered architect in Illinois and New York and undertook a number of commissions ranging

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 15

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

from office spaces in downtown Chicago to a large ranch house in Wyoming.³⁵

Fisher received substantial acclaim for his first commission, the Walter T. Fisher house (1929; Winnetka, Ill.), an impressive brick home, reminiscent of contemporary Dutch architecture, that was among the first houses in the European modern style to appear in the U.S. The Architectural Record did a spread on the house, ³⁶ as did House Beautiful, in 1930.³⁷

It was during the construction of his brother Walter's house that Howard Fisher began to think about materials that might be "less porous" than the brick and mortar used in the Walter T. Fisher house.³⁸ It was during this time, too, that Fisher began to consider ways in which house design could be made more efficient and be adapted for modern life. His articles on the subject were published in *The Architectural Record*, where he was a contributing editor.³⁹

After some three years of research and organization, Fisher formed General Houses, Inc. in 1932 with startup capital from a private syndicate of investors. It was an ambitious undertaking, particularly considering that the founder was not yet 30: General Houses, Fisher decreed, would be a fully integrated housing operation that would design, market, finance, erect, service-even furnish and landscapeprefabricated houses for a national market.⁴⁰

For a company that aimed to churn out machines for living on a large scale, General Houses had an extremely lean corporate structure, largely because the company had no manufacturing division.⁴¹ Rather than produce parts for its prefab houses in a factory or group of factories, the company relied on a series of agreements with corporate

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 16

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

partners. Employing processes that today are known as supply-chain management and just-in-time manufacturing, General Houses would order up the necessary materials, and the corporate partners would supply them. General Houses managed the logistics but manufactured nothing.⁴²

The fledgling company's roster of high-powered partners testified both to the interest in Fisher's business plan during a low point for American manufacturers and to his and his family's connections and persuasive powers. Among the corporations involved in General Houses' early years: Pullman Car & Manufacturing, Bethlehem Steel, Inland Steel, Celotex, General Electric, Pittsburgh Plate Glass, American Radiator, U.S. Gypsum, Armstrong Cork & Insulation, Koehler (plumbing), Kroehler (furniture), Curtis Companies, Edison Cement, Congoleum-Nairn, Container Corporation of America, and Aluminum Corporation of America.⁴³

Fisher had carefully worked out a design and construction system that he believed would allow his company to produce a house that was "twice as good at half the price." The shell of the house-walls, roofs, and floors-would consist of standardized flanged steel panels that were to be bolted to one another through thin wooden spacers. There were wall panels, small window panels, large window panels, full-length glass panels, door panels, and a specially designed fireplace panel, along with corner pieces and spandrel sections for multistory buildings. The frameless system, in which the flanged sections of steel did much of the work of studs in a traditionally framed house, meant that the panels themselves bore the full load of the structure-and thus considerably reduced the amount of materials and labor required. Each exterior wall panel would be a "pan" into which insulation could be fitted. The insulation would be covered, either with an interior steel panel or wallboard, to form a "sandwich." Prefabricated windows

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 17

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

and sash, cabinets, and other parts would be placed in the house according to the plan, as would plumbing, wiring, heating and cooling systems, appliances, and fixtures. Fisher received a patent, U.S. Patent No. 1,969,125, for his system on Aug. 7, 1934.

Fisher's standardized panels allowed General Houses' architects and engineers, working on grids, to design a practically endless number of variations on a theme-some 600,000 different plans might be possible, according to the company.⁴⁴ General Houses made the point that its homes, while unified in their design, could be varied in size and plan to suit the needs of any client, and the company's early commissions did in fact run from small, compact single-story cottages to much larger multistory buildings. Indeed, in 1933, General Houses had made feasible the sort of mass customization that continues to be a goal for housing prefabricators in the 21st century.

General Houses' system made for rapid, "dry" construction. Once a foundation was poured and the parts had been delivered to the site, it was mainly a question of lifting the panels into place, bolting them together, adding windows and doors, insulation, and interior walls and ceilings. At the same time, pipes and wiring were installed, followed by interior cases, fixtures, and kitchen equipment. In general, it was estimated that a small crew of unskilled workers could complete a house in about two weeks' time.⁴⁵ The company claimed that a socket wrench was the only tool a worker required.⁴⁶

General Houses erected its first home in March, 1933, in the Hubbard Woods section of Winnetka, Ill., for Fisher's sister-in-law, the wellknown dancer Ruth Page. The house, which no longer exists, was a small five- room, one-bath, flat-roofed steel-panel cottage overlooking Lake Michigan, with a screened porch. *Time* magazine called it as "severe

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 18

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

and clean as a pursuit plane."47 It was, in many respects, quite similar to the house that would be built later that year at 130 Mohegan Avenue.

Well before this first house went up, however, General Houses had become the subject of intense media attention. In 1932 its plans were covered in architectural journals, in newspapers such as *The New York Times* and the *Chicago Tribune*, and in a widely discussed series of articles in *Fortune* magazine penned (anonymously) by *Fortune* editor Archibald MacLeish. In the July, 1932, *Fortune*, MacLeish deemed General Houses "the General Motors of the new industry of shelter" and praised Fisher's yet-to-be-tested building system for its structural simplicity, its efficient, livable interiors, and its handsome, durable exteriors. It also ran a full-page mockup of a General Houses advertisement with a headline that read, "We will deliver this fiveroom house to you this very week!"⁴⁸ Thanks to *Fortune* and the others, the small, flat-roofed, panelized homes of General Houses and American Houses became, for many Americans, the de facto model for the modern prefabricated house.

The media blitz caught General Houses, which was still in the research and testing phase, somewhat unawares. As the editors of the company's 1934 magazine-like catalog, *Our Homes*, wrote, "At that time the impression was created that the company was already in production and General Houses was swept off its feet by the tremendous public interest in its plans."⁴⁹

General Houses was not in a position in 1932, or even in 1933, to produce houses on any kind of scale. Yet it had begun to prepare for the day when that could happen, signing up dealers in the Midwest, New

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 19

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

York, and elsewhere and producing a sales brochure in 1933 that displayed drawings, floor plans, and prices for four models, ranging from a four-room cottage (\$4,500) to a substantial two-story, threebedroom house with garage (\$8,550).

To emphasize the scientifically precise nature of its building system, General Houses used alphanumeric formulae for its houses-K2H40, for example, referred, in part, to the company's "K" plan, a house with a hall and four rooms. But it also used more standard model names for marketing purposes. The lowest-priced house featured in the 1933 catalog, with a floor plan that matches that of 130 Mohegan Avenue, was called the Mohegan.⁵⁰

In May of 1933, General Houses erected its model home for the Century of Progress Exposition to be held that summer along Lake Michigan in Chicago-a deadline-driven construction project that required just 30 hours to complete.⁵¹ Like the first two houses, it was a one-story, flat-roofed building with two bedrooms and one bath.

During the fair, some 2 million people toured the house, and General Houses enjoyed a second round of nationwide publicity-recognition that continued in 1934, when General Houses erected a second model home in Chicago for that year's version of the World's Fair. In the February, 1934, Harper's, the writer Douglas Haskell viewed the General Houses building at the exposition as the 1933 fair's best in show, and the model for the housing industry. "Houses like Fords!" Haskell wrote. "The homemaker is thus confronted by an idea entirely new. It cuts across ten thousand years of building habits."⁵²

Published sources indicated that General Houses put up just two more steel homes in 1933-one of them Winslow and Anna Ames's house at 130

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 20

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Mohegan Avenue in New London.⁵³ The next year it approximately doubled its production, but that amounted to only 10 or so houses.⁵⁴

Discouraged by slow sales and high costs, Fisher began to research new materials and building systems. By 1935 General Houses had, in association with the Purdue Research Foundation, built a model prefab, similar in style and size to its low-cost steel house but with panels made of "stressed-skin" plywood attached to a steel frame, and soon the company began to offer that construction along with its steelpanel system.

Over the next five or so years General Houses would sell hundreds of plywood houses but only a little more than two dozen steel houses.⁵⁵ Somewhat ironically, perhaps, many of the steel-panel houses in those years were large homes for well-to-do clients.⁵⁶ While the small homes that General Houses initially set out to build were efficient, modern, and handsome, these larger homes allowed General Houses more latitude to display its architectural and engineering mastery.⁵⁷

The Ameses' steel-panel house in New London, while currently dilapidated, displays all the characteristic features of General Houses' early small homes—the very homes that had captured the imaginations of millions of Americans via newspaper and magazine stories and via the company's model homes at the Century of Progress World's Fairs in 1933 and 1934. These features include insulated frameless steel-panel construction on a concrete slab foundation; a flat roof (today hidden but still extant); attached garage; rooftop deck; an open floor plan that utilizes cross-ventilation and passive solar thermal properties; high-quality prefabricated windows, doors, built-in cabinets, and fireplace; and a modest footprint for the space- and price-conscious Depression-era home buyer.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 21

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

The New London house was, and is, an innovative and precisely engineered building. It was also striking in its modern-though not bizarrely or off-puttingly so-Bauhaus-style design. That it appeared in 1933 in New London, at a time when only a very few modern buildings had been constructed in all of New England, is by itself significant, and makes it something of a local and regional landmark.

In addition, the house at 130 Mohegan Avenue is tangible evidence of the potential for reinventing the way houses were built and sold in America, and of Howard Fisher's well-mapped-out plan for industrializing the housing business. As historian John Burns wrote, "Fisher's genius was in refining the idea of assembling houses from standardized prefabricated parts-that is, building houses the way General Motors assembled automobiles. The idea presented a challenge to Fisher's talents both as an architect and as an engineer."⁵⁸

By 1940 Fisher had left General Houses, but in the years that followed he continued to work on solutions to the housing problem with the War Dept. during World War II; as head of the architecture and engineering firm he established in Chicago after the war, Howard T. Fisher & Associates; and as a consultant to U.N.-sponsored housing initiatives in Latin America in the 1950s.

In the 1960s, Fisher returned to Harvard to become a professor of urban planning. Fascinated with the potential of computers since the 1950s, he received a substantial grant from the Ford Foundation to develop Symap, a computerized mapping system that was the forerunner of today's widely used Geographical Information System (GIS) software. Today, Harvard awards an annual Howard T. Fisher Prize for excellence in Geographical Information Science.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 22

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

In 1974, Fisher was made a Fellow of the American Institute of Architects. In great measure, this was in recognition of his work on the industrialization of housing. "Throughout his career," read his AIA Fellow nomination, "the nominee has forcefully advocated greater building industry coordination and integration, and in his research and educational work has demonstrated numerous potentialities to that end." The nomination continued:

General Houses Inc. was perhaps the first company established in the United States for the production on a national scale of high-quality permanent houses through the use of mass production and prefabrication. It pioneered basic concepts, carried out extensive research, and over the years produced a substantial number of houses pursuant to several alternative construction systems-thus helping to demonstrate the broad applicability of prefabrication as a basic building technique.⁵⁹

Today, one of the few remaining examples of Howard T. Fisher's first alternative construction system-and one of the few examples of the archetypal modern prefabricated house of the early 1930s-is the building at 130 Mohegan Avenue in New London, Conn.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 23

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Endnotes

¹ The Architectural Record, 1933-34. The journal covered the construction of General Houses' first buildings in several issues. See "Sectional Steel House for Miss Ruth Page" (April, 1933, 289) "Houses Built With New Construction Methods" (April, 1933, 288), "A Fabricated House at Elmhurst, Illinois" (Nov, 1933, 409) "General Houses, Inc." (Jan., 1934, 18-19) and "Recreation House for Huntington B. Henry" (Oct., 1934, 255).

² New London (Conn.) city directories, 1933-1974.

3 Ibid.

⁴ In 2004, Connecticut College closed the building, dismantled and removed the mechanical systems, and ended all maintenance. By 2006 the building, visibly dilapidated, had been targeted for demolition, but plans were put on hold when efforts to preserve the house began in 2007. In July, 2007, the Connecticut Historic Preservation Council placed the steel house on the State Register of Historic Places.

⁵ Burnham Kelly, *The Prefabrication of Houses* (New York: Technology Press of the Massachusetts Institute of Technology/John Wiley and Sons, 1951), 28.

6 Ibid., 7-14.

⁷ Brian Horrigan, "The Home of Tomorrow, 1927-1945," in Joseph J. Corn, ed., *Imagining Tomorrow: History, Technology, and the American Future* (Cambridge, Mass.: MIT Press, 1988), 137.

⁸ Alfred Bruce and Harold Sandbank, eds., A History of Prefabrication (New York: John B. Pierce Foundation, 1944), 41.

⁹ Albert Farwell Bernis, *The Evolving House (Vol. 2): The Economics of Shelter* (Cambridge, Mass.: Technology Press [Massachusetts Institute of Technology], 1934), 133.

¹⁰ The New York Times, "Sees Future Homes Bought Like Autos," May 25, 1932; "Mass Production of Homes in View," Dec. 3, 1933.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 24

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Endnotes

¹¹ Fortune, "Five Questions...And a Striking Answer,"July, 1932, 60-69, 104-110; "Mass-Produced Houses in Review," April, 1933, 52-57, 78, 80, 83-84, 87.

¹² Jake Gorst, "Modeled in Metal: The Aluminaire House" *Modernism*, Summer 2007, 43-49. The Aluminaire was subsequently removed to Long Island, N.Y., where it exists today.

13 Time, "Prefabrications," Mar. 27, 1933.

14 "48 Systems of Prefabrication," American Architect and Architecture, Sept., 1936, 28-40.

¹⁵ Elizabeth Mock, ed., *Built in USA: 1932-1944.* (New York: Museum of Modern Art, 1944), 18: "It was shortly after 1932 that Americans first became romantic about prefabrication, miraculous novelty which was expected to set a depressed economy on its feet and provide satisfactory shelter even for that ill-housed "third of a nation."

¹⁶ Horrigan, "Home of Tomorrow, 1927-1945," 148.

17 Ibid.

¹⁸ After the fair, General Houses' first Century of Progress house was moved to River Forest, III., where it reportedly exists today—with alterations to its original plan and, reportedly, a cementitious wall covering that obscures its historic character. Few other General Houses' buildings from the company's early years are known to exist; the house at 130 Mohegan Avenue may well be the best remaining example of General Houses' early low-cost house.

¹⁹ John A. Burns, "K2H40: The Promise of Prefabrication," in Michael J. Auer, Burns, and H. Ward Jandl, Yesterday's Houses of Tomorrow: Innovative American Homes 1850 to 1950 (Washington, D.C.: Preservation Press, 1991), 167.

20 Allison Arieff, Prefab (Salt Lake City: Globe Smith, 2000), 21.

21 Auer, Burns, and Jandl, Yesterday's Houses of Tomorrow, 24.

22 Kelly, Prefabrication of Houses, 71.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 25

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Endnotes

23 Ibid., 70.

²⁴ Eugene R. Gaddis, "Modernist and Connoisseur: Winslow Ames at the Lyman Allyn Museum," in *The Vision and Influence of Winslow Ames*, exh. cat. (New London: Lyman Allyn Art Museum, 2002), 5.

²⁵ Ibid., 6. "Ames became a one-man education department," Gaddis writes, "lecturing continuously on a great variety of subjects—from Albrecht Durer prints to modern architecture—to every kind of audience, whether Connecticut College students, the D.A.R., or the P.T.A."

²⁶ Gaddis, "Modernist and Connoisseur," 9.

²⁷ Ibid. The other prominent symbol of Winslow Ames's interest in modernism was *Standing Woman*, a large bronze nude by the sculptor Gaston Lachaise that Ames had personally purchased and installed on the grounds of the Deshon-Allyn House. That work that now belongs to the Museum of Modern Art in New York.

²⁸ Winslow Ames, unpublished autobiography (Smithsonian Institution Archives of American Art, Washington, D.C.).

²⁹ The Day, "Steel Fabricated House in Mohegan Avenue, Enclosed, Attracts Attention," Dec. 2, 1933.

³⁰ Unidentified newspaper story, collection of Lyman Allyn Art Museum, New London.

³¹ Carolyn Battista, "The View from New London; A House for the Future Finally Lives Up to its Billing," The New York Times, April 10, 1994.

32 Connecticut College records.

³³ Ames, unpublished autobiography.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 26

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Endnotes

³⁴ "Walter L. Fisher Dies; Was Former Cabinet Member," *Winnetka Talk*, Nov. 14, 1935. Walter L. Fisher played a key role in the formation of Chicago's public transportation system and served as director of the Chicago Bureau of Public Efficiency, among other posts. During the Taft Administration, Fisher was Secretary of the Interior.

³⁵ Howard T. Fisher Papers, Harvard University Archives.

³⁶ "House for Mr. and Mrs. Walter T. Fisher," The Architectural Record, March, 1930, 459-64.

37 "The Home of Mr. and Mrs. Walter T. Fisher," House Beautiful, March, 1930, 317-19.

38 General Houses, Inc., Our Homes (Chicago: General Houses, Inc., 1934), 19.

³⁹ Howard T. Fisher, "New Elements in Home Design," *The Architectural Record*, November, 1929. As early as 1929, Fisher was advocating in print for efficient, modern house design and construction.

40 Burns, "K2H40," 160.

⁴¹ Fortune, "Mass-Produced Houses in Review," 84. In 1933, General Houses had a full-time staff of 27, broken down as follows: sales: 4; erection: 2; costs: 1; production: 1; design and decoration: 2; land usage: 1; legal: 1; financial: 2; engineering, drafting and research: 11.

42 Ibid.

43 General Houses, Our Homes, 9.

44 Ibid., 12.

⁴⁵ Dorothy Raley (ed.), A Century of Progress Homes and Furnishings (Chicago: M.A. Ring Co., 1934),
63. General Houses' Century of Progress Exposition house, a rush job, required was completed in 200 man-hours, but the company estimated that a similar house would take approximately two weeks to erect.

46 Ibid.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 27

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Endnotes

47 Time, "Prefabrications."

48 Fortune, "Five Questions," 61-69, 104-7.

49 General Houses, Our Homes, 19.

⁵⁰ General Houses, Inc., 1933 sales brochure.

51 General Houses, Our Homes, 34.

52 Douglas Haskell, "Houses Like Fords," Harper's, Feb., 1934, 286.

⁵³ "Recreation House for Huntington B. Henry," *Architectural Record*, Oct., 1934, 255. Henry's weekend hunting retreat on an estate in Lake Forest, Ill., was probably constructed in 1934 but could have been completed the previous year.

54 Howard T. Fisher Papers, Harvard University Archives.

55 Ibid.

⁵⁶ A home for the future U.S. Senator, Democratic Presidential nominee, and U.N. Ambassador Adlai E. Stevenson II was destroyed in a fire as it neared completion in 1935, proving that a steel house is not absolutely fireproof.

⁵⁷ Howard Fisher Papers, Art Institute of Chicago, Chicago Architects Oral History Project. In the 1930s Fisher's General Houses employed a number of young draftsmen, among them G. Paul Schweikher, Herman Lackner, Phillip Will Jr., and Lawrence Perkins, who would later go on to have notable careers in architecture.

58 Burns, "K2H40," 161.

⁵⁸ Howard T. Fisher's American Institute of Architects Fellow nomination, 1974, Howard Fisher Papers.
OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 1

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography

Ames, Winslow. Unpublished autobiography. Smithsonian Institution Archives of American Art, Washington, D.C.

American Institute of Architects. AIA Fellow nomination materials for Howard T. Fisher, 1974.

The Architectural Record, 1933-34.

- "Sectional Steel House for Miss Ruth Page," Apr., 1933, 289.
- "Houses Built With New Construction Methods," Apr. 1933, 288.

- "A Fabricated House at Elmhurst, Illinois," Nov., 1933, 409.

- "House for Mr. and Mrs. Walter T. Fisher," Nov., 1929, 459-64.
- "General Houses, Inc.," Jan., 1934, 18-19.

- "Recreation House for Huntington B. Henry," Oct., 1934, 255.

Arieff, Allison. Prefab. Salt Lake City: Globe Smith, 2000.

Art Institute of Chicago. Chicago Architects Oral History Project. www.artic.edu/aic/libraries/caohp.

Auer, Michael J., Burns, John A., and Jandl, H. Ward. Yesterday's Houses of Tomorrow: Innovative American Homes 1850 to 1950. Washington, D.C.: The Preservation Press, 1991.

Bemis, Albert Farwell and Burchard, John. The Evolving House (Vol. 1): A History of the Home. Cambridge, Mass: The Technology Press (Massachusetts Institute of Technology), 1933.

Bemis, Albert Farwell. The Evolving House (Vol. 2): The Economics of Shelter. Cambridge, Mass: The Technology Press (Massachusetts Institute of Technology), 1934.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 2

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography (continued)

Bemis, Albert Farwell. The Evolving House (Vol. 3): Rational Design. Cambridge, Mass.: Technology Press (Massachusetts Institute of Technology), 1936.

Bruce, Alfred, and Sandbank, Harold. A History of Prefabrication. New York: John B. Pierce Foundation, 1944.

Burchard, John Jr. "The Quest for a Better House." Technology Review, Jan., 1933.

Corn, Joseph J., ed. Imagining Tomorrow: History, Technology, and the American Future. Cambridge, Mass.: MIT Press, 1986.

Davies, Colin. The Prefabricated Home. London: Reaktion, 2005.

The Day, New London - "Application Filed to Construct Steel Fabricated Dwelling; First in City," Sept. 16, 1933. - "12 Applications for Building Permits Approved by Board in September," Oct. 7, 1933. - "Framework Started for Two Steel Fabricated Houses in Mohegan Ave.," Nov., 1933 (approximate date). - "Steel Fabricated House in Mohegan Avenue, Enclosed, Attracts Attention," Dec. 2, 1933.

Fisher, Howard T. Papers, Harvard University Archives.

Fisher, Howard T. "New Elements in Home Design." The Architectural Record, Nov., 1929.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 3

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography (continued)

"48 Systems of Prefabrication." American Architect and Architecture, Sept., 1936, 28-40.

Fortune

"Five Questions...And a Striking Answer." July, 1932, 60-69, 104-10.
 "Mass-Produced Houses in Review." April, 1933, 52-57, 78, 80, 83-84, 87.

Gaddis, Eugene R. Magician of the Modern: Chick Austin and the Transformation of the Arts in America. New York: Knopf, 2000.

Gaddis, Eugene R. "Modernist and Connoisseur: Winslow Ames at the Lyman Allyn Museum," in *The Vision and Influence of Winslow Ames*. Exh. cat. New London: Lyman Allyn Art Museum, 2002.

General Houses, Inc. General Houses, Inc. N.p., 1933. University of Chicago Special Collections Center.

General Houses, Inc. Our Homes. Chicago: General Houses, Inc., 1934.

Gorst, Jake. "Modeled in Metal: The Aluminaire House," Modernism, Summer 2007, pp. 43-49.

Haskell, Douglas. "Houses Like Fords." Harper's Weekly, Feb. 1934, pp. 286-97.

Hitchcock, Henry-Russell. "A House in Winnetka," The Arts, Feb., 1930.

House Beautiful. "The Home of Mr. and Mrs. Walter T. Fisher." March, 1930.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 4

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography (continued)

Kelly, Burnham. The Prefabrication of Houses. New York: Technology Press of the Massachusetts Institute of Technology/John Wiley and Sons, 1951.

Le Corbusier. Towards a New Architecture. Mineola, N.Y.: Dover, 1986 (originally published: London: J. Rodker, 1931).

Mock, Elizabeth, ed. Built in USA: 1932-1944. New York: Museum of Modern Art, 1944.

New London City Directories, 1933-1974.

The New York Times - Carolyn Battista, "The View from New London; A House for the Future Finally Lives Up to its Billing," April 10, 1994. - Jewell, Edward Alden, "The Lyman Allyn Museum," Aug. 12, 1934. - "Winslow Ames, Writer and Museum Head, 83," Oct. 8, 1990.

Raley, Dorothy (ed). A Century of Progress Homes and Furnishings. Chicago: M.A. Ring Co., 1934.

Ruddy, John J. Reinventing New London. Charleston, S.C.: Arcadia, 2000.

Time. "Prefabrications." March 27, 1933.

Winnetka Talk. "Walter L. Fisher Dies; Was Former Cabinet Member." Nov. 14, 1935.

OMB No. 1024-0018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Photographs

130 MOHEGAN AVENUE NEW LONDON, CT

Photographs

The photographs accompanying this nomination are black-and-white film images, properly processed with black-and-white chemicals and thoroughly washed on archival-grade paper.

All photographs were taken in New London County, Connecticut, by Theodore Hendrickson in May, 2008. Negatives are located at the Art Studio Dept., Connecticut College.

Photo numbers correspond to the photographs as labeled in the photograph and maps section of the National Register form.

Photograph 1. View of west facades of house and garage, 130 Mohegan Avenue (foreground, right) and 132 Mohegan Avenue (background, left). Camera facing northeast.

Photograph 2. View of south and east facades of 130 Mohegan Avenue. Camera facing northwest.

Photograph 3. View of north facade with main entry, portico, and garage of 130 Mohegan Avenue. Camera facing south.

Photograph 4. View of west and south facades, including rear entry. Camera facing east.

Photograph 5. Interior view of living room with steel wall and ceiling panels, fireplace.

Photograph 6. Interior view through living room, with built-in cases and utility closet, and hall to bedroom No. 2.

Photograph 7. Interior view through bedroom No. 1, with built-in cases, to hall.





1.

-

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY House at 130 Mohegan Avenue NAME:

MULTIPLE NAME:

STATE & COUNTY: CONNECTICUT, New London

DATE RECEIVED: 12/19/08 DATE OF PENDING LIST: 1/05/09 DATE OF 16TH DAY: 1/20/09 DATE OF 45TH DAY: 2/01/09 DATE OF WEEKLY LIST:

REFERENCE NUMBER: 08001379

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N REQUEST: N SAMPLE: N SLR DRAFT: Y NATIONAL: N

COMMENT WAIVER: N

ACCEPT RETURN REJECT 130 2009 DATE

ABSTRACT/SUMMARY COMMENTS:

. Sep attached Return Sheet for detailed connect.

RECOM. / CRITERIA Return - Katr

REVIEWER TELEPHONE

DISCIPLINE DATE

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.



United States Department of the Interior

NATIONAL PARK SERVICE 1849 C Street, N.W. Washington, D.C. 20240

IN REPLY REFER TO:

United States Department of the Interior National Park Service

National Register of Historic Places Evaluation/Return Sheet

Property Name: House at 130 Mohegan Avenue, New London, CT

Reference Number: 08-1379

Date of Return: January 30, 2009

Reason for Return: The House at 130 Mohegan Avenue nomination is being returned for one technical reason and one substantive reason.

Section 3: No box checked for levels of significance.

Section 8: A national level of significance claimed in the Statement of Significance under Criterion A as a rare surviving early product of the prefabricated housing movement, and under Criterion C as "one of the earliest modern houses in New England". While the house is undoubtedly significant under both criteria in terms of state significance (along with Criterion B for the builder, Winslow Ames), national significance has not been demonstrated.

The justification for national significance under Criterion A is based upon it being an early product of the prefabricated housing movement by Howard Fisher and his company, General Houses, Inc. According to at least one source, *Yesterday's Houses of Tomorrow* by Ward Jandl, the "Howard T. Fisher and General Houses, Inc. were prime movers in the development of the prefabricated housing industry in the United States" (p.166). The same source indicates that General Houses built "several hundred of its modern looking houses" before World War II.

The nomination states that the house at 130 Mohegan Avenuc 'closely resembles" the company's exhibition house at the famous "Century of Progress" exposition held in Chicago in 1933-34, and was one of thirteen homes displayed. (It is noted that the exhibition house survives but has been extensively altered.) However, the critical factor here with a prefabricated house in terms of national significance is how many other examples survive. The answer to this question is buried in a footnote 18 in the statement of significance which states that "Few other General Houses"

buildings for the company's early years are known to exist; the house at 130 Mohegan Avenue may well be the best surviving example of General Houses' low-cost homes."

The house design was featured in *The Architectural Record* for January 1934 as the "Mohegan", one of three prefabricated steel houses offered for sale by General Houses, Inc. This indicates that the identical design was made available for sale and built examples may exist in other locations. The same 1934 article features two alternative house patterns for sale. Therefore, national significance of this particular surviving model has not been demonstrated.

Under Criterion C (architecture) national significance is not justified as there are other examples of early modern architecture in New England built in the period of 1928-1934. The category of "modern architecture" can include many variations, and the nomination does not demonstrate why this example is important under Criterion C. The fact that this house is part of broad category of early modern houses does not in itself justify national significance unless it can be shown the house possesses exceptional integrity, and its design or workmanship was of exceptional significance.

We recommend that the level of significance be marked as "state", and that the references to national significance in the text be amended to be consistent with that designation.

Rogér G. Reed, Historian National Register of Historic Places 202-354-2278 roger_reed@nps.gov

	al Register of H ration Form	listoric Places	12003ª		1 2009
Mamu	e of Property				ARK BRUNCE
storic	name 130 Moheo	an Avenue			
ther na	me/site num <u>ber</u>				
WURE 1	uan Kara				
reet &	town 130 Moheg	an Avenue			NA not for publicat
ty or to	WI New London				NA vicinity
ate co	onnecticut	code CT	COUNTY New London	code 011 zip c	ode 0 <u>6320-</u> 4194
	request for determina Historic Places and me operty X meets C doe	ity under the National His tion of eligibility meets th eets the procedural and p es not meet the National e	storic Preservation Act, as ame the documentation standards fo professional requirements set f Register criteria. I recommend intinuation sheet for additional of SHPO	r registering properties in orth in 36 CFR Part 60. I that this property be co	n the National Register In my opinion, the
	s the designated author request for determina Historic Places and me operty I meets do nationally I statewide ignature of certifying effi- connecticut Commission tate or Federal agency a	ity under the National His tion of eligibility meets th eets the procedural and p es not meet the National e locally. (See cor icial/Title , n on Culture and Tourism and bureau	e documentation standards fo professional requirements set f Register criteria. I recommend ntinuation sheet for additional o	r registering properties in orth in 36 CFR Part 60. I I that this property be co comments.) <u>7.30.25</u> Date Iseum Division/State His	n the National Register In my opinion, the nsidered significant
ାଜ ସହ ଅନ୍ୟୁନ୍ତା ସହ	s the designated author request for determina Historic Places and me operty I meets doe nationally I statewide ignature of certifying effi- connecticut Commission tate or Federal agency a my opinion, the proper	ity under the National His tion of eligibility meets th sets the procedural and p es not meet the National e locally. (See cor icial/Title , n on Culture and Tourism and bureau ty meets does not	e documentation standards fo professional requirements set f Register criteria. I recommend ntinuation sheet for additional SHPO 9. Historic Preservation and Mu	r registering properties in orth in 36 CFR Part 60. I I that this property be co comments.) <u>7.30.25</u> Date Iseum Division/State His	n the National Register In my opinion, the nsidered significant
ାଜ ମହା ହେ । ଆଜ ମହା ହେ । ଅନ୍ତ	s the designated author request for determina Historic Places and me operty I meets doe nationally I statewide ignature of certifying effi- connecticut Commission tate or Federal agency a my opinion, the proper omments.)	ity under the National His tion of eligibility meets th sets the procedural and p es not meet the National e locally. (See cor icial/Title , n on Culture and Tourism and bureau ty meets does not	e documentation standards fo professional requirements set f Register criteria. I recommend ntinuation sheet for additional of SHPO h. Historic Preservation and Mu meet the National Register cri	r registering properties in orth in 36 CFR Part 60. I I that this property be co comments.) <u>7.30.25</u> Date Iseum Division/State His	n the National Register In my opinion, the nsidered significant
	s the designated author request for determina Historic Places and me operty I meets doe nationally I statewide ignature of certifying offic connecticut Commission tate or Federal agency a my opinion, the proper omments.)	ity under the National His tion of eligibility meets th sets the procedural and p es not meet the National e locally. (See cor icial/Title icial/Title and bureau	e documentation standards fo professional requirements set f Register criteria. I recommend ntinuation sheet for additional of SHPO a. Historic Preservation and Mu meet the National Register cri Date	r registering properties in orth in 36 CFR Part 60. I that this property be co comments.) 7.30.05 Date Iseum Division/State His teria. (See continuat	n the National Register In my opinion, the Insidered significant
	s the designated author request for determina Historic Places and me operty I meets doe nationally I statewide gnature of certifying offic connecticut Commission tate or Federal agency a my opinion, the proper omments.)	ity under the National His tion of eligibility meets th eets the procedural and p es not meet the National e locally. (See cor icial/Title , non Culture and Tourism and bureau ty meets does not icial/Title and bureau Certific ation	e documentation standards fo professional requirements set f Register criteria. I recommend ntinuation sheet for additional of SHPO h. Historic Preservation and Mu meet the National Register cri	r registering properties in orth in 36 CFR Part 60. I that this property be co comments.) 7.30.05 Date Iseum Division/State His teria. (See continuat	n the National Register In my opinion, the nsidered significant
In constructions in the second	s the designated author request for determina Historic Places and me operty I meets doo nationally statewide ignature of certifying offic connecticut Commission tate or Federal agency a my opinion, the proper omments.) ignature of certifying offic tate or Federal agency a met Park Service of tify that the property is: tered in the National Reg See continuation sh termined eligible for the National Register See continuation sh termined not eligible for the	ity under the National His tion of eligibility meets the pess not meet the National and p ess not meet the National and e locally. (See con icial/Title , and bureau ty meets does not icial/Title and bureau estimation	e documentation standards fo professional requirements set f Register criteria. I recommend ntinuation sheet for additional of SHPO a. Historic Preservation and Mu meet the National Register cri Date	r registering properties in orth in 36 CFR Part 60. I that this property be co comments.) 7.30.05 Date Iseum Division/State His teria. (See continuat	n the National Register In my opinion, the Insidered significant
In contract of a point	s the designated author request for determina Historic Places and me operty I meets doe nationally statewide ignature of certifying offic connecticut Commission tate or Federal agency a my opinion, the proper omments.) ignature of certifying offic tate or Federal agency a mail Park Services tify that the property is: tered in the National Reg See continuation sh termined eligible for the National Register See continuation sh	ity under the National His tion of eligibility meets the pess not meet the National and p ess not meet the National and e locally. (See con icial/Title , and bureau ty meets does not icial/Title and bureau estimation	e documentation standards fo professional requirements set f Register criteria. I recommend ntinuation sheet for additional of SHPO a. Historic Preservation and Mu meet the National Register cri Date	r registering properties in orth in 36 CFR Part 60. I that this property be co comments.) 7.30.05 Date Iseum Division/State His teria. (See continuat	n the National Register In my opinion, the Insidered significant

130 Mohegan Avenue	Page 2		ondon, Co			-
5. Classification						AMAN MARKEN
Ownership of Property (check as many boxes as apply)	Category of P (check only one box)	roperty Num (Do not include pr				Property
		Contribu	ting	Nonco	ontributi	ng
x private	x building(s)	1	_			buildings
public-local	district					sites
public-State	🔲 site					structures
D public-Federal	structure					objects
	🗌 object	1		Ó	-	Total
		1				
Name of related multiple prop (Enter "N/A" if property is not part of a n		Number of co in the Nation			s previo	usly listed
NA	NA					
6. Function of Use Historic Function (Enter only categories from instructions) DOMESTIC: residential		(Enter		tion pries from instru sidential)
Architectural Classification		Mate		pries from insta	(ctions)	
(Enter only categories from instructions		found		CONCRETE		
INTERNATIONAL STYLE				PRESSED S	1	
		roof	ASPHALT	SHINGLE,	WOOD (1	980s ROOF);
			STEEL,	WOOD, TAR	(1933 R	00F)
		other		WOOD		
Narrative Description						

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

X See continuation sheet(s) for Section No. 7

Page 3

New London, Conn. County and State

130 Mohegan Avenue Name of Property	New London, Conn. County and State				
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.)	Areas of Significance (enter categories from instructions)				
x A Property is associated with events that have made a significant contribution to the broad patterns of our history.	INDUSTRY SOCIAL HISTORY				
x B Property is associated with the lives of persons significant in our past.	ART				
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.	ENGINEERING				
D Property has yielded, or is likely to yield, information important in prehistory or history.	Period of Significance 1932-1939				
Criteria Considerations (Mark "x" in all the boxes that apply.)	Significant Dates				
Property is:	1933, 1934				
A owned by a religious institution or used for religious purposes.	Significant Person (only if Criterion B selected)				
B removed from its original location.	. 우편 이상은 수영을 가지 않는 것이 같아. 이상 가지 않는 것이 같아.				
C a birthplace or grave.	AMES, WINSLOW				
D a cemetery.					
E a reconstructed building, object, or structure.					
F a commemorative property.	Architect/Builder (use last names first for individuals) FISHER, HOWARD T./GENERAL HOUSES, INC.				
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.)	See continuation sheet(s) for Section No. 8				
StoMajor Bibliographical References Bibliography (Cite the books, articles, and other sources used in preparing this form on one or more course	ntinuation sheets.)				
Previous documentation on file (NPS):	Primary location of additional data:				
 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 	x State Historic Preservation Office Other State agency Federal agency Local government University Other Name of repository:				
# recorded by Historic American Engineering Record #	See continuation sheet(s) for Section No. 9				

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 2

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Description (continued)

The pitched roof, added in the 1980s, has its gables at east and west. The original steel chimney extends approximately 6 feet above the original roofline on the north side of the building.

The house's main entry is near the center of the north facade, at the angle formed by the intersection of that facade and the garage entry. A wooden portico, most likely original, is set into that angle (Photograph 3).

The rear entry is at the center of the west facade (Photograph 4); it gives onto a brick patio. There is a rooftop deck atop the garage, with a metal railing, only partly intact, approximately 4 feet in height. (The original exterior staircase leading to the deck, a nautical-style metal unit attached to the garage's exterior, is no longer present, and there is currently no access to the deck.)

The foundation is a poured concrete slab, rising 8 inches above the ground line. Thirty-eight exterior wall panels, all 4 feet by 9 feet, are bolted to the foundation and to each other, with narrow wooden spacers between each panel. Thin metal u-channels cover the joints.

The wall panels carry the structure's load, with the joined vertical flanges doing much of the work performed by studs in a traditional balloon-frame structure. For additional strength, two steel I-beams span the width of the house at the roof level. Steel roof panels, of essentially the same construction as the wall panels, are bolted to the top horizontal flanges of the wall panels, to the I-beams, and to one another. The original roof panels, covered with layers of wood and built-up tar, appears to remain in place; the gabled roof atop it is constructed of wood and sheathed with asphalt or composition shingles. Flanged steel corner units and a cornice-an unornamented pressed-steel

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section _ Z Page _3_

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Description (continued)

band-complete the construction. Metal gutters, with drainpipes at various intervals, are attached to the cornice.

The exterior wall panels are of five types: full wall panel, window panel, entry door panel, double-door panel, and fireplace panel. Their distribution is as follows:

- North elevation, main block (including 3 panels shared with garage): 5 wall panels, 2 window panels, entry door panel, fireplace panel;

- East elevation, main block: 3 wall panels, 2 window panels;

- South elevation, main block: 3 wall panels, 6 window panels (one window missing);

- West elevation, main block: 1 wall panel, 3 window panels, double-door panel;

- Garage elevations: 9 wall panels, 1 window panel.

In addition, there is a steel garage door frame, 24 feet by 9 feet, with an aperture for a wooden garage door. The door is 8 feet by 7.5 feet and has three small lights, 9 inches by 16 inches, near the top.

Windows are double-hung with wooden frames and sash, clearly the original Silentite windows manufactured by the (now defunct) Iowabased Curtis Companies for General Houses. Storm windows, not original material, have been attached to the frames on the exterior. On the south side, one window has been removed; a synthetic board bolted to the steel panel covers the aperture.

The interior plan is simple and open, consistent with the modern design concepts employed by General Houses. One enters through the main entry directly into the living area, 10 feet by 16 feet 6 inches,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 4

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Description (continued)

which is open to the kitchen-dining area at rear, 10 feet by 14 feet. These spaces essentially fill the western half of the house. The east side includes two bedrooms-one 8 feet 10 inches by 16 feet, the other 10 feet 10 inches by 16 feet-plus a bathroom, 5 feet by 6 feet 6 inches, off a small hall, 3 feet by 7 feet 6 inches (Floor Plan).

Floors are carpeted in the living area and bedrooms. Vinyl flooring covers the kitchen-dining area. None of the original flooring material, which according to historic documents would have been either wood or linoleum, appears to exist.

Interior walls are 20-gauge pressed-steel panels, original material, painted, with horizontal and vertical steel stiffeners attached to the undersides. They are held in place by narrow metal strips, which cover the interior joints and are screwed into the wooden spacers between the exterior panels. Batts of insulation material fill the air space, approximately 4 inches, between exterior and interior panels. Ceilings are the underside of the steel roof panels, painted, in the livingdining-kitchen areas. Similar ceilings likely exist in the bedrooms but are hidden by false ceilings, most likely made of gypsum board.

The wood-burning fireplace panel in the living area is a unit specially designed by General Houses. With a cold air intake at the bottom and a warm air register at the top, it is designed, like a Franklin stove, to produce heat through both radiation and convection. The one-piece steel unit has a projecting mantel, and there is a built-in, sliding metal-mesh fireguard screen (Photograph 5).

The interior features three large floor-to-ceiling closet/wardrobe units, original wooden units designed by General Houses and manufactured by Curtis Cos. One appears in the living area just off

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 5

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Description (continued)

the main entry (Photograph 6), and there is one in each of the bedrooms (Photograph 7). Cabinets of similar construction, with brass door pulls, appear in the kitchen. A single closet, in the main living area, appears to have provided space for the original boiler, now gone. (The boiler would have sent conditioned air into a ceiling duct and out through registers, now covered, in the tops of wall panels in the living area, kitchen, bedrooms, and bathroom.)

Baseboard radiators, not historic material, have been attached to the bottoms of many interior panels. In addition, electrical conduit, also not historic material, has been attached to the interior wall and ceiling panels in various places.

A number of bathroom fixtures, including the lavatory, a mirrored medicine cabinet, and a light fixture, appear to be original material.

Conditions at the steel house, which has been vacant since 2004, range from poor to good. All mechanical systems have been removed, and there are clear signs of deterioration: peeling paint inside and out; an unsightly (though not structurally troublesome) layer of rust on exterior steel walls; corrosion, some of it resulting in section loss, at the sill level of the exterior wall panels; and significant corrosion of at least two ceiling panels, the result of roof leakage. Yet nearly all of the house's original features remain and, in the main, appear to be restorable. While the gabled roof hides the original flat roof, it is removable, and there have been only a small number of additional alterations. Many important character-defining elements, particularly those on the interior, are in good condition.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 1

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

STATEMENT OF SIGNIFICANCE

Summary

The building at 130 Mohegan Avenue is an excellent, intact "house of tomorrow" from the early 1930s—a prefabricated steel-panel home of modern design based on principles of economy, efficiency, quality, and affordability. Designed and erected by General Houses, Inc., the pioneering company founded and led by the eminent architect-engineerbuilder Howard T. Fisher (1906-79), this innovative frameless, International Style structure exemplifies the concerted, if now largely forgotten, effort to bring new building materials, state-ofthe-art construction methods, industrial production techniques, fresh business models, and theories of modern design to bear on the problem of affordable housing during the Depression. It is significant as:

- the only intact example of General Houses' original low-cost model known to exist, and the company's first "production" house.

- one of two International Style prefabs erected simultaneously on the same site in 1933-the only site in the U.S. where one can view the innovative early work of the two leading prefabricators of the day;

- an irreplaceable artifact of the modern prefabricated housing movement of the 1930s, which flowered during the years of the "Century of Progress" World's Fair expositions in 1933 and 1934;

- evidence of a leading Connecticut modernist's commitment to the modern prefabricated housing movement;

- a rare example of a master architect-engineer's building system, a system that helped pioneer a building type, the panelized house;

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 2

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

The structure is an unusual surviving example of the modern massproduction house aspired to by Frank Lloyd Wright, Le Corbusier, Walter Gropius, R. Buckminster Fuller, and others in the 1910s and 1920s. (While some of those visionaries had tested the waters-notably Wright, with his involvement in the American System-Built homes in the 1910s¹-Fisher was the first to launch a full-scale enterprise devoted to producing fully industrialized modern houses.²)

While General Houses' intent was to mass-produce steel houses for a national market, only a small number of its all-steel homes were built before Fisher and General Houses turned to alternative materials and construction methods in 1936.³ The house at 130 Mohegan Avenue is the only intact example of General Houses' original low-cost construction known to exist.⁴

The steel house's significance, high on its own, is strengthened by its association with the Winslow Ames House, an International Style prefab designed and built by American Houses, Inc., the New York company that was General Houses' chief rival in the early 1930s. In late 1933 the two houses-similar in their use of panelized construction and structural steel members yet contrasting in their use of steel and their builders' approaches to design, marketing, production, and distribution-were constructed simultaneously on one small plot of land. Today, the site offers what is undoubtedly the only opportunity in the U.S. to observe the early, groundbreaking work of the two leading prefabricators of the 1930s.⁵ Together, the two houses constitute a living museum of the most forward-looking smallhouse architecture of the day and the culture that produced it.

The building meets National Register criteria A, B, and C, and is significant under the themes of social history, art, architecture,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 3

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

engineering, and invention. The period of significance is 1932-39.

Criterion A: That are associated with events that have made a significant contribution to the broad pattern of history.

The steel house is historically significant at the national level of significance as a rare, intact artifact of the modern prefabricated housing movement that swept across the United States in the early 1930s. In those years architects, industrialists, entrepreneurs, and journalists, among many others, viewed prefabrication-often in conjunction with modern architectural design-as the answer to the country's Depression-era housing crisis. Meanwhile, millions of Americans, many inspired by the model homes on display at the "Century of Progress" World's Fair expositions in 1933 and 1934, eagerly anticipated a new era of high-quality, affordable housing based on the mass-production, assembly-line processes that had turned U.S. carmakers such as Ford and General Motors into industrial powerhouses. In the eyes of many, General Houses, with its streamlined all-steel construction system and its "fully integrated" business model for designing, marketing, building, financing, and servicing homes, was the first, best hope for industrialized housing in America.6

In 1933, General Houses answered the call for a "Fordized" house—a compact, efficiently designed home with standardized, factory-produced parts that could be rapidly assembled on its site like a car—first with three "demonstration" models in the Chicago area, then, in the late fall, with its first "production" house, the structure at 130 Mohegan Avenue in New London.

An International Style building erected not long after the term was

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 4

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

coined, the New London house's design and construction are based not only on the theories of European modernists but also on a particularly American "ethos of mass production."⁷ As such, it, along with the American Houses building beside it, mark a key turning point in the history of housing in America-a moment when it looked as if the theories of Wright, Le Corbusier, and Fuller and the practices of Ford and General Motors would together revolutionize the disorganized and inefficient homebuilding industry. In late 1933 in New London, Conn., the erection of two sturdy, modern "machines for living" clearly demonstrated the potential for such a transformation.

While commercial success eluded the pioneering prefabricators of the day-both General Houses and American Houses were failures, if judged solely by the number of houses sold-the modern prefab movement led by General Houses and American Houses fostered numerous innovations in home design and construction and laid the groundwork for subsequent construction systems, and patterns of development, that would shape the U.S. in the decades to come.⁸

The steel house at 130 Mohegan Avenue is an exceptionally valuable historic resource-particularly in conjunction with the historic "sister" prefab beside it-for the study of the industrialized housing movement of the 1930s, which represented not only advances in architecture, business, and technology but also the cultural and artistic ideals of the American people during the Great Depression.

Criterion B: That are associated with the lives of persons significant in our past.

The steel house is also significant at the state level for its association with Winslow Ames, the founding director of New London's

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 5

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Lyman Allyn Art Museum, who commissioned the building in 1933 and, with his wife, Anna, owned it until 1949. Ames was a noted museum director, curator, author, and educator who played a leading role in Connecticut's cultural scene during the 1930s and, in essence, introduced New Londoners to modern art and architecture. The steel house is one of four buildings, all surviving in close proximity, that are associated with Ames and his achievements during this period.

Criterion C: That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Finally, the steel house is historically significant at the national level as a rare surviving example of the innovative design, engineering, and construction methods developed by master architectengineer Howard T. Fisher and employed by General Houses, Inc., the modern prefab movement's leader in the early 1930s. Fisher was a pioneer of prefabrication who developed multiple building systems during his time as General Houses' president and chief architect. Later, Fisher continued to work on prefabrication systems, first for the U.S. government during World War II and later for the U.N. in Latin America. (Fisher could count many additional accomplishments, as a noted architect, particularly in the field of shopping center design, in the 1950s and as a professor of urban planning in the 1960s and 1970s.) The steel house is a product of Fisher's first patented system-for a frameless all-steel house-and represents General Houses' initial focus on small, affordable homes for working Americans.

The steel house embodies the distinctive characteristics of a building

a se invento

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 6

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

type-the panelized prefabricated house-during the type's formative period. The panelized construction methods of General Houses, which drew on the design and technology advances of American skyscraper construction as well as the assembly-line processes of American industry, signaled a break from prefabrication's first phase, in which precut lumber and other construction materials were delivered to customers for the construction of "kit houses."⁹

As an early experimenter in panelized construction, General Houses paved the way for successive waves of innovation in the building type, including not only such well-known ventures as Lustron Corp. and Walter Gropius' General Panel Corp. in the 1940s but also more contemporary advances in panelized construction such as the development of the structural insulated panel, or SIP.

The steel house embodies the distinctive characteristics of a second, related building type-the modern steel house-during the type's formative period. General Houses was among the first in the U.S. to exploit the potential of steel in residential construction, through its use of load-bearing steel panels. (Rival American Houses followed a different path in the adjacent house, affixing panels of asbestos cement to steel framing members. In both cases, the construction achieved the prefabricators' goal: lightweight, durable, standardized, precision-tooled parts that could be rapidly joined.) Here, as well, General Houses laid the groundwork for later applications of steel in residential building that continue to this day.¹⁰

The frameless steel prefab at 130 Mohegan Avenue, along with the steel-framed prefab beside it, offer a rare opportunity to view a building type, construction method, and architectural style-panelized, steel, prefabricated, International Style-as they appeared during

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 7

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

their earliest stage of development in the U.S. The all-steel house's unusually high degree of historic integrity-virtually all of the structure's original architectural components, including foundation, interior and exterior wall and roof panels, windows, doors, built-in storage units, fixtures and hardware, remain in place on the original site, with the original footprint and floor plan intact-makes this rare, though now fragile, artifact an extraordinarily valuable historic resource.

Building History

The steel house at 130 Mohegan Avenue, erected in late 1933, is one of two early modern prefabricated houses commissioned by Winslow Ames, the founding director of New London's Lyman Allyn Art Museum, and his wife, Anna. The second house, built by General Houses' New York-based rival, American Houses, Inc., in late 1933 and early 1934, is a steelframe building with panels (now encapsulated) of asbestos cement. Today known as the Winslow Ames House, it was rehabilitated in the early 1990s and was placed on the National Register of Historic Places in 1995. It sits just a few yards north of the steel house at 132 Mohegan Avenue.

Published sources indicate the steel house is the fourth building completed by General Houses-and the first outside the company's home turf of Chicago-after homes constructed in Winnetka, Ill., Elmhurst, Ill., and Chicago (a building later moved to River Forest, Ill.).¹¹

For 15 years under the Ameses' ownership, the steel house was occupied by a series of residential tenants. In 1949 the Ameses sold it and the Winslow Ames House to Connecticut College for Women, now Connecticut

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 8

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

College. For 46 years the college rented out the house to various tenants, mainly faculty and staff members.¹² (The adjacent Winslow Ames House was similarly occupied until the late 1980s.¹³ Since 1994 it has been used by the college as office space.)

The college made only modest repairs and updates to the building over the years, such as the installation of new wiring and heating systems, with the exception of one significant character-altering modification dating to the 1980s: the construction of a wooden pitched roof, which today sits atop the original flat steel/built-up roof.¹⁴

HISTORIC BACKGROUND

The Modern Prefabricated House in the 1930s

The term "prefabrication" did not enter the lexicon until the early 1930s, when efforts to industrialize and modernize housing attained the status of a movement in the U.S.¹⁵ While only a relatively small number of prefabricated houses were built during the interwar years¹⁶ and while many of the era's key figures have been largely forgottenthe movement was real, and its legacy significant.

Although the word "prefabrication" may have been new in 1933, when the house at 130 Mohegan Avenue was designed and erected, prefabrication as a practice was not. Precut houses were known to have been sent across the Atlantic to the colonies in the 17th century.¹⁷ In the 19th century, English manufacturers shipped prefabs to Australia and other parts of the British Empire; often, these buildings were made of corrugated iron. During the Gold Rush in the U.S., East Coast

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 9

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

entrepreneurs sent kit houses by rail to San Francisco. And in the early decades of the 20th century a host of companies-Sears Roebuck, Aladdin, and E.F. Hodgson, among others-sold plans and precision-cut lumber for do-it-yourself houses to thousands of Americans.¹⁸

What was new in the early 1930s were advanced industrial processes, an array of innovative building materials—and modern architecture, with its emphasis on rectilinear forms, smooth, unadorned surfaces, open floor plans, and functional efficiency. These advances made possible the transition from prefabrication's first stage, the precut house, to its second, the panelized house.

The movement's initial wave in America can be traced to the 1910s and 1920s, when a number of forward-thinking architects, planners, and writers promoted the concept of mass-produced housing as a response to the inadequate supply of new homes, the often substandard housing conditions in America, and the widely perceived ineffectiveness of the homebuilding industry. As historian Brian Horrigan has written, these early proponents "espoused the idea of the house as a technologically perfected artifact"-a reengineered product that could be produced at low cost with a high degree of quality control.¹⁹

The wave crested quickly, in the early 1930s, as architects, builders, and others rushed to offer up the "house of tomorrow" as a solution to the Depression-era housing crisis (and, not coincidentally, as a way to restart America's industrial engine). There were many variations on the concept, but in those years the house of tomorrow was typically modern in design and materials, and was intended to be produced assembly-line-style in the manner of the automobile. In general, steel was considered to be the most promising construction material.²⁰

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 10

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Most of the early modern prefab schemes never made it past the prototype stage (if they survived beyond the concept stage), but a small number of entrepreneurs in the 1930s did put together fullservice businesses and set about marketing their products to the American public. The most ambitious and prominent members of this group were the architects Howard T. Fisher, whose Chicago company, General Houses, Inc., designed and built the steel house at 130 Mohegan Avenue, and Robert W. McLaughlin, whose New York-based American Houses, Inc. erected the steel house's "sister" prefab, the Winslow Ames House.

These early modern "merchant prefabricators" took their architectural cues, and some of their philosophical underpinnings, from Europe's modernists (though the Europeans themselves had been influenced by the proto-modernists American architects Louis Sullivan and Frank Lloyd Wright). These famously included members of Germany's Bauhaus School, in particular the school's founder, Walter Gropius, as well as the Swiss-French architect Le Corbusier. By the 1920s the European modernists had codified the design precepts-rectilinear forms, smooth, machine-tooled (or apparently so) surfaces, lack of exterior ornamentation, emphasis on volume rather than mass, integration of outdoor and indoor space-that came to define the International Style.

The urgent housing needs of the Great Depression catalyzed the modern prefabrication movement, even as construction ground to a nearstandstill amid the economic crisis. This was only logical: With 87% of households earning less than \$2,500 a year in 1932, the traditionally built house, which started at around \$5,000, was unthinkable for the vast majority of Americans.²¹ Prefabrication, which promised lower costs and higher quality, looked like the solution.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 11

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

By 1932 the media were promoting prefabrication as the solution to a number of problems in addition to the high cost of new construction: a rapidly deteriorating housing stock, overcrowded cities, idle factories, the prospect of social unrest. Newspapers ran stories with headlines like "Mass Production of Homes in View" and "Sees Future Homes Bought Like Autos" on their front pages.²² Fortune magazine produced a lengthy and much-discussed series of articles that made the case for prefabrication, promoting what would later be called "an ethos of mass production."²³ Few doubted that American industryparticularly the automobile industry-was the appropriate model, and the phrase "Houses like Fords" became something of a rallying cry.

In 1931, Lawrence Kocher, the managing editor of *The Architectural Record*, and the architect Albert Frey teamed up to design and build a house they called the Aluminaire for an exhibition in New York City. The prefabricated metal building, erected in just 10 days, embodied Le Corbusier's principles and sparked interest in modernism, new materials, and new construction methods.²⁴

In 1932 both McLaughlin's American Houses, Inc. and Fisher's General Houses, Inc. were incorporated. General Houses erected its first homea small, modern panelized cottage-in Winnetka, Ill., in March, 1933.²⁵ While General Houses was incorporated first and was seen by the media as the nascent industry's leader, American Houses beat rival General Houses to the punch by erecting its first home (now demolished) in Pennsylvania in late 1932.²⁶ (Others joined the hunt over the next few years: By September, 1936, a survey by American Architect and Architecture listed 48 prefabrication systems, though perhaps only a small portion of those employed modern design or new building materials.²⁷)

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park.Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 12

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Public interest reached its apex with the "Century of Progress" World's Fair expositions held in Chicago in 1933 and 1934.²⁸ Millions of people toured the fairs' dozen or so model homes-most of them modern in design and materials-that were meant to herald the new era of efficient, low-cost housing. Almost all of the fairs' houses were factory-produced to some degree, and prefabrication was a significant part of their allure.

The small steel-panel house erected by General Houses was seen by many as the exhibition's key building, an inexpensive yet thoroughly modern home that, it seemed, could be replicated on a large scale. As Brian Horrigan wrote, General Houses' steel cottage was the Century of Progress Exposition house "that seemed to housing observers to be the true augury of the future."²⁹

It was a frameless one-story cottage on a concrete slab foundation, with a flat roof, assembled from 4-foot by 9-foot painted steel panels.³⁰ The house at 130 Mohegan Avenue is not a replica, reflecting both its owner's particular desires and General Houses' "No two houses alike" motto.³¹ Nevertheless, the building resembles the fair house in size, plan, materials, and construction, and is the only known intact example of General Houses' construction as it was originally conceived and displayed at the Century of Progress fairs.³²

The mass market did not materialize for General Houses or any other 1930s prefabricator, though General Houses was among the few to enjoy a measure of success in the decade leading up to World War II. But it was a success measured in the hundreds of houses (and, at most, two dozen all-steel houses) rather than the thousands or even millions envisioned.³³ The company faced a host of ultimately insurmountable hurdles: inflexible building codes; opposition from labor unions,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 13

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

banks, and the traditional construction industry; distribution and marketing difficulties; lack of government support; frustrating homeloan conditions; a public surprisingly unwilling to embrace modern design; the escalating price of steel; no economies of scale; and a dismal (at best) economy.³⁴ By decade's end General Houses had reinvented itself as a purveyor of traditional-looking wooden Cape Cod-style homes, and the modern prefab movement of the 1930s had guietly faded away.

Less than 1% of all single-family homes constructed in the 1930s were prefabricated,³⁵ and only a small portion of those were modern prefabs, yet the movement's significance extends far beyond the modest output of the builders involved. Many of those who entered the field were motivated by the potential for great profits, but there was a strong element of social consciousness attached to the movement. Open floor plans, economical use of space, lack of unnecessary ornamentation, attached garages, rooftop decks, large expanses of glass-all spoke to the modernists' desire to create a more healthful, more satisfying living environment. As historian and preservationist H. Ward Jandl wrote, the houses of tomorrow "focused attention on how to improve the way we live."³⁶

Postwar housing demand further stimulated the industry, with the number of prefabricators jumping to 280 in 1946.³⁷ Many of these outfits-including General Panel Corp., founded by Gropius and Konrad Wachsmann; Green's Ready-Built houses, with designs by George Fred Keck; and the famed Lustron Corp., which produced steel-panel housesbuilt on the techniques, processes, systems, and designs pioneered by the modern prefabricators of the 1930s. Other builders, notably William J. Levitt, developed on-site assembly-line construction

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 14

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

techniques that owed a debt to the early 1930s mass-production housing movement.

In 1949 prefab manufacturers shipped some 35,000 houses and were anticipating significant growth in 1950.³⁸ There would be growth, but the postwar prefab boom began to fade by the mid-1950s. In the more than five decades since then, interest in prefab housing has waxed and waned, but a core group of progressive architects and cost-conscious builders has kept alive the ideals of the movement begun in the 1930s.

Few buildings dating to the movement's beginning exist today. Only a handful of American Houses' modern prefabs, known as Motohomes, are known to exist-one of them being New London's Winslow Ames House.³⁹ The number of surviving General Houses all-steel buildings from the early 1930s is on a similar level. Without doubt, nowhere else but in New London can one find side-by-side examples of the work of the 1930s' two leading prefabricators.

Winslow Ames and Modernism in New London

Winslow Ames (1907-1993) had a long and noteworthy career as a museum director, curator, author, and teacher. As the director of New London's Lyman Allyn Museum in the 1930s, he was a key figure in the effort-much of it emanating from Connecticut-to bring modern art and architecture to the American public's attention.

The son of an American diplomat, Ames was born in Chile on July 3, 1907, and spent his early childhood overseas. He and his family returned to the United States in 1914, settling in Staten Island, N.Y.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 15

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

He graduated from Phillips Andover Academy and Columbia College, where he received a degree in art history in 1929.

In 1929 and 1930, Ames did graduate work in museum studies at Harvard University, where he studied under and worked with the director of Harvard's Fogg Art Museum, Edward Waldo Forbes. He received his master's degree in the spring of 1930 and almost immediately was offered the directorship of the yet-to-be-opened Lyman Allyn Museum.⁴⁰

After a sojourn to Europe, where he collected works for the museum, Ames married Anna Rebecca Gerhard of Philadelphia. In the summer of 1931 the couple moved to New London, where Winslow Ames would spend a decade as the Lyman Allyn Museum's director-and where he would, in essence, become the public face of art and culture in southeastern Connecticut.⁴¹

Ames was part of an influential circle of men, all associated with Harvard (particularly its fine arts program), who would help set America's cultural agenda over the next several decades. They included Henry-Russell Hitchcock, the noted architectural historian; Philip Johnson, the famed architect and critic; Alfred Barr, the founding director of the Museum of Modern Art in New York; Francis Henry Taylor, the director of New York's Metropolitan Museum of Art; Virgil Thomson, the composer; Julien Levy, the promoter of and dealer in surrealist art; Lincoln Kirstein, founder of the New York City Ballet; and A. Everett "Chick" Austin Jr., the director of the Wadsworth Atheneum in Hartford.

(Another Harvard-trained member of the modernist cohort in the 1930s was Howard Fisher, a Harvard College graduate who in 1927 and 1928 had done graduate work at Harvard's School of Architecture. As a working

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 16

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

architect, a writer on architecture and housing, and as founder, president, and chief architect of General Houses, Inc., Fisher would combine contemporary principles of modern architecture with current theories of mass production in buildings such as Winslow and Anna Ames's steel house at 130 Mohegan Avenue.)

Ames's work quickly drew notice and gave the Lyman Allyn Museum a recognition out of proportion to its size, not to mention the size of the museum's host city. Throughout the 1930s he brought a wide variety of impressive exhibitions to the Lyman Allyn, ranging from shows of old master drawings to displays of everyday objects of good design that sold for less than \$10. As Eugene R. Gaddis, the biographer of Chick Austin, wrote, "Something unusual was always happening at the Lyman Allyn."⁴²

In late 1933 something unusual was happening on a small plot of land just north of the Lyman Allyn: the erection of not one but two modern, prefabricated "houses of tomorrow." Upon their completion, the houses would be two of the most visible signs of Winslow Ames's dedication to the modern aesthetic.⁴³

Winslow and Anna Ames resolved to build their prefabs after Winslow Ames and a friend had attended the Century of Progress Exposition in Chicago during the summer of 1933. According to Ames's unpublished autobiography, Ames met with both General Houses, Inc. founder Howard T. Fisher and American Houses, Inc. founder Robert W. McLaughlin.

"We read Fortune in those days as well as Time," Ames wrote, "and F. [Fortune] was full of prefabricated housing. We got rather excited, though we did not need a house, by Amer. H. and Gen. H.... The upshot was that Ann, able to touch some of her mother's estate at age 25,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 17

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

decided to build one each of AH and GH as rental properties on two small lots on Mohegan Avenue."44

Construction began on General Houses' all-steel building at 130 Mohegan Avenue in November, 1933. Next door at 132 Mohegan Avenue, the building now known as the Winslow Ames House, designed and erected by American Houses, went up almost simultaneously.

The two houses, with their flat roofs, rooftop terraces, attached garages, and unusual building materials, created something of a stir in New London. On Dec. 3, 1933, The Day of New London covered the construction with a story titled, "Steel Fabricated House in Mohegan Avenue, Enclosed, Attracts Attention."⁴⁵ Another newspaper headline read, "New Londoners Stare at Houses of Asbestos and Steel as Winslow Ames Joins Revolt in Home Building Trend." That story began:

Most of the neighbors lift their eyebrows and question his sanity, but Winslow Ames, director of the Lyman Allyn Museum in New London, believes implicitly in an impending revolution in the home building industry, signalized by two prefabricated houses he is erecting on Mohegan Avenue. They are going up on ground adjoining the museum and are startlingly original in type: one is asbestos cement; the other entirely of steel.⁴⁶

The Ameses reportedly paid \$4,500 for the General Houses building and \$7,500 for their American Houses home.⁴⁷ They rented the two houses to various tenants until 1949, when they sold both buildings to Connecticut College for \$9,000.⁴⁸ In his unpublished autobiography, Ames wrote somewhat wistfully about the houses and the promise of prefabrication. "In the end, after having had tenants for many years,"

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 18

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

he wrote, "we sold both homes to Connecticut College. No significant profit. We concluded that prefabrication one house at a time was no great economy."⁴⁹

While the revolution in homebuilding did not occur in the 1930s, the Ameses' two prefabs stand as testimony to Americans' desire to bring modern design and industrial processes to bear on the housing crisis of the Depression. More specifically, they testify to Winslow Ames's forward-looking approach to his work in New London as an advocate for groundbreaking and challenging art and architecture. Along with the nearby Deshon-Allyn House (1829; listed on the National Register of Historic Places in 1970), where the Ameses lived during their time in New London, and the Lyman Allyn Museum building (1932), they form a built landscape that bears witness to Ames's numerous achievements in New London.

Howard T. Fisher, General Houses, Inc., and the All-Steel House

General Houses, Inc. was a leader in the modern prefabricated housing movement in the 1930s. A fully realized corporation that set out to design, market, finance, erect, and service houses, General Houses represented the first, best hope for industrialized housing in the 20th century.

Under Howard T. Fisher, General Houses developed, and over the years modified, a building type and method of construction that produced the archetypal early modern prefab-a panelized home, built from standardized parts, that reflected both the aspirations of modern architecture and the Machine Age faith in industry, technology, and

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 19

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

mass production. While prefabricated housing systems might not at first glance lend themselves to individual artistry, Fisher's accomplishments can be seen as the work of a master.

Today, only a very small number of buildings remain to document the work of Fisher's General Houses. The house at 130 Mohegan Avenue in New London, the only intact example of General Houses' original lowcost construction known to exist, is a rare and illuminating example of the company's early work.

Howard Taylor Fisher (1903-1979) was born into a prominent Chicago family. His father, Walter L. Fisher, was an influential lawyer and conservationist who was active in the civic development of the city.⁵⁰ In 1926, Howard Fisher graduated from Harvard, magna cum laude, with a degree in art history. The next year he began graduate studies in architecture at Harvard. In 1928 he left Cambridge without receiving a master's degree. Upon his return to Chicago, he became a registered architect in Illinois and New York and undertook a number of commissions ranging from office spaces in downtown Chicago to a large ranch house in Wyoming.⁵¹

Fisher received widespread acclaim for his first commission, the Walter T. Fisher house (1929; Winnetka, Ill.), an impressive brick home, reminiscent of contemporary Dutch architecture, that was among the first houses in the European modern style to appear in the U.S. The Architectural Record did a spread on the house,⁵² as did House Beautiful, in 1930.⁵³

It was during the construction of his brother Walter's house that Howard Fisher began to think about materials that might be "less porous" than the bricks and mortar used in the Walter T. Fisher
OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 20

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

house.⁵⁴ It was during this time, too, that Fisher began to consider ways in which house design could be made more efficient and be adapted for modern life. His articles on the subject were published in *The Architectural Record*, where he was a contributing editor.⁵⁵

After three years of research and organization, Fisher formed General Houses, Inc. in 1932 with startup capital from a private syndicate of investors. It was an ambitious undertaking, particularly considering that the founder was not yet 30: General Houses, Fisher decreed, would be a fully integrated housing operation that would design, market, finance, erect, service-even furnish and landscape-prefabricated houses for a national market.⁵⁶

For a company that aimed to churn out machines for living on a large scale, General Houses had an extremely lean corporate structure, largely because the company had no manufacturing division.⁵⁷ Rather than produce parts for its prefab houses in a factory or group of factories, the company relied on a series of agreements with corporate partners. Employing processes now known as supply-chain management and just-in-time manufacturing, General Houses would order up the necessary materials, and the corporate partners would supply them. General Houses managed the logistics but manufactured nothing.⁵⁸

The fledgling company's roster of high-powered partners testified both to the interest in Fisher's business plan during a low point for American manufacturers. Among the corporations involved in General Houses' early years: Pullman Car & Manufacturing, Bethlehem Steel, Inland Steel, Celotex, General Electric, Pittsburgh Plate Glass, American Radiator, U.S. Gypsum, Armstrong Cork & Insulation, Koehler (plumbing), Kroehler (furniture), Curtis Companies, Edison Cement,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 21

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Congoleum-Nairn, Container Corporation of America, and Aluminum Corporation of America.⁵⁹

Fisher had carefully worked out a design and construction system that he believed would allow his company to produce a house that was "twice as good at half the price." The shell of the house-walls, roofs, and floors-would consist of standardized flanged steel panels that were to be bolted to one another through thin wooden spacers. There were wall panels, small window panels, large window panels, full-length glass panels, door panels, and a specially designed fireplace panel, along with corner pieces and spandrel sections for multistory buildings.

The frameless system, in which the flanged sections of steel did much of the work of studs in a traditionally framed house, meant that the panels themselves bore the full load of the structure—and thus considerably reduced the amount of materials and labor required. Each exterior wall panel would be a "pan" into which insulation could be fitted. The insulation would be covered, with an interior steel panel or wallboard, to form a "sandwich." Prefabricated windows and sash, cabinets, and other parts would be placed in the building according to the plan, as would plumbing, wiring, heating and cooling systems, appliances, and fixtures. Fisher received a patent, U.S. Patent No. 1,969,125, for his system on Aug. 7, 1934.

Fisher's standardized panels allowed General Houses' architects and engineers, working on grids, to design a practically endless number of variations on a theme-some 600,000 different plans might be possible, according to the company.⁶⁰ General Houses made the point that its homes, while unified in their design, could be varied in size and plan to suit the needs of any client, and the company's early commissions did in fact run from small, compact single-story cottages to much

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 22

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

larger multistory buildings. Indeed, in 1933, General Houses had pioneered the sort of "mass customization" that continues to be a goal for housing prefabricators in the 21st century.

General Houses' system made for rapid, "dry" construction. Once a foundation was poured and the parts had been delivered to the site, it was mainly a question of lifting the panels into place, bolting them together, adding windows and doors, insulation, and interior walls and ceilings. At the same time, pipes and wiring were installed, followed by interior cases, fixtures, and kitchen equipment. In general, it was estimated that a small crew of unskilled workers could complete a house in about two weeks' time.⁶¹ The company claimed that a socket wrench was the only tool a worker required.⁶²

General Houses erected its first home in March, 1933, in the Hubbard Woods section of Winnetka, Ill., for Fisher's sister-in-law, the dancer Ruth Page. The house, which no longer exists, was a small fiveroom, one-bath, flat-roofed steel-panel cottage overlooking Lake Michigan, with a screened porch. *Time* magazine called it as "severe and clean as a pursuit plane."⁶³ It was, in many respects, quite similar to the house that would be built later that year at 130 Mohegan Avenue.

Well before this first house went up, however, General Houses had become the subject of intense media attention. In 1932 its plans were covered in architectural journals, in newspapers such as The New York Times and the Chicago Tribune, and in a widely discussed series of articles in Fortune magazine penned (anonymously) by Fortune editor Archibald MacLeish. In the July, 1932, Fortune, MacLeish deemed General Houses "the General Motors of the new industry of shelter" and praised Fisher's yet-to-be-tested building system for its structural

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 23

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

simplicity, its efficient, livable interiors, and its handsome, durable exteriors. It also ran a full-page mockup of a General Houses advertisement with a headline that read, "We will deliver this fiveroom house to you this very week!"⁶⁴ Thanks to *Fortune* and the others, the small, flat-roofed, panelized homes of General Houses and its ilk became, for many Americans, the de facto model for the modern prefabricated house.

The media blitz caught General Houses, which was still in the research and testing phase, somewhat unawares. As the editors of the company's 1934 magazine-like catalog, *Our Homes*, wrote, "At that time the impression was created that the company was already in production and General Houses was swept off its feet by the tremendous public interest in its plans."⁶⁵

General Houses was not in a position in 1932, or even in 1933, to produce houses on any kind of scale. Yet it had begun to prepare for the day when that could happen, signing up dealers in the Midwest, New York, and elsewhere and producing a sales brochure in 1933 that displayed drawings, floor plans, and prices for four models, ranging from a four-room cottage (\$4,500) to a substantial two-story, threebedroom house with garage (\$8,550).

To emphasize the scientifically precise nature of its building system, General Houses used alphanumeric formulae for its houses-K2H40, for example, referred, in part, to the company's "K" plan, a house with a hall and four rooms. But it also used more standard model names for marketing purposes. The lowest-priced house featured in the 1933 catalog, with a floor plan similar to that of 130 Mohegan Avenue, was called the Mohegan.⁶⁶

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 24

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

In May, 1933, General Houses erected its model home for the Century of Progress Exposition to be held that summer along Lake Michigan in Chicago-a deadline-driven construction project that required just 30 hours to complete.⁶⁷ Like the first two houses, it was a one-story, flat-roofed building with two bedrooms and one bath.

During the fair, some 2 million people toured the house, and General Houses enjoyed a second round of nationwide publicity-recognition that continued in 1934, when General Houses erected a second model home in Chicago for that year's version of the World's Fair. In the February, 1934, Harper's, the writer Douglas Haskell extolled the General Houses building at the exposition as the 1933 fair's best in show and as the model for both the housing industry and American homeowners. "Houses like Fords!" Haskell wrote. "The homemaker is thus confronted by an idea entirely new. It cuts across ten thousand years of building habits."⁶⁸

Published sources indicate that General Houses put up just two more steel homes in 1933-one of them Winslow and Anna Ames's house at 130 Mohegan Avenue in New London.⁶⁹ The next year it, according to General Houses documents, approximately doubled its production, but that amounted to only 10 or so houses.⁷⁰

Discouraged by slow sales and high costs, Fisher began to research new materials and building systems. In 1935, General Houses, in association with the Purdue Research Foundation, built a model prefab, similar in style and size to its low-cost steel house but with panels made of "stressed-skin" plywood attached to a steel frame. In 1936 the company focused on that construction, deemphasizing its steel-panel system.

OMB No. 102400.18 (Expires 1-31-2009)

United States Department of the Interior-National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 25

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Over the next five or so years General Houses would sell hundreds of houses but likely sold a total of no more than two dozen steel houses.⁷¹ Counter to Fisher's original guiding concept of affordable housing for the masses, many of the company's steel-panel houses in the 1930s were large homes for well-to-do clients.⁷² While the small homes that General Houses initially set out to build were efficient, modern, and handsome, these larger homes did allow Fisher and his staff more latitude to display their architectural and engineering mastery.⁷³

The Ameses' steel-panel house in New London displays all the characteristic features of General Houses' early small homes—the same homes that had captured the imaginations of millions of Americans via newspaper and magazine stories and via the company's model homes at the Century of Progress World's Fairs in 1933 and 1934. These features include insulated frameless steel-panel construction on a concrete slab foundation; a flat roof (today hidden but still extant); attached garage; rooftop deck; an open floor plan that utilizes crossventilation and passive solar thermal properties; high-quality prefabricated windows, doors, built-in cabinets, and fireplace; and a modest footprint for the space- and price-conscious Depression-era home buyer.

The New London house was, and is, an innovative and precisely engineered building. It was also striking for its modern, Bauhausstyle design at a time when few International Style houses had been built in the U.S.

Perhaps most noteworthy, the house at 130 Mohegan Avenue is tangible evidence of the potential for reinventing the way houses were designed, built, and marketed in America, and of Howard Fisher's

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 26

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

carefully crafted program for making such a transformation possible. Realizing such a scheme-regardless of its ultimate commercial successrequired the gifts of a master architect-engineer, not to mention the skills of a bold business innovator. According to historian John Burns, "Fisher's genius was in refining the idea of assembling houses from standardized prefabricated parts-that is, building houses the way General Motors assembled automobiles. The idea presented a challenge to Fisher's talents both as an architect and as an engineer."⁷⁴

By 1940, Fisher had left General Houses, but in the years that followed he continued to work on solutions to the housing problem with the War Dept. during World War II; as head of the architecture and engineering firm he established in Chicago after the war, Howard T. Fisher & Associates; and as a consultant to U.N.-sponsored housing initiatives in Latin America in the 1950s.

In the 1960s, Fisher returned to Harvard to become a professor of urban planning. Fascinated with the potential of computers since the 1950s, he received a grant from the Ford Foundation to develop Symap, a computerized mapping system that was the forerunner of today's widely used Geographical Information System (GIS) software. Today, Harvard awards an annual Howard T. Fisher Prize for excellence in Geographical Information Science.

In 1974, Fisher was made a Fellow of the American Institute of Architects. In great measure, this was in recognition of his work on the industrialization of housing. "Throughout his career," read his AIA Fellow nomination, "the nominee has forcefully advocated greater building industry coordination and integration, and in his research

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 27

130 MOHEGAN AVENUE NEW LONDON, CT

and educational work has demonstrated numerous potentialities to that end." The nomination continued:

General Houses Inc. was perhaps the first company established in the United States for the production on a national scale of highquality permanent houses through the use of mass production and prefabrication. It pioneered basic concepts, carried out extensive research, and over the years produced a substantial number of houses pursuant to several alternative construction systems-thus helping to demonstrate the broad applicability of prefabrication as a basic building technique.⁷⁵

Today, one of the few remaining examples of Howard T. Fisher's first alternative construction system—a pioneering panelized, industrialized system—is the archetypal modern prefabricated house of the early 1930s at 130 Mohegan Avenue in New London, Conn.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 28

130 MOHEGAN AVENUE NEW LONDON, CT

Endnotes

¹ The short-lived American System-Built venture, which Frank Lloyd Wright entered into with the Milwaukee contractor Arthur L. Richards in 1916, offered a preview of how a modern prefabricated housing operation might work in the U.S. Wright's American System houses featured modern architectural elements, including flat roofs and open floor plans; an innovative two-foot construction module; and premilled, machine-made materials. Unlike General Houses' system in the 1930s, however, the American System houses were clearly part of prefabrication's first, "precut" era with their use of wood framing, plaster, and other traditional materials and their need for skilled craftsmen as builders. The venture ended in 1917 as World War I got under way. Today a small, but not fully defined, number of houses remain in Midwestern cities such as Milwaukee and Gary, Ind., where the Richards Co. was active.

² General Houses, Inc. was incorporated in February, 1932, with initial capital from a syndicate of private investors. By 1933, according to *Fortune* magazine ("Mass Produced Houses in Review," April 1933), the company had a staff of more than two dozen in design, sales, legal, and other departments and was working with a host of America's biggest corporations, such as Pullman, General Electric, Kohler, and many others, as supplier-partners.

³ While company records for General Houses likely do not exist, some correspondence from the early 1930s exists in the Howard T. Fisher Papers at the Harvard University Archives. One letter on file, dated May 15, 1935, includes a list of all 11 houses constructed to date by the company, as well as four additional houses under contract. Most of these houses were not the original low-cost construction envisioned by Howard Fisher when he founded the company but instead were larger, more expensive houses. At the time of this letter, General Houses' transition from its all-steel construction to its plywood panel (subsequently asbestos cement panel) construction was well under way. While the company likely continued to offer its all-steel construction for a period of time after mid-1935, it is likely that very few additional all-steel homes were built after the date of this letter.

⁴ Subtracting both those buildings known to be demolished and those known to be larger, more expensive homes from the May, 1935, list leaves, at most, four possible low-cost, all-steel homes: New London, Conn.; Glen Oak, III. (size, price uncertain, though likely large); Monmouth, III. (a low-cost house); and Milwaukee (a low-cost house). The building in New London is the only such house known to exist from this small pool and is almost certainly the only existing intact example of the company's A-100 model, the original low-cost home created by General Houses. (The small houses in Monmouth and Milwaukee were under contract but not under construction in May, 1935. Given that General Houses continually tinkered with its building systems in the 1930s, it is almost certain that these houses were updated versions on the A-100, if not entirely new models.)

⁵ In some ways, the site bears resemblance to the group of experimental houses from the same period in Beverly Shores, Ind. Five of the 12 exhibition homes from the 1933 "Century of Progress" World's Fair in Chicago were moved after the fair to Beverly Shores, where they exist today, owned by the National Park Service and occupied by tenants, who agreed to rehabilitate the structures, under a long-term residential leasing program. The homes—George Fred Keck's House of Tomorrow, the Weiboldt-Rostone House, the Florida Tropical House, the Cypress Log Cabin, and a porcelain enameled steel house, the Armco-Ferro-Mayflower House—are listed on the National Register of Historic Places and are, like the two houses in New London, invaluable artifacts of the prefabricated housing movement of the early 1930s. The New London site differs from Beverly Shores, however, both in that it showcases the work of General Houses and American Houses, the "go-ahead" prefabrication outfits of the era, and in that it showcases not experimental "one-off" buildings but rather the tangible, production-oriented result of the experimentation and innovation in housing in the 1920s and early 1930s. While neither General Houses nor American Houses would erect large numbers of homes like those in New London, the houses there are the production models that were meant to bring modern housing to Americans on a large scale. (In addition, both buildings in New London remain on their original site and retain a high degree of historic integrity.)

⁶ A number of critics and historians—before, during, and after General Houses' existence—have posited that General Houses was the leading prefabrication venture of the interwar period, and the industry's leading innovator. Their reports range from the July 1932 encomium in *Fortune* magazine ("Five Questions...and a Striking Answer"), which viewed General Houses' (as yet untested) system as the apparent solution to America's housing problem, to the building technology authority John Burchard's overview of the nascent prefabrication industry in the January, 1933, issue of *Technology Review* ("The Quest for a Better House") to the architectural critic Douglas Haskell's trenchant "Houses Like Fords" in the February, 1934, issue of *Harper's Weekly*. More recently, the architectural historian Colin Davies has pointed to General Houses' in part because "General Houses took the view that prefabricated houses ought to look modern" (*The Prefabricated Home*, 2005, 53). General Houses and American Houses, according to Davies, were the era's "go-ahead companies" that were "experimenting with advanced steel structures and dimensionally co-ordinated systems" (54).

⁷ Historians of U.S. technology and industry have described the "ethos of mass production" that inspired innovation in the 1920s and 1930s. In *From the American System to Mass Production 1800-1932* (Baltimore: Johns Hopkins Press, 1984), David A. Hounshell writes that not only industrial designers but "businessmen and social thinkers also saw unprecedented opportunity in combining the productive efficiency of the assembly line with individuality and the aesthetics of designers.... America in the late 1920s and early 1930s was pervaded by an ethos of mass production." (304-05). Indeed, Hounshell points to the work of the housing prefabricator Foster Gunnison in the 1930s as "an excellent example of the pervasiveness of the ethos of mass production." (310). (Starting in the mid-1930s, Gunnison's company produced factory-built prefabricated homes in an Indiana plant. However, while his buildings were factory-made, they were not modern in their design or materials, and Gunnison's attempts to reshape the housing business were predated by General Houses and American Houses.)

⁸ American Institute of Architects Fellow nomination for Howard T. Fisher, 1974. The AIA's honor, bestowed on Fisher in 1974, was based in large part on Fisher's groundbreaking work on prefabrication during his years at the helm of General Houses. As the nomination states, General Houses under Fisher "pioneered basic concepts, carried out extensive research" and helped "demonstrate the broad applicability of prefabrication as a basic building technique."

⁹ Cynthia E. Johnson, *Houses in a Box: Prefabricated Housing in the Jackson Purchase Cultural Landscape Region, 1900 to 1960 (*Kentucky Heritage Council: 2006), 44. An historic context prepared by the Kentucky Heritage Council identifies four types of prefabricated housing—the precut houses of the early 20th century and the later panelized, sectional, and preassembled buildings associated with the postwar period but (in the case of panelized construction) pioneered in the 1930s by General Houses and American Houses.

¹⁰ Neil Jackson, *The Modern Steel House* (New York: John Wiley & Sons, 1996). Architect and critic Jackson, along with many others, has identified the modern steel house as a building type that dates to the late 1920s in the U.S., when architects—influenced by experiments in Europe during that decade, by the ethos of mass production in America, and by the construction, design, and cost-saving potential of metal—began to exploit the architectural potential of steel. Among the notable architects who designed homes with steel during the late 1920s and 1930s were Rudolph Schindler, Richard Neutra, and Walter Gropius. They and others, including R. Buckminster Fuller and Frank Lloyd Wright, had envisioned building systems that used steel in mass-produced housing. General Houses and American Houses were among the first to demonstrate the feasibility of such systems, setting the stage for later prefab outfits in the post-World War II era and on to the present.

¹¹ The Architectural Record, 1933-34. The journal covered the construction of General Houses' first buildings in several issues. See "Sectional Steel House for Miss Ruth Page" (April, 1933, 289) "Houses Built With New Construction Methods" (April, 1933, 288), "A Fabricated House at Elmhurst, Illinois" (Nov., 1933, 409) "General Houses, Inc." (Jan., 1934, 18-19) and "Recreation House for Huntington B. Henry" (Oct., 1934, 255).

12 New London (Conn.) city directories, 1933-1974.

13 Ibid.

14 In 2004, Connecticut College closed the building, dismantled and removed the mechanical systems, and ended all maintenance. By 2006 the building, visibly dilapidated, had been targeted for demolition, but plans were put on hold when efforts to preserve the house began in 2007. In July, 2007, the Connecticut Historic Preservation Council placed the steel house on the State Register of Historic Places.

¹⁵ Burnham Kelly, The Prefabrication of Houses (New York: Technology Press of the Massachusetts Institute of Technology/John Wiley and Sons, 1951), 28.

¹⁶ Davies, *The Prefabricated Home*, 54, 56. "In quantitative terms,," Davies writes, "prefabrication's contribution to housing in the U.S. in the 1930s was minor"—fewer than 10,000 units in the decade leading up to 1942, when war production would stimulate the prefabrication industry. (The stimulation would amount to more than 200,000 homes during the war years; very few, if any, of those buildings, however, were modern in design or construction.)

¹⁷ "Hodgson Houses" (Hodgsonhouses.com) According to this history of the Massachusetts-based maker of precut structures E.F. Hodgson Co., "Most scholars will tell you that the first prefab buildings were brought into the American Colonies in the late 17th century via Cape Ann on the North Shore of Massachusetts."

18 Davies, 7-14.

¹⁹ Brian Horrigan, "The Home of Tomorrow, 1927-1945," in Joseph J. Corn, ed., *Imagining Tomorrow: History, Technology, and the American Future* (Cambridge, Mass.: MIT Press, 1988), 137.

²⁰ Alfred Bruce and Harold Sandbank, eds., A History of Prefabrication (New York: John B. Pierce Foundation, 1944), 41: "During the years when prefabrication first attained the status of a widespread movement—1933-37—the terms "prefabricated house" and "steel house" were considered almost synonymous."

21 Ibid., 7.

²² The New York Times, "Sees Future Homes Bought Like Autos," May 25, 1932; "Mass Production of Homes in View," Dec. 3, 1933.

²³ Fortune, "Five Questions...And a Striking Answer,"July, 1932, 60-69, 104-110; "Mass-Produced Houses in Review," April, 1933, 52-57, 78, 80, 83-84, 87.

²⁴ Jake Gorst, "Modeled in Metal: The Aluminaire House" *Modernism*, Summer 2007, 43-49. The Aluminaire was subsequently removed to Long Island, N.Y., where it exists today.

25 Time, "Prefabrications," Mar. 27, 1933.

²⁸ Jandl, Yesterday's Houses of Tomorrow. American Houses beat General Houses to the punch by erecting its first building, a small flat-roofed cottage similar in design to General Houses' building at 130 Mohegan Avenue, in Hazelton, Pa., in late 1932. This prototype house, which no longer stands, was meant to be the first of many homes for a local client. However, no additional houses were constructed in Hazelton, and American Houses quickly switched its focus to somewhat larger, more expensive buildings for middle-class Americans such as the building at 132 Mohegan Avenue in New London.

27 "48 Systems of Prefabrication," American Architect and Architecture, Sept., 1936, 28-40.

²⁸ Elizabeth Mock, ed., *Built in USA: 1932-1944.* (New York: Museum of Modern Art, 1944), 18: "It was shortly after 1932 that Americans first became romantic about prefabrication, miraculous novelty which was expected to set a depressed economy on its feet and provide satisfactory shelter even for that ill-housed "third of a nation."

29 Horrigan, "Home of Tomorrow, 1927-1945," 148.

30 Ibid.

³¹ General Houses' promotional materials, 1933. The University of Chicago Library, Digital Activities & Collections (www.century.lib.uchicago.edu).

³² After the fair, General Houses' first Century of Progress house was moved to River Forest, III., where it reportedly exists today—with alterations to its original plan and, reportedly, a cementitious wall covering that obscures its historic character.

³³ John A. Burns, "K2H40: The Promise of Prefabrication," in Michael J. Auer, Burns, and H. Ward Jandl, Yesterday's Houses of Tomorrow: Innovative American Homes 1850 to 1950 (Washington, D.C.: Preservation Press, 1991), 167.

34 Kelly, The Prefabrication of Houses, and others.

35 Allison Arieff, Prefab (Salt Lake City: Globe Smith, 2000), 21.

36 Auer, Burns, and Jandl, Yesterday's Houses of Tomorrow, 24.

37 Kelly, The Prefabrication of Houses, 71.

38 Ibid., 70.

³⁹ Jandl, Yesterday's Houses of Tomorrow. According to architectural historian Jandl, American Houses sold some 150 "Motohomes" in the 1930s. It is unknown how many exist today—there may be some number, like the house in Washington, D.C., referred to by Jandl, in which all of the Motohome features have been removed or covered, making the house's origins difficult to identify. In any case, the number of such buildings retaining a significant degree of integrity is almost certainly quite small. Today there are at least two: the building at 132 Mohegan Avenue and a similarly sized home in Madison, Wis., both of which are listed on the National Register of Historic Places.

⁴⁰ Eugene R. Gaddis, "Modernist and Connoisseur: Winslow Ames at the Lyman Allyn Museum," in *The Vision and Influence of Winslow Ames*, exh. cat. (New London: Lyman Allyn Art Museum, 2002), 5.

⁴¹ Ibid., 6. "Ames became a one-man education department," Gaddis writes, "lecturing continuously on a great variety of subjects—from Albrecht Durer prints to modern architecture—to every kind of audience, whether Connecticut College students, the D.A.R., or the P.T.A."

42 Gaddis, "Modernist and Connoisseur," 9.

⁴³ Ibid. The other prominent symbol of Winslow Ames's interest in modernism was *Standing Woman*, a large bronze nude by the sculptor Gaston Lachaise that Ames had personally purchased and installed on the grounds of the Deshon-Allyn House. That work that now belongs to the Museum of Modern Art in New York.

⁴⁴ Winslow Ames, unpublished autobiography (Smithsonian Institution Archives of American Art, Washington, D.C.).

⁴⁵ The Day, "Steel Fabricated House in Mohegan Avenue, Enclosed, Attracts Attention," Dec. 2, 1933.

46 Unidentified newspaper story, collection of Lyman Allyn Art Museum, New London.

⁴⁷ Carolyn Battista, "The View from New London; A House for the Future Finally Lives Up to its Billing," The New York Times, April 10, 1994.

48 Connecticut College records.

⁴⁹ Ames, unpublished autobiography.

⁵⁰ "Walter L. Fisher Dies; Was Former Cabinet Member," *Winnetka Talk*, Nov. 14, 1935. Walter L. Fisher played a key role in the formation of Chicago's public transportation system and served as director of the Chicago Bureau of Public Efficiency, among other posts. During the Taft Administration, Fisher was Secretary of the Interior.

⁵¹ Howard T. Fisher Papers, Harvard University Archives.

52 "House for Mr. and Mrs. Walter T. Fisher," The Architectural Record, March, 1930, 459-64.

53 "The Home of Mr. and Mrs. Walter T. Fisher," House Beautiful, March, 1930, 317-19.

54 General Houses, Inc., Our Homes (Chicago: General Houses, Inc., 1934), 19.

⁵⁵ Howard T. Fisher, "New Elements in Home Design," *The Architectural Record*, November, 1929. As early as 1929, Fisher was advocating in print for efficient, modern house design and construction.

56 Burns, "K2H40," 160.

⁵⁷ Fortune, "Mass-Produced Houses in Review," 84. In 1933, General Houses had a full-time staff of 27, broken down as follows: sales: 4; erection: 2; costs: 1; production: 1; design and decoration: 2; land usage: 1; legal: 1; financial: 2; engineering, drafting and research: 11.

58 Ibid.

59 General Houses, Our Homes, 9.

60 Ibid., 12.

⁶¹ Dorothy Raley (ed.), A Century of Progress Homes and Furnishings (Chicago: M.A. Ring Co., 1934), 63. General Houses' Century of Progress Exposition house, a rush job, required was completed in 200 man-hours, but the company estimated that a similar house would take approximately two weeks to erect. 62 Ibid.

63 Time, "Prefabrications."

64 Fortune, "Five Questions," 61-69, 104-7.

65 General Houses, Our Homes, 19.

66 General Houses, Inc., 1933 sales brochure.

67 General Houses, Our Homes, 34.

68 Douglas Haskell, "Houses Like Fords," Harper's, Feb., 1934, 286.

^{69,} "Recreation House for Huntington B. Henry," *Architectural Record*, Oct., 1934, 255. Henry's weekend hunting retreat on an estate in Lake Forest, III., was probably constructed in 1934 but could have been completed the previous year.

⁷⁰ Howard T. Fisher Papers, Harvard University Archives.

71 Ibid.

1

⁷² A home for the future U.S. Senator, Democratic Presidential nominee, and U.N. Ambassador Adlai E. Stevenson II was destroyed in a fire as it neared completion in 1935, proving that a steel house is not absolutely fireproof.

⁷³ Howard Fisher Papers; Art Institute of Chicago, Chicago Architects Oral History Project. In the 1930s Fisher's General Houses employed a number of young draftsmen, among them G. Paul Schweikher, Herman Lackner, Phillip Will Jr., and Lawrence Perkins, who would later go on to have notable careers in architecture.

74 Burns, "K2H40," 161.

74 Howard T. Fisher's American Institute of Architects Fellow nomination, 1974, Howard Fisher Papers.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 1

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography

Ames, Winslow. Unpublished autobiography. Smithsonian Institution Archives of American Art, Washington, D.C.

American Institute of Architects. AIA Fellow nomination materials for Howard T. Fisher, 1974.

The Architectural Record, 1933-34.

- "Sectional Steel House for Miss Ruth Page," Apr., 1933, 289.
- "Houses Built With New Construction Methods," Apr. 1933, 288.
- "A Fabricated House at Elmhurst, Illinois," Nov., 1933, 409.
- "House for Mr. and Mrs. Walter T. Fisher," Nov., 1929, 459-64.
- "General Houses, Inc.," Jan., 1934, 18-19.
- "Recreation House for Huntington B. Henry," Oct., 1934, 255.

Arieff, Allison. Prefab. Salt Lake City: Globe Smith, 2000.

Art Institute of Chicago. Chicago Architects Oral History Project. www.artic.edu/aic/libraries/caohp.

Auer, Michael J., Burns, John A., and Jandl, H. Ward. Yesterday's Houses of Tomorrow: Innovative American Homes 1850 to 1950. Washington, D.C.: The Preservation Press, 1991.

Bemis, Albert Farwell and Burchard, John. The Evolving House (Vol. 1): A History of the Home. Cambridge, Mass: The Technology Press (Massachusetts Institute of Technology), 1933.

Bemis, Albert Farwell. The Evolving House (Vol. 2): The Economics of Shelter. Cambridge, Mass: The Technology Press (Massachusetts Institute of Technology), 1934.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 2

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography (continued)

Bemis, Albert Farwell. The Evolving House (Vol. 3): Rational Design. Cambridge, Mass.: Technology Press (Massachusetts Institute of Technology), 1936.

Bruce, Alfred, and Sandbank, Harold. A History of Prefabrication. New York: John B. Pierce Foundation, 1944.

Burchard, John Jr. "The Quest for a Better House." Technology Review, Jan., 1933.

Corn, Joseph J., ed. Imagining Tomorrow: History, Technology, and the American Future. Cambridge, Mass.: MIT Press, 1986.

Davies, Colin. The Prefabricated Home. London: Reaktion, 2005.

The Day, New London — "Application Filed to Construct Steel Fabricated Dwelling; First in City," Sept. 16, 1933. — "12 Applications for Building Permits Approved by Board in September," Oct. 7, 1933. — "Framework Started for Two Steel Fabricated Houses in Mohegan Ave.," Nov., 1933 (approximate date). — "Steel Fabricated House in Mohegan Avenue, Enclosed, Attracts Attention," Dec. 2, 1933.

Fisher, Howard T. Papers, Harvard University Archives.

Fisher, Howard T. "New Elements in Home Design." The Architectural Record, Nov., 1929.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 3

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography (continued)

"48 Systems of Prefabrication." American Architect and Architecture, Sept., 1936, 28-40.

Fortune

- "Five Questions...And a Striking Answer." July, 1932, 60-69, 104-10.
- "Mass-Produced Houses in Review." April, 1933, 52-57, 78, 80, 83-84, 87.

Gaddis, Eugene R. Magician of the Modern: Chick Austin and the Transformation of the Arts in America. New York: Knopf, 2000.

Gaddis, Eugene R. "Modernist and Connoisseur: Winslow Ames at the Lyman Allyn Museum," in The Vision and Influence of Winslow Ames. Exh. cat. New London: Lyman Allyn Art Museum, 2002.

General Houses, Inc. General Houses, Inc. N.p., 1933. University of Chicago Special Collections Center.

General Houses, Inc. Our Homes. Chicago: General Houses, Inc., 1934.

Gorst, Jake. "Modeled in Metal: The Aluminaire House," Modernism, Summer 2007, pp. 43-49.

Haskell, Douglas. "Houses Like Fords." Harper's Weekly, Feb. 1934, pp. 286-97.

Hitchcock, Henry-Russell. "A House in Winnetka," The Arts, Feb., 1930.

House Beautiful. "The Home of Mr. and Mrs. Walter T. Fisher." March, 1930.

	Page 4
130 Mohegan Avenue	
Name of Property	

New London, Conn.

County and State

10. Geographical Data

Acreage of Property 0.1 ACRE

UTM References

(Place additional boundaries of the property on a continuation sheet.)

 1
 1/8
 7/4/2/2/6/6
 4/6/8/4/1/5/0
 2
 /
 /
 Zone

 3
 /
 /
 /
 /
 /
 /
 /
 Zone
 Zone
 Zone
 Zone
 Zone
 Zone
 Zone
 Easting
 Vorthing
 4
 /
 /
 Zone
 Easting
 Zone
 Zone</

USGS Topographic Quad name NEW LONDON

telephone (860) 439-5083

state CT zip code 06320-4194

Verbal Boundary Description (Describe the boundaries of the property.)

The nominated property includes the house known as 130 Mohegan Avenue, along with land bounded as follows: north by a line 10' from the garage's north wall, east by Mohegan Avenue (Connecticut Route 132), south by a line 8' from the south wall, and west by a line 42' from the garage's west wall.

Boundary Justification (Explain why the boundaries were selected.)

The boundary includes the house and a reasonable amount of surrounding land, which forms the setting for the house.

13. Form Prepared By

name/title Douglas Royalty

organization Connecticut College date July 1, 2008

street & number 270 Mohegan Avenue

city or town New London, Conn.

email address doug.royalty@conncoll.edu

Additional Documentation

The National Register requires each nomination consist of the following beyond this 4-page cover form:

x Continuation Sheets for narrative x A USGS topographic quad map (7.5 or 15 minute series) indicating the property's location

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

A Photo identification map for districts; one map can serve both as sketch and photo ID map.

x black and white photographs of the property. See policy statement for acceptable use of digital photographs

The Connecticut Commission on Culture and Tourism requires the following for all nominations:

x An additional set of black and white photographs that remains at the SHPO

x Floor plans of properties whose significance is based on their plans

x Color slides or PowerPoint images and presentation of the property to the Connecticut State Review Board

 Property Gwmer

 name/title Connecticut College

 street & number 270 Mohegan Avenue

 telephone (860) 447-1911

 city or town New London

 state CT
 zip code 06320-4194

 email address (if available) NA

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 1

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Description

The building at 130 Mohegan Avenue is a one-story International Style dwelling constructed of prefabricated pressed-steel panels. This small "machine for living" was erected in late 1933 by the Chicago-based company General Houses, Inc. It sits along Connecticut Route 132 (Mohegan Avenue) in New London, one in a row of six early 20th century dwellings, all now owned by Connecticut College. Four of the six buildings are two- to three-story vernacular wood-frame homes; the remaining two are early modern prefabs featuring steel construction (Photograph 1). This row of buildings, in the southeastern corner of the college's campus, is separated from the main campus by a large parking lot and by landscaped areas with mature trees and shrubs. Despite the presence of a busy highway nearby, the setting retains much of its pre-World War II residential character.

The metal house is a rare surviving example of General Houses' original patented frameless construction, in which flanged 14-gauge steel panels, approximately 4 feet by 9 feet, are bolted to the foundation, to one another, and to roof panels of similar steel construction. Although the original flat roof, an important characterdefining feature, has been hidden by a second, gabled roof, it and the bulk of the house's historic material remain, and the building retains a high degree of integrity in terms of location, design, setting, materials, workmanship, feeling, and association (Photographs 1-2).

The house has a rectangular plan, 21 feet by 37 feet, with the narrower elevations at east and west. A single-bay garage, 13 feet by 20 feet, also of steel-panel construction, is attached at the northwest corner of the house, with its narrower elevations also at east and west. The rear of the garage extends beyond the house to the west by 8 feet (two panels), resulting in an asymmetrical structure with two attached, yet distinct, rectangular blocks (Photograph 1).

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 4

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography (continued)

Kelly, Burnham. The Prefabrication of Houses. New York: Technology Press of the Massachusetts Institute of Technology/John Wiley and Sons, 1951.

Le Corbusier. Towards a New Architecture. Mineola, N.Y.: Dover, 1986 (originally published: London: J. Rodker, 1931).

Mock, Elizabeth, ed. Built in USA: 1932-1944. New York: Museum of Modern Art, 1944.

New London City Directories, 1933-1974.

The New York Times - Carolyn Battista, "The View from New London; A House for the Future Finally Lives Up to its Billing," April 10, 1994. - Jewell, Edward Alden, "The Lyman Allyn Museum," Aug. 12, 1934. - "Winslow Ames, Writer and Museum Head, 83," Oct. 8, 1990.

Raley, Dorothy (ed). A Century of Progress Homes and Furnishings. Chicago: M.A. Ring Co., 1934.

Ruddy, John J. Reinventing New London. Charleston, S.C.: Arcadia, 2000.

Time. "Prefabrications." March 27, 1933.

Winnetka Talk. "Walter L. Fisher Dies; Was Former Cabinet Member." Nov. 14, 1935.

OMB No. 1024-0018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Photographs

130 MOHEGAN AVENUE NEW LONDON, CT

Photographs

The photographs accompanying this nomination are black-and-white film images, properly processed with black-and-white chemicals and thoroughly washed on archival-grade paper.

All photographs were taken in New London County, Connecticut, by Theodore Hendrickson in May, 2008. Negatives are located at the Art Studio Dept., Connecticut College.

Photo numbers correspond to the photographs as labeled in the photograph and maps section of the National Register form.

Photograph 1. View of west facades of house and garage, 130 Mohegan Avenue (foreground, right) and 132 Mohegan Avenue (background, left). Camera facing northeast.

Photograph 2. View of south and east facades of 130 Mohegan Avenue. Camera facing northwest.

Photograph 3. View of north facade with main entry, portico, and garage of 130 Mohegan Avenue. Camera facing south.

Photograph 4. View of west and south facades, including rear entry. Camera facing east.

Photograph 5. Interior view of living room with steel wall and ceiling panels, fireplace.

Photograph 6. Interior view through living room, with built-in cases and utility closet, and hall to bedroom No. 2.

Photograph 7. Interior view through bedroom No. 1, with built-in cases, to hall.

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION/RETURN SHEET

REQUESTED ACTION: RESUBMISSION

PROPERTY House at 130 Mohegan Avenue NAME :

MULTIPLE NAME :

STATE & COUNTY: CONNECTICUT, New London

7/31/09 DATE OF PENDING LIST: DATE RECEIVED: DATE OF 45TH DAY: 9/13/09 DATE OF 16TH DAY: DATE OF WEEKLY LIST:

REFERENCE NUMBER: 08001379

DETAILED EVALUATION:

ACCEPT / RETURN

REJECT 9/10/2009 DATE

ABSTRACT/SUMMARY COMMENTS:

See attached letter for explanatic why national significance

has not been justified.

RECOM. / CRITERIA Return -	Particle Andres
REVIEWER	DISCIPLINE
TELEPHONE	DATE 9/10/2009
DOCIMENTATION see attache	ed comments Y/N see attached SLR Y/N



United States Department of the Interior

NATIONAL PARK SERVICE 1849 C Street, N.W. Washington, D.C. 20240

IN REPLY REFER TO:

United States Department of the Interior National Park Service

National Register of Historic Places Evaluation/Return Sheet

Property Name: House at 130 Mohegan Avenue, New London, CT

Reference Number: 08-1379

Date of Return: September 10, 2009

Reason for Return: The House at 130 Mohegan Avenue nomination has been revised to support the claim that the property merits national significance. In the view of NPS, the justification for national significance is not supported by the documentation.

Section 8 Significance: The property is exceptionally significant in Connecticut history as "an irreplaceable artifact of the modern prefabricated housing movement of the 1930s", built by Winslow Ames, who was prominent in Connecticut cultural history. However, the justification for national significance as provided in the revised nomination can be summarized as follows:

1. 130 Mohegan Avenue is the only known example of the prototype design for Howard Fisher's prefabricated metal housing.

2. The prototype design is nationally significant in the development of modern prefabricated housing.

The claim that it is the only known example is plausible, given the relatively few numbers of these houses that were built. The apparent small number, however, raises the question of the importance of early prefabricated homes produced by Howard Fisher's company, General Houses, Inc.

There was a rapid evolution of Fisher's General Houses from the manufacture of steel panel houses to the production of more traditional house designs using more traditional building materials. This evolution of the company with the abandonment of steel construction by 1936, does not support the argument that the prototypical design, as represented by 130 Mohegan Road

(built in 1933), played an important role in the development of prefabricated housing. The Moderne style design of the prototype house is historically interesting, but not in itself significant given the numbers of other modernist designs offered to the public by different architects and companies at that time. It is true that Fisher's failure to achieve economic success derived in large part from resistance of the building industry, as well as mortgage companies. The resistance to change was later compounded by the material shortages brought on by the war. This is documented in an early history of prefabricated housing (noted in the bibliography).¹ These impediments to the success of General Houses, and Howard Fisher's efforts to offer a prefabricated product more economically feasible, are significant in terms of his career. They do not, however, justify the listing in the National Register this example of this early design as nationally significant.

If the nomination is resubmitted all references to national significance should be deleted.

Roger G. Reed, Historian National Register of Historic Places 202-354-2278 roger_reed@nps.gov

¹ Kelly, Burnham, The Prefabrication of Houses. Boston: MIT, 1951.

NPS Form 10-900 (Oct. 1990)	OMB No. 10024-0
United States Department of the Inter National Park Service	RECEIVED 2280
National Register of Historic	Places OCT 2 7 2009
Registration Form	08001379 NAT. RECOST OF WEITORIC PLACES
	080013 NATE REPORT OF THE TOPIC PLACES
1. Name of Property	
historic nam <u>e 130 Mohegan Ave</u>	nue
other name/site number	
2. Location	
street & town 130 Mohegan Aver	nue NA not for publicati
city or town New London	NA vicinity
state Connecticut code	CT COUNTY New London code 011 zip code 06320-4194
3. State/Federal Agency Certificati	
of Historic Places and meets the proc	pility meets the documentation standards for registering properties in the National Register cedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the
or Historic Places and meets the proc property 🖾 meets 🗋 does not meet 🗋 nationally 🖾 statewide 🗋 locally.	The National Register criteria. I recommend that this property be considered significant (\Box See continuation sheet for additional comments.)
Signature of certifying official/Title	xedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the the National Register criteria. I recommend that this property be considered significant (□ See continuation sheet for additional comments.)
or historic Places and meets the proc property is meets in does not meet the nationally is statewide in locally. Signature of certifying official/Title <u>Connecticut Commission on Culture a</u> State or Federal agency and bureau	xedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the the National Register criteria. I recommend that this property be considered significant (□ See continuation sheet for additional comments.)
or historic Places and meets the proc property is meets in does not meet the nationally is statewide in locally. Signature of certifying official/Title <u>Connecticut Commission on Culture a</u> State or Federal agency and bureau In my opinion, the property in meets	xedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the the National Register criteria. I recommend that this property be considered significant (□ See continuation sheet for additional comments.) > ? · 3 · · · · · · · · · · · · · · · · ·
or historic Places and meets the proc property 🖾 meets 🗋 does not meet f nationally 🖾 statewide 🗋 locally. Signature of certifying official/Title <u>Connecticut Commission on Culture a</u> State or Federal agency and bureau In my opinion, the property 🗌 meets comments.)	redural and professional requirements set forth in 36 CFR Part 60. In my opinion, the the National Register criteria. I recommend that this property be considered significant (□ See continuation sheet for additional comments.) > ? · 3 · · · · · · · · · · · · · · · · ·
In my opinion, the property meets of meets of comments.)	redural and professional requirements set forth in 36 CFR Part 60. In my opinion, the the National Register criteria. I recommend that this property be considered significant (See continuation sheet for additional comments.) Image: the second sec
or historic Places and meets the proc property ⊠ meets ☐ does not meet f ☐ nationally ⊠ statewide ☐ locally. Signature of certifying official/Title <u>Connecticut Commission on Culture a</u> State or Federal agency and bureau In my opinion, the property ☐ meets comments.) Signature of certifying official/Title	redural and professional requirements set forth in 36 CFR Part 60. In my opinion, the the National Register criteria. I recommend that this property be considered significant (See continuation sheet for additional comments.) Image: the second sec
or historic Places and meets the proc property ⊠ meets ☐ does not meet f ☐ nationally ⊠ statewide ☐ locally. Signature of certifying official/Title <u>Connecticut Commission on Culture a</u> State or Federal agency and bureau In my opinion, the property ☐ meets comments.) Signature of certifying official/Title State or Federal agency and bureau 1. National Park Service Certification hereby certify that the property is: ☐ entered in the National Register.	Date
In my opinion, the property meets agency and bureau In my opinion, the property meets agency and bureau In my opinion, the property meets Comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property meets Comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property meets Comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property meets Comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property is: State or Federal agency and bureau In my opinion, the property is: Description	Date
or historic Places and meets the proc property I meets I does not meet to nationally I statewide I locally. Signature of certifying official/Title Connecticut Commission on Culture as State or Federal agency and bureau In my opinion, the property I meets comments.) Signature of certifying official/Title State or Federal agency and bureau I. National Park Service Certification hereby certify that the property is: I entered in the National Register. See continuation sheet. I determined eligible for the National Register See continuation sheet.	Date
or historic Places and meets the proc property I meets I does not meet to nationally I statewide locally. Signature of certifying official/Title Connecticut Commission on Culture as State or Federal agency and bureau In my opinion, the property I meets comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property I meets comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property I meets comments.) Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title State or Federal agency and bureau I neets State or Federal agency and bureau I neets Signature of certifying official/Title State or Federal agency and bureau I neets State or Federal agency and bureau I neets Secontinuation sheet. See continuation sheet. Autional Register National Register. National Register.	Date
or historic Places and meets the proc property I meets I does not meet to nationally I statewide locally. Signature of certifying official/Title Connecticut Commission on Culture as State or Federal agency and bureau In my opinion, the property I meets comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property I meets comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property I meets comments.) Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title Signature of certifying official/Title I neets comments. Signature of certifying official/Title Signature of certifying official/Title I neets comments. Signature of certifying official/Title I neets comments. Signature of certifying	Date
or historic Places and meets the proc property I meets I does not meet to nationally I statewide locally. Signature of certifying official/Title Connecticut Commission on Culture as State or Federal agency and bureau In my opinion, the property I meets comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property I meets comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property I meets comments.) Signature of certifying official/Title State or Federal agency and bureau I neets comments. Signature of certifying official/Title State or Federal agency and bureau I neets State or Federal agency and bureau I neets Signature of certifying official/Title State or Federal agency and bureau I neets State or Federal agency and bureau I neets Secontinuation sheet. See continuation sheet. Autional Register National Register. National Register.	Date
or historic Places and meets the proc property 🖾 meets 🗌 does not meet t nationally 🖾 statewide 🗋 locally. Signature of certifying official/Title Connecticut Commission on Culture as State or Federal agency and bureau In my opinion, the property 🗍 meets comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property 🗍 meets comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property 🗍 meets comments.) Signature of certifying official/Title State or Federal agency and bureau In my opinion, the property is: Signature of certifying official/Title State or Federal agency and bureau In the National Register. See continuation sheet. I determined eligible for the National Register. See continuation sheet. I determined not eligible for the National Register. I removed from the National Register.	Date

<u>130 Mohegan Avenue</u> Name of Property	Page 2	New London, C County and State		
5. Classification		and the second second second		
Ownership of Property (check as many boxes as apply)	Category of Pro (check only one box)	Operty Number of (Do not include previously lis	Resources wi ted resources in the c	
		Contributing	Noncontril	outing
x private	x building(s)	1		buildings
public-local	district			sites
public-State	🗌 site			structures
public-Federal	structure			objects
	🗌 object	1 _	0	Total
		1		-
Name of related multiple prop (Enter "N/A" if property is not part of a NA		Number of contributi in the National Regis NA		eviously listed
6. Function or Use Historic Function (Enter only categories from instructions DOMESTIC: residential	s)	Current Function (Enter only categories from instructions) DOMESTIC: residential (vacant)		
7. Description Architectural Classification (Enter only categories from instructions	s)	Materials (Enter only categ	ories from instructions)
INTERNATIONAL STYLE		foundation		
		Walls METAL:	PRESSED STEEL	
		roof ASPHALT	SHINGLE, WOOD	(1980s ROOF);
		STEEL,	WOOD, TAR (193	3 ROOF)
		other	WOOD	
Satural States of the				

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

X See continuation sheet(s) for Section No. 7

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 1

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Description

The building at 130 Mohegan Avenue is a one-story International Style dwelling constructed of prefabricated pressed-steel panels. This small "machine for living" was erected in late 1933 by the Chicago-based company General Houses, Inc. It sits along Connecticut Route 132 (Mohegan Avenue) in New London, one in a row of six early 20th century dwellings, all now owned by Connecticut College. Four of the six buildings are two- to three-story vernacular wood-frame homes; the remaining two are early modern prefabs featuring steel construction (Photograph 1). This row of buildings, in the southeastern corner of the college's campus, is separated from the main campus by a large parking lot and by landscaped areas with mature trees and shrubs. Despite the presence of a busy highway nearby, the setting retains much of its pre-World War II residential character.

The metal house is a rare surviving example of General Houses' original patented frameless construction, in which flanged 14-gauge steel panels, approximately 4 feet by 9 feet, are bolted to the foundation, to one another, and to roof panels of similar steel construction. Although the original flat roof, an important characterdefining feature, has been hidden by a second, gabled roof, it and the bulk of the house's historic material remain, and the building retains a high degree of integrity in terms of location, design, setting, materials, workmanship, feeling, and association (Photographs 1-2).

The house has a rectangular plan, 21 feet by 37 feet, with the narrower elevations at east and west. A single-bay garage, 13 feet by 20 feet, also of steel-panel construction, is attached at the northwest corner of the house, with its narrower elevations also at east and west. The rear of the garage extends beyond the house to the west by 8 feet (two panels), resulting in an asymmetrical structure with two attached, yet distinct, rectangular blocks (Photograph 1).

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section <u>7</u> Page <u>2</u>

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Description (continued)

The pitched roof, added in the 1980s, has its gables at east and west. The original steel chimney extends approximately 6 feet above the original roofline on the north side of the building.

The house's main entry is near the center of the north facade, at the angle formed by the intersection of that facade and the garage entry. A wooden portico, most likely original, is set into that angle (Photograph 3).

The rear entry is at the center of the west facade (Photograph 4); it gives onto a brick patio. There is a rooftop deck atop the garage, with a metal railing, only partly intact, approximately 4 feet in height. (The original exterior staircase leading to the deck, a nautical-style metal unit attached to the garage's exterior, is no longer present, and there is currently no access to the deck.)

The foundation is a poured concrete slab, rising 8 inches above the ground line. Thirty-eight exterior wall panels, all 4 feet by 9 feet, are bolted to the foundation and to each other, with narrow wooden spacers between each panel. Thin metal u-channels cover the joints.

The wall panels carry the structure's load, with the joined vertical flanges doing much of the work performed by studs in a traditional balloon-frame structure. For additional strength, two steel I-beams span the width of the house at the roof level. Steel roof panels, of essentially the same construction as the wall panels, are bolted to the top horizontal flanges of the wall panels, to the I-beams, and to one another. The original roof panels, covered with layers of wood and built-up tar, appears to remain in place; the gabled roof atop it is constructed of wood and sheathed with asphalt or composition shingles. Flanged steel corner units and a cornice-an unornamented pressed-steel

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 3

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Description (continued)

band-complete the construction. Metal gutters, with drainpipes at various intervals, are attached to the cornice.

The exterior wall panels are of five types: full wall panel, window panel, entry door panel, double-door panel, and fireplace panel. Their distribution is as follows:

 North elevation, main block (including 3 panels shared with garage): 5 wall panels, 2 window panels, entry door panel, fireplace panel;

- East elevation, main block: 3 wall panels, 2 window panels;

- South elevation, main block: 3 wall panels, 6 window panels (one window missing);

- West elevation, main block: 1 wall panel, 3 window panels, double-door panel;

- Garage elevations: 9 wall panels, 1 window panel.

In addition, there is a steel garage door frame, 24 feet by 9 feet, with an aperture for a wooden garage door. The door is 8 feet by 7.5 feet and has three small lights, 9 inches by 16 inches, near the top.

Windows are double-hung with wooden frames and sash, clearly the original Silentite windows manufactured by the (now defunct) Iowabased Curtis Companies for General Houses. Storm windows, not original material, have been attached to the frames on the exterior. On the south side, one window has been removed; a synthetic board bolted to the steel panel covers the aperture.

The interior plan is simple and open, consistent with the modern design concepts employed by General Houses. One enters through the main entry directly into the living area, 10 feet by 16 feet 6 inches,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 4

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Description (continued)

which is open to the kitchen-dining area at rear, 10 feet by 14 feet. These spaces essentially fill the western half of the house. The east side includes two bedrooms-one 8 feet 10 inches by 16 feet, the other 10 feet 10 inches by 16 feet-plus a bathroom, 5 feet by 6 feet 6 inches, off a small hall, 3 feet by 7 feet 6 inches (Floor Plan).

Floors are carpeted in the living area and bedrooms. Vinyl flooring covers the kitchen-dining area. None of the original flooring material, which according to historic documents would have been either wood or linoleum, appears to exist.

Interior walls are 20-gauge pressed-steel panels, original material, painted, with horizontal and vertical steel stiffeners attached to the undersides. They are held in place by narrow metal strips, which cover the interior joints and are screwed into the wooden spacers between the exterior panels. Batts of insulation material fill the air space, approximately 4 inches, between exterior and interior panels. Ceilings are the underside of the steel roof panels, painted, in the livingdining-kitchen areas. Similar ceilings likely exist in the bedrooms but are hidden by false ceilings, most likely made of gypsum board.

The wood-burning fireplace panel in the living area is a unit specially designed by General Houses. With a cold air intake at the bottom and a warm air register at the top, it is designed, like a Franklin stove, to produce heat through both radiation and convection. The one-piece steel unit has a projecting mantel, and there is a built-in, sliding metal-mesh fireguard screen (Photograph 5).

The interior features three large floor-to-ceiling closet/wardrobe units, original wooden units designed by General Houses and manufactured by Curtis Cos. One appears in the living area just off

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 5

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Description (continued)

the main entry (Photograph 6), and there is one in each of the bedrooms (Photograph 7). Cabinets of similar construction, with brass door pulls, appear in the kitchen. A single closet, in the main living area, appears to have provided space for the original boiler, now gone. (The boiler would have sent conditioned air into a ceiling duct and out through registers, now covered, in the tops of wall panels in the living area, kitchen, bedrooms, and bathroom.)

Baseboard radiators, not historic material, have been attached to the bottoms of many interior panels. In addition, electrical conduit, also not historic material, has been attached to the interior wall and ceiling panels in various places.

A number of bathroom fixtures, including the lavatory, a mirrored medicine cabinet, and a light fixture, appear to be original material.

Conditions at the steel house, which has been vacant since 2004, range from poor to good. All mechanical systems have been removed, and there are clear signs of deterioration: peeling paint inside and out; an unsightly (though not structurally troublesome) layer of rust on exterior steel walls; corrosion, some of it resulting in section loss, at the sill level of the exterior wall panels; and significant corrosion of at least two ceiling panels, the result of roof leakage. Yet nearly all of the house's original features remain and, in the main, appear to be restorable. While the gabled roof hides the original flat roof, it is removable, and there have been only a small number of additional alterations. Many important character-defining elements, particularly those on the interior, are in good condition.

130 Mohegan Avenue Pag Name of Property	New London, Conn. County and State
8. Statement of Significance	
Applicable National Register Criteria	Areas of Significance
(Mark "x" in one or more boxes for the criteria qualifying the property	(enter categories from instructions)
for National Register listing.)	
x A Property is associated with events that have made	THEIGHEN
a significant contribution to the broad patterns of	INDUSTRY
our history.	SOCIAL HISTORY
our moury.	
x B Property is associated with the lives of persons significant in our past.	ART
	A. 3
v C Despects such a distribution shows to statistics	ARCHITECTURE
x C Property embodies the distinctive characteristics of a type, period, or method of construction or	BUCTURED TWO
represents the work of a master, or possesses	ENGINEERING
high artistic values, or represents a significant and	
distinguishable entity whose components lack	
individual distinction.	
	lan a fora a chuan la c
D Property has yielded, or is likely to yield,	Period of Significance
information important in prehistory or history.	1932-1939
Criteria Considerations	
(Mark "x" in all the boxes that apply.)	ON CALLYN .
	Significant Dates
Property is:	1933, 1934
A owned by a religious institution or used for	
religious purposes.	
	Significant Person (only if Criterion B selected)
B removed from its original location.	
C a birthplace or grave.	AMES, WINSLOW
	Cultural Affiliation
D a cemetery.	
E a reconstructed building, object, or structure.	
F a commemorative property.	Architect/Builder (use last names first for individuals)
	FISHER, HOWARD T./GENERAL HOUSES, INC.
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 sheet	
and a second	See continuation sheet(s) for Section No. 8
9. Major Bibliographical References	
Bibliography (Cite the books, articles, and other sources used in preparing this form on one or more	e continuation sheets)
Previous documentation on file (NPS):	Primary location of additional data:
preliminary determination of individual listing (36	x State Historic Preservation Office
CFR 67) has been requested	☐ Other State agency
previously listed in the National Register	E Federal agency
previously determined eligible by the National	Local government
Register	
designated a National Historic Landmark	Other Name of repository:
recorded by Historic American Buildings Survey	Contraction of the second
recorded by Historic American Engineering Record #	
	See continuation sheet(s) for Section No. 9

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 1

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

STATEMENT OF SIGNIFICANCE

Summary

The building at 130 Mohegan Avenue is an excellent, intact "house of tomorrow" from the early 1930s—a prefabricated steel-panel home of modern design based on principles of economy, efficiency, quality, and affordability. Designed and erected by General Houses, Inc., the pioneering company founded and led by the eminent architect-engineerbuilder Howard T. Fisher (1906-79), this innovative frameless, International Style structure exemplifies the concerted, if now largely forgotten, effort to bring new building materials, state-ofthe-art construction methods, industrial production techniques, fresh business models, and theories of modern design to bear on the problem of affordable housing during the Depression. It is significant as:

- the only intact example of General Houses' original low-cost model known to exist, and the company's first "production" house.

- one of two International Style prefabs erected simultaneously on the same site in 1933-likely the only site where one can view the innovative early work of the two leading prefabricators of the day;

- an irreplaceable artifact of the modern prefabricated housing movement of the 1930s, which flowered during the years of the "Century of Progress" World's Fair expositions in 1933 and 1934;

- evidence of a leading Connecticut modernist's commitment to the modern prefabricated housing movement;

- a rare example of a master architect-engineer's building system, a system that helped pioneer a building type, the panelized house;

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 2

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

The structure is an unusual surviving example from the early 1930s of the modern mass-production house aspired to by Frank Lloyd Wright, Le Corbusier, Walter Gropius, R. Buckminster Fuller, and others in the 1910s and 1920s. (While some of those visionaries had tested the waters-notably Wright, with his involvement in the American System-Built homes in the 1910s¹-Fisher was the first to launch a full-scale enterprise devoted to producing fully industrialized modern houses.²)

While General Houses' intent was to mass-produce steel houses for a national market, only a small number of its all-steel homes were built before Fisher and General Houses turned to alternative materials and construction methods in 1936.³ The house at 130 Mohegan Avenue is the only intact example of General Houses' original low-cost construction known to exist.⁴

The steel house's significance is strengthened by its association with the Winslow Ames House, an International Style prefab designed and built by American Houses, Inc., the New York company that was General Houses' chief rival in the early 1930s. In late 1933 the two housessimilar in their use of panelized construction and structural steel members yet contrasting in their use of steel and their builders' approaches to design, marketing, production, and distribution-were constructed simultaneously on one small plot of land. Today, the site offers what is almost surely the only opportunity to observe the early, groundbreaking work of the two leading prefabricators of the 1930s.⁵ Together, the two houses constitute a living museum of the most forward-looking small-house architecture of the day and the culture that produced it.

The building meets National Register criteria A, B, and C, and is significant under the themes of social history, art, architecture,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 3

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

engineering, and invention. The period of significance is 1932-39.

Criterion A: That are associated with events that have made a significant contribution to the broad pattern of history.

The steel house is historically significant at the state level of significance as a rare, intact artifact of the modern prefabricated housing movement that swept across the United States in the early 1930s. In those years architects, industrialists, entrepreneurs, and journalists, among many others, viewed prefabrication-often in conjunction with modern architectural design-as the answer to the country's Depression-era housing crisis. Meanwhile, millions of Americans, many inspired by the model homes on display at the "Century of Progress" World's Fair expositions in 1933 and 1934, eagerly anticipated a new era of high-quality, affordable housing based on the mass-production, assembly-line processes that had turned U.S. carmakers such as Ford and General Motors into industrial powerhouses. In the eyes of many, General Houses, with its streamlined all-steel construction system and its "fully integrated" business model for designing, marketing, building, financing, and servicing homes, was the first, best hope for industrialized housing in America.6

In 1933, General Houses answered the call for a "Fordized" house—a compact, efficiently designed home with standardized, factory-produced parts that could be rapidly assembled on its site like a car—first with three "demonstration" models in the Chicago area, then, in the late fall, with its first true production house, the structure at 130 Mohegan Avenue in New London.

An International Style building erected not long after the term was

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 4

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

coined, the New London house's design and construction are based not only on the theories of European modernists but also on a particularly American "ethos of mass production."⁷ As such, it, along with the American Houses building beside it, mark a key turning point in the history of housing in America—a moment when it looked as if the theories of Wright, Le Corbusier, and Fuller and the practices of Ford and General Motors would together reinvent the disorganized and inefficient homebuilding industry. In late 1933 in New London, Conn., the erection of two sturdy, modern "machines for living" clearly demonstrated the potential for such a transformation.

While commercial success eluded the pioneering prefabricators of the day-both General Houses and American Houses were failures, if judged solely by the number of houses sold-the modern prefab movement led by General Houses and American Houses fostered numerous innovations in home design and construction and laid the groundwork for subsequent construction systems, and patterns of development, that would help shape the U.S. housing industry in the decades to come.⁸

The steel house at 130 Mohegan Avenue is an exceptionally valuable historic resource-particularly in conjunction with the historic "sister" prefab beside it-for the study of the industrialized housing movement of the 1930s, which represented not only advances in architecture, business, and technology but also the cultural and artistic ideals of the American people during the Great Depression.

Criterion B: That are associated with the lives of persons significant in our past.

The steel house is also significant at the state level for its association with Winslow Ames, the founding director of New London's
OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 5

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Lyman Allyn Art Museum, who commissioned the building in 1933 and, with his wife, Anna, owned it until 1949. Ames was a noted museum director, curator, author, and educator who played a leading role in Connecticut's cultural scene during the 1930s and, in essence, introduced New Londoners to modern art and architecture. The steel house is one of four buildings, all surviving in close proximity, that are associated with Ames and his achievements during this period.

Criterion C: That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Finally, the steel house is historically significant at the state level as a rare surviving example of the innovative design, engineering, and construction methods developed by master architectengineer Howard T. Fisher and employed by General Houses, Inc., the modern prefab movement's leader in the early 1930s. Fisher was a pioneer of prefabrication who developed multiple building systems during his time as General Houses' president and chief architect. Later, Fisher continued to work on prefabrication systems, first for the U.S. government during World War II and then for the U.N. in Latin America. (Fisher could count many additional accomplishments, as a noted architect, particularly in the field of shopping center design, in the 1950s, and as a professor of urban planning in the 1960s and 1970s.) The steel house is a product of Fisher's first patented system -for a frameless all-steel house-and represents General Houses' initial focus on small, affordable homes for working Americans.

The steel house embodies the distinctive characteristics of a building

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 6

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

type-the panelized prefabricated house-during the type's formative period. The panelized construction methods of General Houses, which drew on the design and technology advances of American skyscraper construction as well as the assembly-line processes of American industry, signaled a break from prefabrication's first phase, in which precut lumber and other construction materials were delivered to customers for the construction of "kit houses."⁹

As an early experimenter in panelized construction, General Houses paved the way for successive waves of innovation in the building type, including not only such well-known ventures as Lustron Corp. and Walter Gropius' General Panel Corp. in the 1940s but also more contemporary advances in panelized construction such as the development of the structural insulated panel, or SIP.

The steel house embodies the distinctive characteristics of a second, related building type-the modern steel house-during the type's formative period. General Houses was among the first in the U.S. to exploit the potential of steel in residential construction, through its use of load-bearing steel panels. (Rival American Houses followed a different path in the adjacent house, affixing panels of asbestos cement to steel framing members. In both cases, the construction achieved the prefabricators' goal: lightweight, durable, standardized, precision-tooled parts that could be rapidly joined.) Here, as well, General Houses laid the groundwork for later applications of steel in residential building that continue to this day.¹⁰

The frameless steel prefab at 130 Mohegan Avenue, along with the steel-framed prefab beside it, offer a rare opportunity to view a building type, construction method, and architectural style-panelized, steel, prefabricated, International Style-as they appeared during

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 7

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

their earliest stage of development in the U.S. The all-steel house's unusually high degree of historic integrity-virtually all of the structure's original architectural components, including foundation, interior and exterior wall and roof panels, windows, doors, built-in storage units, fixtures and hardware, remain in place on the original site, with the original footprint and floor plan intact-makes this rare, though now fragile, artifact an extraordinarily valuable historic resource.

Building History

The steel house at 130 Mohegan Avenue, erected in late 1933, is one of two early modern prefabricated houses commissioned by Winslow Ames, the founding director of New London's Lyman Allyn Art Museum, and his wife, Anna. The second house, built by General Houses' New York-based rival, American Houses, Inc., in late 1933 and early 1934, is a steelframe building with panels (now encapsulated) of asbestos cement. Today known as the Winslow Ames House, it was rehabilitated in the early 1990s and was placed on the National Register of Historic Places in 1995. It sits just a few yards north of the steel house at 132 Mohegan Avenue.

Published sources indicate the steel house is the fourth building completed by General Houses—and the first outside the company's home turf of Chicago—after homes constructed in Winnetka, Ill., Elmhurst, Ill., and Chicago (a building later moved to River Forest, Ill.).¹¹

For 15 years under the Ameses' ownership, the steel house was occupied by a series of residential tenants. In 1949 the Ameses sold it and the Winslow Ames House to Connecticut College for Women, now Connecticut

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 8

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

College. For 46 years the college rented the house to various tenants, mainly faculty and staff members.¹² (The adjacent Winslow Ames House was similarly occupied until the late 1980s.¹³ Since 1994 it has been used by the college as office space.)

The college made only modest repairs and updates to the building over the years, such as the installation of new wiring and heating systems, with the exception of one significant character-altering modification dating to the 1980s: the construction of a wooden pitched roof, which today sits atop the original flat steel/built-up roof.¹⁴

HISTORIC BACKGROUND

The Modern Prefabricated House in the 1930s

The term "prefabrication" did not enter the lexicon until the early 1930s, when efforts to industrialize and modernize housing attained the status of a movement in the U.S.¹⁵ While only a relatively small number of prefabricated houses were built during the interwar years¹⁶and while many of the era's key figures have been largely forgottenthe movement was real, and its legacy significant.

Although the word "prefabrication" may have been new in 1933, when the house at 130 Mohegan Avenue was designed and erected, prefabrication as a practice was not. Precut houses were known to have been sent across the Atlantic to the colonies in the 17th century.¹⁷ In the 19th century, English manufacturers shipped prefabs to Australia and other parts of the British Empire; often, these buildings were made of corrugated iron. During the Gold Rush in the U.S., East Coast

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 9

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

entrepreneurs sent kit houses by rail to San Francisco. And in the early decades of the 20th century a host of companies-Sears Roebuck, Aladdin, and E.F. Hodgson, among others-sold plans and precision-cut lumber for do-it-yourself houses to thousands of Americans.¹⁸

What was new in the early 1930s were advanced industrial processes, an array of innovative building materials—and modern architecture, with its emphasis on rectilinear forms, smooth, unadorned surfaces, open floor plans, and functional efficiency. These advances made possible the transition from prefabrication's first stage, the precut house, to its second, the panelized house.

The movement's initial wave in America can be traced to the 1910s and 1920s, when a number of forward-thinking architects, planners, and writers promoted the concept of mass-produced housing as a response to the inadequate supply of new homes, the often substandard housing conditions in America, and the widely perceived ineffectiveness of the homebuilding industry. As historian Brian Horrigan has written, these early proponents "espoused the idea of the house as a technologically perfected artifact"—a reengineered product that could be produced at low cost with a high degree of quality control.¹⁹

The wave crested quickly, in the early 1930s, as architects, builders, and others rushed to offer up the "house of tomorrow" as a solution to the Depression-era housing crisis (and, not coincidentally, as a way to restart America's industrial engine). There were many variations on the concept, but in those years the house of tomorrow was typically modern in design and materials, and was intended to be produced assembly-line-style in the manner of the automobile. In general, steel was considered to be the most promising construction material.²⁰

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 10

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Most of the early modern prefab schemes never made it past the prototype stage (if they survived beyond the concept stage), but a small number of entrepreneurs in the 1930s did put together fullservice businesses and set about marketing their products to the American public. The most ambitious and prominent members of this group were the architects Howard T. Fisher, whose Chicago company, General Houses, Inc., designed and built the steel house at 130 Mohegan Avenue, and Robert W. McLaughlin, whose New York-based American Houses, Inc. erected the steel house's "sister" prefab, the Winslow Ames House.

These early modern "merchant prefabricators" took their architectural cues, and some of their philosophical underpinnings, from Europe's modernists (though the Europeans themselves had been influenced by the proto-modernists American architects Louis Sullivan and Frank Lloyd Wright). These famously included members of Germany's Bauhaus School, in particular the school's founder, Walter Gropius, as well as the Swiss-French architect Le Corbusier. By the 1920s the European modernists had codified the design precepts-rectilinear forms, smooth, machine-tooled (or apparently so) surfaces, lack of exterior ornamentation, emphasis on volume rather than mass, integration of outdoor and indoor space-that came to define the International Style.

The urgent housing needs of the Great Depression catalyzed the modern prefabrication movement, even as construction ground to a nearstandstill amid the economic crisis. This was only logical: With 87% of households earning less than \$2,500 a year in 1932, the traditionally built house, which started at around \$5,000, was unthinkable for the vast majority of Americans.²¹ Prefabrication, which promised lower costs and higher quality, looked like the solution.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 11

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

By 1932 the media were promoting prefabrication as the solution to a number of problems in addition to the high cost of new construction: a rapidly deteriorating housing stock, overcrowded cities, idle factories, the prospect of social unrest. Newspapers ran stories with headlines like "Mass Production of Homes in View" and "Sees Future Homes Bought Like Autos" on their front pages.²² Fortune magazine produced a lengthy and much-discussed series of articles that made the case for prefabrication, promoting what would later be called "an ethos of mass production."²³ Few doubted that American industry-particularly the automobile industry-was the appropriate model, and the phrase "Houses like Fords" became something of a rallying cry.

In 1931, Lawrence Kocher, the managing editor of *The Architectural Record*, and the architect Albert Frey teamed up to design and build a house they called the Aluminaire for an exhibition in New York City. The prefabricated metal building, erected in just 10 days, embodied Le Corbusier's principles and sparked interest in modernism, new materials, and new construction methods.²⁴

In 1932 both McLaughlin's American Houses, Inc. and Fisher's General Houses, Inc. were incorporated. General Houses erected its first homea small, modern panelized cottage-in Winnetka, Ill., in March, 1933.²⁵ While General Houses was incorporated first and was seen by the media as the nascent industry's leader, American Houses beat rival General Houses to the punch by erecting its first home (now demolished) in Pennsylvania in late 1932.²⁶ (Others joined the hunt over the next few years: By September, 1936, a survey by American Architect and Architecture listed 48 prefabrication systems, though perhaps only a small portion of those employed modern design or new building materials.²⁷)

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 12

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Public interest reached its apex with the "Century of Progress" World's Fair expositions held in Chicago in 1933 and 1934.²⁸ Millions of people toured the fairs' dozen or so model homes-most of them modern in design and materials-that were meant to herald the new era of efficient, low-cost housing. Almost all of the fairs' houses were factory-produced to some degree, and prefabrication was a significant part of their allure.

The small steel-panel house erected by General Houses was seen by many as the exhibition's key building, an inexpensive yet thoroughly modern home that, it seemed, could be replicated on a large scale. As Brian Horrigan writes, General Houses' steel cottage was the Century of Progress Exposition house "that seemed to housing observers to be the true augury of the future."²⁹

It was a frameless one-story cottage on a concrete slab foundation, with a flat roof, assembled from 4-foot by 9-foot painted steel panels.³⁰ The house at 130 Mohegan Avenue is not a replica, reflecting both its owner's particular desires and General Houses' "No two houses alike" motto.³¹ Nevertheless, the building resembles the fair house in size, plan, materials, and construction, and is the only known intact example of General Houses' construction as it was originally conceived and displayed at the Century of Progress fairs.³²

The mass market did not materialize for General Houses or any other 1930s prefabricator, though General Houses was among the few to enjoy a measure of success in the decade leading up to World War II. But it was a success measured in the hundreds of houses (and, at most, two dozen all-steel houses) rather than the thousands or even millions envisioned.³³ The company faced a host of ultimately insurmountable hurdles: inflexible building codes; opposition from labor unions,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 13

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

banks, and the traditional construction industry; distribution and marketing difficulties; lack of government support; frustrating homeloan conditions; a public surprisingly unwilling to embrace modern design; the escalating price of steel; no economies of scale; and a dismal (at best) economy.³⁴ By decade's end, General Houses had reinvented itself as a purveyor of traditional-looking wooden Cape Cod-style homes, and the Machine Age modern prefab movement of the early 1930s faded away.

Less than 1% of all single-family homes constructed in the 1930s were prefabricated,³⁵ and only a small portion of those were modern prefabs, yet the movement's significance extends far beyond the modest output of the builders involved. Many of those who entered the field were motivated by the potential for great profits, but there was a strong element of social consciousness attached to the movement. Open floor plans, economical use of space, lack of unnecessary ornamentation, attached garages, rooftop decks, large expanses of glass—all spoke to the modernists' desire to create a more healthful, more satisfying living environment. As historian and preservationist H. Ward Jandl wrote, the houses of tomorrow "focused attention on how to improve the way we live."³⁶

Postwar housing demand further stimulated the industry, with the number of prefabricators jumping to 280 in 1946.³⁷ Many of these outfits—including General Panel Corp., founded by Gropius and Konrad Wachsmann; Green's Ready-Built houses, with designs by George Fred Keck; and the famed Lustron Corp., which produced steel-panel houses built on the techniques, processes, systems, and designs pioneered by the modern prefabricators of the 1930s. Other builders, notably William J. Levitt, developed on-site assembly-line construction

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 14

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

techniques that owed a debt to the early 1930s mass-production housing movement.

In 1949 prefab manufacturers shipped some 35,000 houses and were anticipating significant growth in 1950.³⁸ There would be growth, but the postwar prefab boom began to fade by the mid-1950s. In the more than five decades since then, interest in prefab housing has waxed and waned, but a core group of progressive architects and cost-conscious builders has kept alive the ideals of the movement begun in the 1930s.

Few buildings dating to the movement's beginning exist today. Only a handful of American Houses' modern prefabs, known as Motohomes, are known to exist-one of them being New London's Winslow Ames House.³⁹ The number of surviving General Houses all-steel buildings from the early 1930s is similarly small. Almost without doubt, nowhere else but in New London can one find side-by-side examples of the work of the 1930s' two leading prefabricators.

Winslow Ames and Modernism in New London

Winslow Ames (1907-1993) had a long and noteworthy career as a museum director, curator, author, and teacher. As the director of New London's Lyman Allyn Museum in the 1930s, he was a key figure in the effort-much of it emanating from Connecticut-to bring modern art and architecture to the American public's attention.

The son of an American diplomat, Ames was born in Chile on July 3, 1907, and spent his early childhood overseas. He and his family returned to the United States in 1914, settling in Staten Island, N.Y.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 15

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

He graduated from Phillips Andover Academy and Columbia College, where he received a degree in art history in 1929.

In 1929 and 1930, Ames did graduate work in museum studies at Harvard University, where he studied under and worked with the director of Harvard's Fogg Art Museum, Edward Waldo Forbes. He received his master's degree in the spring of 1930 and almost immediately was offered the directorship of the yet-to-be-opened Lyman Allyn Museum.⁴⁰

After a sojourn to Europe, where he collected works for the museum, Ames married Anna Rebecca Gerhard of Philadelphia. In the summer of 1931 the couple moved to New London, where Winslow Ames would spend a decade as the Lyman Allyn Museum's director-and where he would, in essence, become the public face of art and culture in southeastern Connecticut.⁴¹

Ames was part of an influential circle of men, all associated with Harvard (particularly its fine arts program), who would help set America's cultural agenda over the next several decades. They included Henry-Russell Hitchcock, the noted architectural historian; Philip Johnson, the famed architect and critic; Alfred Barr, the founding director of the Museum of Modern Art in New York; Francis Henry Taylor, the director of New York's Metropolitan Museum of Art; Virgil Thomson, the composer; Julien Levy, the promoter of and dealer in surrealist art; Lincoln Kirstein, founder of the New York City Ballet; and A. Everett "Chick" Austin Jr., the director of the Wadsworth Atheneum in Hartford.

(Another Harvard-trained member of the modernist cohort in the 1930s was Howard Fisher, a Harvard College graduate who in 1927 and 1928 had done graduate work at Harvard's School of Architecture. As a working

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 16

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

architect, a writer on architecture and housing, and as founder, president, and chief architect of General Houses, Inc., Fisher would combine contemporary principles of modern architecture with current theories of mass production in buildings such as Winslow and Anna Ames's steel house at 130 Mohegan Avenue.)

Ames's work quickly drew notice and gave the Lyman Allyn Museum a recognition out of proportion to its size, not to mention the size of the museum's host city. Throughout the 1930s he brought a wide variety of impressive exhibitions to the Lyman Allyn, ranging from shows of old master drawings to displays of everyday objects of good design that sold for less than \$10. As Eugene R. Gaddis, the biographer of Chick Austin, wrote, "Something unusual was always happening at the Lyman Allyn."⁴²

In late 1933 something unusual was happening on a small plot of land just north of the Lyman Allyn: the erection of not one but two modern, prefabricated "houses of tomorrow." Upon their completion, the houses would be two of the most visible signs of Winslow Ames's dedication to the modern aesthetic.⁴³

Winslow and Anna Ames resolved to build their prefabs after Winslow Ames and a friend had attended the Century of Progress Exposition in Chicago during the summer of 1933. According to Ames's unpublished autobiography, Ames met with both General Houses, Inc. founder Howard T. Fisher and American Houses, Inc. founder Robert W. McLaughlin.

"We read Fortune in those days as well as Time," Ames wrote, "and F. [Fortune] was full of prefabricated housing. We got rather excited, though we did not need a house, by Amer. H. and Gen. H.... The upshot was that Ann, able to touch some of her mother's estate at age 25,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 17

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

decided to build one each of AH and GH as rental properties on two small lots on Mohegan Avenue."44

Construction began on General Houses' all-steel building at 130 Mohegan Avenue in November, 1933. Next door at 132 Mohegan Avenue, the building now known as the Winslow Ames House, designed and erected by American Houses, went up almost simultaneously.

The two houses, with their flat roofs, rooftop terraces, attached garages, and unusual building materials, created something of a stir in New London. On Dec. 3, 1933, *The Day* of New London covered the construction with a story titled, "Steel Fabricated House in Mohegan Avenue, Enclosed, Attracts Attention."⁴⁵ Another newspaper headline read, "New Londoners Stare at Houses of Asbestos and Steel as Winslow Ames Joins Revolt in Home Building Trend." That story began:

Most of the neighbors lift their eyebrows and question his sanity, but Winslow Ames, director of the Lyman Allyn Museum in New London, believes implicitly in an impending revolution in the home building industry, signalized by two prefabricated houses he is erecting on Mohegan Avenue. They are going up on ground adjoining the museum and are startlingly original in type: one is asbestos cement; the other entirely of steel.⁴⁶

The Ameses reportedly paid \$4,500 for the General Houses building and \$7,500 for their American Houses home.⁴⁷ They rented the two houses to various tenants until 1949, when they sold both buildings to Connecticut College for \$9,000.⁴⁸ In his unpublished autobiography, Ames wrote somewhat wistfully about the houses and the promise of prefabrication. "In the end, after having had tenants for many years,"

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 18

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

he wrote, "we sold both homes to Connecticut College. No significant profit. We concluded that prefabrication one house at a time was no great economy."49

While the revolution in homebuilding did not occur in the 1930s, the Ameses' two prefabs stand as testimony to Americans' desire to bring modern design and industrial processes to bear on the housing crisis of the Depression. More specifically, they testify to Winslow Ames's forward-looking approach to his work in New London as an advocate for groundbreaking and challenging art and architecture. Along with the nearby Deshon-Allyn House (1829; listed on the National Register of Historic Places in 1970), where the Ameses lived during their time in New London, and the Lyman Allyn Museum building (1932), they form a built landscape that bears witness to Ames's numerous achievements in New London.

Howard T. Fisher, General Houses, Inc., and the All-Steel House

General Houses, Inc. was a leader in the modern prefabricated housing movement in the 1930s. A fully realized corporation that set out to design, market, finance, erect, and service houses, General Houses represented the first, best hope for industrialized housing in the 20th century.

Under Howard T. Fisher, General Houses developed, and over the years modified, a building type and method of construction that produced the archetypal early modern prefab—a panelized home, built from standardized parts, that reflected both the aspirations of modern architecture and the Machine Age faith in industry, technology, and

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 19

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

mass production. While prefabricated housing systems might not at first glance lend themselves to individual artistry, Fisher's accomplishments can be seen as the work of a master.

Today, only a small number of buildings remain to document the work of Fisher's General Houses. The house at 130 Mohegan Avenue in New London, the only intact example of General Houses' original low-cost construction known to exist, is a rare and illuminating example of the company's early work.

Howard Taylor Fisher (1903-1979) was born into a prominent Chicago family. His father, Walter L. Fisher, was an influential lawyer and conservationist who was active in the civic development of the city.⁵⁰ In 1926, Howard Fisher graduated from Harvard, magna cum laude, with a degree in art history. The next year he began graduate studies in architecture at Harvard. In 1928 he left Cambridge without receiving a master's degree. Upon his return to Chicago, he became a registered architect in Illinois and New York and undertook a number of commissions ranging from office spaces in downtown Chicago to a large ranch house in Wyoming.⁵¹

Fisher received widespread acclaim for his first commission, the Walter T. Fisher house (1929; Winnetka, Ill.), an impressive brick home, reminiscent of contemporary Dutch architecture, that was among the first houses in the European modern style to appear in the U.S. *The Architectural Record* did a spread on the house, ⁵² as did *House Beautiful*, in 1930.⁵³

It was during the construction of his brother Walter's house that Howard Fisher began to think about materials that might be "less porous" than the bricks and mortar used in the Walter T. Fisher

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 20

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

house.⁵⁴ It was during this time, too, that Fisher began to consider ways in which house design could be made more efficient and be adapted for modern life. His articles on the subject were published in *The Architectural Record*, where he was a contributing editor.⁵⁵

After three years of research and organization, Fisher formed General Houses, Inc. in 1932 with startup capital from a private syndicate of investors. It was an ambitious undertaking, especially considering that the founder was not yet 30: General Houses, Fisher decreed, would be a fully integrated housing operation that would design, market, finance, erect, service-even furnish and landscape-prefabricated houses for a national market.⁵⁶

For a company that aimed to churn out machines for living on a large scale, General Houses had an extremely lean corporate structure, in part because the company had no manufacturing division.⁵⁷ Rather than produce components for its prefab houses in a factory or group of factories, the company relied on a series of agreements with corporate partners. Employing processes now known as supply-chain management and just-in-time manufacturing, General Houses would order up the necessary materials, and the corporate partners would supply them. General Houses managed the logistics but manufactured nothing.⁵⁸

The fledgling company's roster of high-powered partners testified to the interest in Fisher's business plan during a low point for American manufacturers. Among the corporations involved in General Houses' early years: Pullman Car & Manufacturing, Bethlehem Steel, Inland Steel, Celotex, General Electric, Pittsburgh Plate Glass, American Radiator, U.S. Gypsum, Armstrong Cork & Insulation, Koehler (plumbing), Kroehler (furniture), Curtis Companies, Edison Cement,

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 21

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Congoleum-Nairn, Container Corporation of America, and Aluminum Corporation of America.⁵⁹

Fisher had carefully worked out a design and construction system that he believed would allow his company to produce a house that was "twice as good at half the price." The shell of the house-walls, roofs, and floors-would consist of standardized flanged steel panels that were to be bolted to one another through thin wooden spacers. There were wall panels, small window panels, large window panels, full-length glass panels, door panels, and a specially designed fireplace panel, along with corner pieces and spandrel sections for multistory buildings.

The frameless system, in which the flanged sections of steel did much of the work of studs in a traditionally framed house, meant that the panels themselves bore the full load of the structure—and thus reduced considerably the amount of materials and labor required. Each exterior wall panel would be a "pan" into which insulation could be fitted. The insulation would be covered, with an interior steel panel or with wallboard, to form a "sandwich." Prefabricated windows and sash, cabinets, and other parts would be placed in the building according to the plan, as would plumbing, wiring, heating and cooling systems, appliances, and fixtures. Fisher received a patent, U.S. Patent No. 1,969,125, for his system on Aug. 7, 1934.

Fisher's standardized panels allowed General Houses' architects and engineers, working on grids, to design a virtually endless number of variations on a theme-some 600,000 different plans might be possible, according to the company.⁶⁰ General Houses made the point that its homes, while unified in their design, could be varied in size and plan to suit the needs of any client, and the company's early commissions did in fact run from small, compact single-story cottages to much

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 22

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

larger multistory buildings. Indeed, in 1933, General Houses had pioneered the sort of "mass customization" that continues to be a goal for housing prefabricators in the 21st century.

General Houses' system made for rapid, "dry" construction. Once a foundation was poured and the parts had been delivered to the site, it was mainly a question of lifting the panels into place, bolting them together, adding windows and doors, insulation, and interior walls and ceilings. At the same time, pipes and wiring were installed, followed by interior cases, fixtures, and kitchen equipment. In general, it was estimated that a small crew of unskilled workers could complete a house in about two weeks' time.⁶¹ The company claimed that a socket wrench was the only tool a worker required.⁶²

General Houses erected its first home in March, 1933, in the Hubbard Woods section of Winnetka, Ill., for Fisher's sister-in-law, the dancer Ruth Page. The house, which no longer exists, was a small fiveroom, one-bath, flat-roofed steel-panel cottage overlooking Lake Michigan, with a screened porch. *Time* magazine called it as "severe and clean as a pursuit plane."⁶³ It was, in many respects, quite similar to the house that would be built later that year at 130 Mohegan Avenue.

Well before this first house went up, however, General Houses had become the subject of intense media attention. In 1932 its plans were covered in architectural journals, in newspapers such as *The New York Times* and the *Chicago Tribune*, and in a widely discussed series of articles in *Fortune* magazine penned (anonymously) by *Fortune* editor Archibald MacLeish. In the July, 1932, *Fortune*, MacLeish deemed General Houses "the General Motors of the new industry of shelter" and praised Fisher's yet-to-be-tested building system for its structural

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 23

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

simplicity, its efficient, livable interiors, and its handsome, durable exteriors. It also ran a full-page mockup of a General Houses advertisement with a headline that read, "We will deliver this fiveroom house to you this very week!"⁶⁴ Thanks to *Fortune* and the others, the small, flat-roofed, panelized homes of General Houses and its ilk became, for many Americans, the de facto model for the modern prefabricated house.

The media blitz caught General Houses, which was still in the research and testing phase, somewhat unawares. As the editors of the company's 1934 magazine-like catalog, *Our Homes*, wrote, "At that time the impression was created that the company was already in production and General Houses was swept off its feet by the tremendous public interest in its plans."⁶⁵

General Houses was not in a position in 1932, or even in 1933, to produce houses on a large scale. Yet it had begun to prepare for the day when that could happen, signing up dealers in the Midwest, New York, and elsewhere and producing a sales brochure in 1933 that displayed drawings, floor plans, and prices for four models, ranging from a four-room cottage (\$4,500) to a substantial two-story, threebedroom house with garage (\$8,550).

To emphasize the scientifically precise nature of its building system, General Houses used alphanumeric formulae for its houses-K2H40, for example, referred, in part, to the company's "K" plan, a house with a hall and four rooms. But it also used more standard model names for marketing purposes. The lowest-priced house featured in the 1933 catalog, with a floor plan similar to that of 130 Mohegan Avenue, was called the Mohegan.⁶⁶

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 24

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

In May, 1933, General Houses erected its model home for the Century of Progress Exposition to be held that summer along Lake Michigan in Chicago-a deadline-driven construction project that required just 30 hours to complete.⁶⁷ Like the first two houses, it was a one-story, flat-roofed building with two bedrooms and one bath.

During the fair, some 2 million people toured the house, and General Houses enjoyed a second round of nationwide publicity-recognition that continued in 1934, when General Houses erected a second model home in Chicago for that year's version of the World's Fair. In the February, 1934, Harper's, the architectural historian and critic Douglas Haskell extolled the General Houses building at the exposition as the 1933 fair's best in show and as the model for both the housing industry and American homeowners. "Houses like Fords!" Haskell wrote. "The homemaker is thus confronted by an idea entirely new. It cuts across ten thousand years of building habits."⁶⁸

Published sources indicate that General Houses put up just two more steel homes in 1933-one of them Winslow and Anna Ames's house at 130 Mohegan Avenue in New London.⁶⁹ The next year the company, according to General Houses documents, more than doubled its production, though that amounted to only 10 or so houses.⁷⁰

Discouraged by slow sales and high costs, Fisher began to research new materials and building systems. In 1935, General Houses, in association with the Purdue Research Foundation, built a model prefab, similar in style and size to its low-cost steel house but with panels made of "stressed-skin" plywood attached to a steel frame. In 1936 the company focused on that construction, deemphasizing (though continuing to offer) its steel-panel system.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 25

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

Over the next five or so years General Houses would sell hundreds of modern houses probably sold a total of no more than two dozen allsteel houses.⁷¹ Counter to Fisher's original guiding concept of affordable housing for the masses, many of the company's steel-panel houses in the 1930s were large homes for well-to-do clients.⁷² While the small homes that General Houses initially set out to build were efficient, modern, and handsome, these larger homes did allow Fisher and his staff more latitude to display their architectural and engineering mastery.⁷³

The Ameses' steel-panel house in New London displays all the characteristic features of General Houses' early small homes-the same homes that had captured the imaginations of millions of Americans via newspaper and magazine stories and via the company's model homes at the Century of Progress World's Fairs in 1933 and 1934. These features include: insulated frameless steel-panel construction on a concrete slab foundation; a flat roof (today hidden but still extant); attached garage; rooftop deck; an open floor plan that utilizes crossventilation and passive solar thermal properties; high-quality prefabricated windows, doors, built-in cabinets, and fireplace; and a modest footprint for the space- and price-conscious Depression-era home buyer.

The New London house was, and is, an innovative and precisely engineered building. It was also striking for its modern, Bauhausstyle design at a time when few International Style houses had been built in the U.S.

Perhaps most noteworthy, the house at 130 Mohegan Avenue is tangible evidence of the potential for reinventing the way houses were designed, built, and marketed in America, and of Howard Fisher's

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES

Section 8 Page 26

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Statement of Significance (continued)

carefully crafted program for making such a transformation possible. Realizing such a scheme-regardless of its ultimate commercial successrequired the gifts of a master architect-engineer, not to mention the skills of a bold business innovator. According to historian John Burns, "Fisher's genius was in refining the idea of assembling houses from standardized prefabricated parts-that is, building houses the way General Motors assembled automobiles. The idea presented a challenge to Fisher's talents both as an architect and as an engineer."⁷⁴

By 1940, Fisher had left General Houses, but in the years that followed he continued to work on solutions to the housing problem with the War Dept. during World War II; as head of the architecture and engineering firm he established in Chicago after the war, Howard T. Fisher & Associates; and as a consultant to U.N.-sponsored housing initiatives in Latin America in the 1950s.

In the 1960s, Fisher returned to Harvard to become a professor of urban planning. Fascinated with the potential of computers since the 1950s, he received a grant from the Ford Foundation to develop Symap, a computerized mapping system that was the forerunner of today's widely used Geographical Information System (GIS) software. Today, Harvard awards an annual Howard T. Fisher Prize for excellence in Geographical Information Science.

In 1974, Fisher was made a Fellow of the American Institute of Architects. In great measure, this was in recognition of his work on the industrialization of housing. "Throughout his career," read his AIA Fellow nomination, "the nominee has forcefully advocated greater building industry coordination and integration, and in his research

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 27

130 MOHEGAN AVENUE NEW LONDON, CT

and educational work has demonstrated numerous potentialities to that end." The nomination continued:

General Houses Inc. was perhaps the first company established in the United States for the production on a national scale of highquality permanent houses through the use of mass production and prefabrication. It pioneered basic concepts, carried out extensive research, and over the years produced a substantial number of houses pursuant to several alternative construction systems-thus helping to demonstrate the broad applicability of prefabrication as a basic building technique.⁷⁵

Today, one of the few remaining examples of Howard T. Fisher's first alternative construction system—a pioneering panelized, industrialized system—is the archetypal modern prefabricated house of the early 1930s at 130 Mohegan Avenue in New London, Conn.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 28

130 MOHEGAN AVENUE NEW LONDON, CT

Endnotes

¹ The short-lived American System-Built venture, which Frank Lloyd Wright entered into with the Milwaukee contractor Arthur L. Richards in 1916, offered a preview of how a modern prefabricated housing operation might work in the U.S. Wright's American System houses featured modern architectural elements, including flat roofs and open floor plans; an innovative two-foot construction module; and premilled, machine-made materials. Unlike General Houses' system in the 1930s, however, the American System houses were clearly part of prefabrication's first, "precut" era with their use of wood framing, plaster, and other traditional materials and their need for skilled craftsmen as builders. The venture ended in 1917. Today a small, though not fully defined, number of houses remain in Midwestern cities such as Milwaukee and Gary, Ind., where the Richards Co. was active.

² General Houses, Inc. was incorporated in February, 1932, with initial capital from a syndicate of private investors. By 1933, according to *Fortune* magazine ("Mass Produced Houses in Review," April 1933), the company had a staff of more than two dozen in design, sales, legal, and other departments and was working with a host of America's biggest corporations, such as Pullman, General Electric, Kohler, and many others, as supplier-partners.

³ While company records for General Houses likely do not exist, some correspondence from the early 1930s exists in the Howard T. Fisher Papers at the Harvard University Archives. One letter on file, dated May 15, 1935, includes a list of the 11 houses constructed to date by the company, as well as four additional houses under contract. Few of these houses were the original low-cost construction envisioned by Fisher when he founded the company but instead were larger, more expensive houses. At the time of this letter, General Houses' transition from its all-steel construction to its plywood panel (subsequently asbestos cement panel) construction was well under way. While the company likely continued to offer its all-steel construction for some time after mid-1935, it is unlikely that more than a few additional all-steel homes were built after the date of this letter.

⁴ Subtracting both those buildings known to be demolished and those known to be larger, more expensive homes from the May, 1935, list leaves, at most, four possible low-cost, all-steel homes: New London, Conn.; Glen Oak, III. (size, price uncertain, though likely large); Monmouth, III.; and Milwaukee. The New London building is the only such house known to exist from this small pool and is almost certainly the only existing intact example of the company's A-100 model, the original low-cost home created by General Houses. (The small houses in Monmouth and Milwaukee were under contract but not under construction in May, 1935. Given that General Houses continually tinkered with its building systems in the 1930s, it is almost certain that these houses were updated versions of the A-100, if not entirely new models.)

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 29

130 MOHEGAN AVENUE NEW LONDON, CT

Endnotes

⁵ In some ways, the site bears resemblance to the group of experimental houses from the same period in Beverly Shores, Ind. Five of the 12 exhibition homes from the 1933 "Century of Progress" World's Fair in Chicago were moved after the fair to Beverly Shores, where they exist today, owned by the National Park Service and occupied by tenants, who agreed to rehabilitate the structures, under a long-term residential leasing program. The homes-George Fred Keck's House of Tomorrow, the Weiboldt-Rostone House, the Florida Tropical House, the Cypress Log Cabin, and a porcelain enameled steel house, the Armco-Ferro-Mayflower House-are listed on the National Register of Historic Places and are, like the two houses in New London, invaluable artifacts of the prefabricated housing movement of the early 1930s. The New London site differs from Beverly Shores, however, both in that it showcases the work of General Houses and American Houses, the "go-ahead" prefabrication outfits of the era, and in that it showcases not experimental "one-off" buildings but rather the tangible, production-oriented result of the experimentation and innovation in modern prefab housing during the 1920s and early 1930s. While neither General Houses nor American Houses would erect large numbers of homes like those in New London, the houses there are the production models that were meant to bring modern housing to Americans on a large scale. (It's also worth noting that both buildings in New London remain on their original site and retain a high degree of historic integrity.)

⁶ A number of critics and historians—before, during, and after General Houses' existence—have posited that General Houses was the leading prefabrication venture of the interwar period, and the leading innovator. Their reports range from the July 1932 encomium in *Fortune* magazine ("Five Questions...and a Striking Answer"), which viewed General Houses' (as yet untested) system as the apparent solution to America's housing problem, to the building technology authority John Burchard's overview of the nascent prefabrication industry in the January, 1933, issue of *Technology Review* ("The Quest for a Better House") to the architectural critic Douglas Haskell's trenchant "Houses Like Fords" in the February, 1934, issue of *Harper's Weekly*. More recently, the architectural historian Colin Davies has pointed to General Houses' entry on the scene as "the introduction of another episode in the history of the American prefabricated house" in part because "General Houses took the view that prefabricated houses ought to look modern" (*The Prefabricated Home*, 2005, 53). General Houses and American Houses, according to Davies, were the era's "go-ahead companies" that were "experimenting with advanced steel structures and dimensionally co-ordinated systems" (54).

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 30

130 MOHEGAN AVENUE NEW LONDON, CT

Endnotes

⁷ Historians of U.S. technology and industry have described the "ethos of mass production" that inspired innovation in many realms during the 1920s and 1930s. In *From the American System to Mass Production 1800-1932* (Baltimore: Johns Hopkins Press, 1984), David A. Hounshell writes that not only industrial designers but "businessmen and social thinkers also saw unprecedented opportunity in combining the productive efficiency of the assembly line with individuality and the aesthetics of designers.... America in the late 1920s and early 1930s was pervaded by an ethos of mass production." (304-05). Indeed, Hounshell points to the work of the housing prefabricator Foster Gunnison in the 1930s as "an excellent example of the pervasiveness of the ethos of mass production." (310). (Starting in the mid-1930s, Gunnison's company produced factory-built prefabricated homes in an Indiana plant. However, while his buildings were factory-made, they were not modern in their design or materials, and Gunnison's attempts to reshape the housing business were predated by General Houses and American Houses.)

⁸ American Institute of Architects Fellow nomination for Howard T. Fisher, 1974. The AIA's honor, bestowed on Fisher in 1974, was based in large part on Fisher's groundbreaking work on prefabrication during his years at the helm of General Houses. As the nomination states, General Houses under Fisher "pioneered basic concepts, carried out extensive research" and helped "demonstrate the broad applicability of prefabrication as a basic building technique."

⁹ Cynthia E. Johnson, *Houses in a Box: Prefabricated Housing in the Jackson Purchase Cultural Landscape Region, 1900 to 1960 (*Kentucky Heritage Council: 2006), 44. An historic context prepared by the Kentucky Heritage Council identifies four types of prefabricated housing—the precut houses of the early 20th century and the later panelized, sectional, and preassembled buildings associated with the postwar period but (in the case of panelized construction) pioneered in the 1930s by General Houses and American Houses.

¹⁰ Neil Jackson, *The Modern Steel House* (New York: John Wiley & Sons, 1996). Architect and critic Jackson, along with many others, has identified the modern steel house as a building type that dates to the late 1920s in the U.S., when architects—influenced by experiments in Europe during that decade, by the ethos of mass production in America, and by the design, construction, and cost-saving potential of metal—began to exploit the architectural potential of steel. Among the notable architects who designed homes with steel during the late 1920s and 1930s were Rudolph Schindler, Richard Neutra, and Walter Gropius. They and others, including R. Buckminster Fuller and Frank Lloyd Wright, had envisioned building systems that used steel in mass-produced housing. General Houses and American Houses were among the first to demonstrate the feasibility of such systems, setting the stage for later prefab outfits in the post-World War II era and on to the present.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 31

130 MOHEGAN AVENUE NEW LONDON, CT

Endnotes

¹¹ The Architectural Record, 1933-34. The journal covered the construction of General Houses' first buildings in several issues. See "Sectional Steel House for Miss Ruth Page" (April, 1933, 289) "Houses Built With New Construction Methods" (April, 1933, 288), "A Fabricated House at Elmhurst, Illinois" (Nov., 1933, 409) "General Houses, Inc." (Jan., 1934, 18-19) and "Recreation House for Huntington B. Henry" (Oct., 1934, 255).

12 New London (Conn.) city directories, 1933-1974.

13 Ibid.

¹⁴ In 2004, Connecticut College closed the building, dismantled and removed the mechanical systems, and ended all maintenance. By 2006 the building, visibly dilapidated, had been targeted for demolition, but plans were put on hold when efforts to preserve the house began in 2007. In July, 2007, the Connecticut Historic Preservation Council placed the steel house on the State Register of Historic Places.

¹⁵ Burnham Kelly, *The Prefabrication of Houses* (New York: Technology Press of the Massachusetts Institute of Technology/John Wiley and Sons, 1951), 28.

¹⁶ Davies, *The Prefabricated Home*, 54, 56. "In quantitative terms,," Davies writes, "prefabrication's contribution to housing in the U.S. in the 1930s was minor"—fewer than 10,000 units in the decade leading up to 1942, when war production would stimulate the industry. (Such stimulation would amount to more than 200,000 homes during the war years, according to Davies;, few of those houses, however, were modern buildings.)

¹⁷ "Hodgson Houses" (Hodgsonhouses.com) According to this history of the Massachusetts-based maker of precut structures E.F. Hodgson Co., "Most scholars will tell you that the first prefab buildings were brought into the American Colonies in the late 17th century via Cape Ann on the North Shore of Massachusetts."

18 Davies, 7-14.

¹⁹ Brian Horrigan, "The Home of Tomorrow, 1927-1945," in Joseph J. Corn, ed., *Imagining Tomorrow: History, Technology, and the American Future* (Cambridge, Mass.: MIT Press, 1988), 137.

²⁰ Alfred Bruce and Harold Sandbank, eds., *A History of Prefabrication* (New York: John B. Pierce Foundation, 1944), 41: "During the years when prefabrication first attained the status of a widespread movement—1933-37—the terms "prefabricated house" and "steel house" were considered almost synonymous."

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 32

130 MOHEGAN AVENUE NEW LONDON, CT

Endnotes

21 Ibid., 7.

²² The New York Times, "Sees Future Homes Bought Like Autos," May 25, 1932; "Mass Production of Homes in View," Dec. 3, 1933.

²³ *Fortune*, "Five Questions...And a Striking Answer,"July, 1932, 60-69, 104-110; "Mass-Produced Houses in Review," April, 1933, 52-57, 78, 80, 83-84, 87.

²⁴ Jake Gorst, "Modeled in Metal: The Aluminaire House" *Modernism*, Summer 2007, 43-49. The Aluminaire was subsequently removed to Long Island, N.Y., where it exists today.

25 Time, "Prefabrications," Mar. 27, 1933.

²⁶ Jandl, Yesterday's Houses of Tomorrow. American Houses beat General Houses to the punch by erecting its first building, a small flat-roofed cottage similar in design to General Houses' building at 130 Mohegan Avenue, in Hazelton, Pa., in late 1932. This prototype house, which no longer stands, was meant to be the first of many homes for a local client. However, no additional houses were constructed in Hazelton, and American Houses quickly switched its focus to somewhat larger, more expensive buildings for middle-class Americans along the lines of the building at 132 Mohegan Avenue in New London.

27 "48 Systems of Prefabrication," American Architect and Architecture, Sept., 1936, 28-40.

²⁸ Elizabeth Mock, ed., *Built in USA: 1932-1944.* (New York: Museum of Modern Art, 1944), 18: "It was shortly after 1932 that Americans first became romantic about prefabrication, miraculous novelty which was expected to set a depressed economy on its feet and provide satisfactory shelter even for that ill-housed "third of a nation."

29 Horrigan, "Home of Tomorrow, 1927-1945," 148.

30 Ibid.

³¹ General Houses' promotional materials, 1933. The University of Chicago Library, Digital Activities & Collections (www.century.lib.uchicago.edu).

³² After the fair, General Houses' first Century of Progress house was moved to River Forest, III., where it reportedly exists today—with alterations to its original plan and, reportedly, a cementitious wall covering that obscures its historic character.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 33

130 MOHEGAN AVENUE NEW LONDON, CT

Endnotes

³³ John A. Burns, "K2H40: The Promise of Prefabrication," in Michael J. Auer, Burns, and H. Ward Jandl, Yesterday's Houses of Tomorrow: Innovative American Homes 1850 to 1950 (Washington, D.C.: Preservation Press, 1991), 167.

³⁴ Kelly, The Prefabrication of Houses, and others.

35 Allison Arieff, Prefab (Salt Lake City: Globe Smith, 2000), 21.

³⁶ Auer, Burns, and Jandl, Yesterday's Houses of Tomorrow, 24.

³⁷ Kelly, The Prefabrication of Houses, 71.

38 Ibid., 70.

³⁹ Jandl, *Yesterday's Houses of Tomorrow*. According to architectural historian Jandl, American Houses sold some 150 of its Bauhaus-style "Motohomes" in the 1930s. It is unknown how many exist today—there may be some number, such as the house in Washington, D.C., referred to by Jandl, in which the Motohome features have been removed or covered, making the house's origins difficult or impossible to identify. In any case, the number of such buildings retaining a significant degree of integrity is quite small. Today at least two are known to exist: the building at 132 Mohegan Avenue and a similarly sized house in Madison, Wis., both of which are listed on the National Register of Historic Places.

⁴⁰ Eugene R. Gaddis, "Modernist and Connoisseur: Winslow Ames at the Lyman Allyn Museum," in *The Vision and Influence of Winslow Ames*, exh. cat. (New London: Lyman Allyn Art Museum, 2002), 5.

⁴¹ Ibid., 6. "Ames became a one-man education department," Gaddis writes, "lecturing continuously on a great variety of subjects—from Albrecht Durer prints to modern architecture—to every kind of audience, whether Connecticut College students, the D.A.R., or the P.T.A."

42 Gaddis, "Modernist and Connoisseur," 9.

⁴³ Ibid. The other prominent symbol of Winslow Ames's interest in modernism was *Standing Woman*, a large bronze nude by the sculptor Gaston Lachaise that Ames had personally purchased and installed on the grounds of the Deshon-Allyn House. That work that now belongs to the Museum of Modern Art in New York.

⁴⁴ Winslow Ames, unpublished autobiography (Smithsonian Institution Archives of American Art, Washington, D.C.).

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 34

130 MOHEGAN AVENUE NEW LONDON, CT

Endnotes

⁴⁵ The Day, "Steel Fabricated House in Mohegan Avenue, Enclosed, Attracts Attention," Dec. 2, 1933.

⁴⁶ Unidentified newspaper story, collection of Lyman Allyn Art Museum, New London.

⁴⁷ Carolyn Battista, "The View from New London; A House for the Future Finally Lives Up to its Billing," The New York Times, April 10, 1994.

⁴⁸ Connecticut College records.

49 Ames, unpublished autobiography.

⁵⁰ "Walter L. Fisher Dies; Was Former Cabinet Member," *Winnetka Talk*, Nov. 14, 1935. Walter L. Fisher played a key role in the formation of Chicago's public transportation system and served as director of the Chicago Bureau of Public Efficiency, among other posts. During the Taft Administration, Fisher was Secretary of the Interior.

⁵¹ Howard T. Fisher Papers, Harvard University Archives.

52 "House for Mr. and Mrs. Walter T. Fisher," The Architectural Record, March, 1930, 459-64.

53 "The Home of Mr. and Mrs. Walter T. Fisher," House Beautiful, March, 1930, 317-19.

54 General Houses, Inc., Our Homes (Chicago: General Houses, Inc., 1934), 19.

⁵⁵ Howard T. Fisher, "New Elements in Home Design," *The Architectural Record*, November, 1929. As early as 1929, Fisher was advocating in print for efficient, modern house design and construction.

56 Burns, "K2H40," 160.

⁵⁷ *Fortune*, "Mass-Produced Houses in Review," 84. In 1933, General Houses had a full-time staff of 27, broken down as follows: sales: 4; erection: 2; costs: 1; production: 1; design and decoration: 2; land usage: 1; legal: 1; financial: 2; engineering, drafting and research: 11.

58 Ibid.

59 General Houses, Our Homes, 9.

60 Ibid., 12.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 8 Page 35

130 MOHEGAN AVENUE NEW LONDON, CT

Endnotes

⁶¹ Dorothy Raley (ed.), A Century of Progress Homes and Furnishings (Chicago: M.A. Ring Co., 1934),
63. General Houses' Century of Progress Exposition house, a rush job, required was completed in 200 man-hours, but the company estimated that a similar house would take approximately two weeks to erect.

62 Ibid.

63 Time, "Prefabrications."

64 Fortune, "Five Questions," 61-69, 104-7.

65 General Houses, Our Homes, 19.

66 General Houses, Inc., 1933 sales brochure.

67 General Houses, Our Homes, 34.

68 Douglas Haskell, "Houses Like Fords," Harper's, Feb., 1934, 286.

⁶⁹ "Recreation House for Huntington B. Henry," *Architectural Record*, Oct., 1934, 255. Henry's weekend hunting retreat on an estate in Lake Forest, Ill., was likely constructed in 1934.

⁷⁰ Howard T. Fisher Papers, Harvard University Archives.

71 Ibid.

⁷² A home for the future U.S. Senator, Democratic Presidential nominee, and U.N. Ambassador Adlai E. Stevenson II was destroyed in a fire as it neared completion in 1935 in Libertyville, III.

⁷³ Howard Fisher Papers; Art Institute of Chicago, Chicago Architects Oral History Project. In the 1930s Fisher's General Houses employed a number of young draftsmen, among them G. Paul Schweikher, Herman Lackner, Phillip Will Jr., and Lawrence Perkins, who would later go on to have notable careers as architects.

74 Burns, "K2H40," 161.

⁷⁵ Howard T. Fisher's American Institute of Architects Fellow nomination, 1974, Howard Fisher Papers.

130 Mohegan Avenue Page 4 Name of Property	New London, Conn. County and State
10. Geographical Data	
Acreage of Property 0.1 ACRE	
UTM References (Place additional boundaries of the property on a continuation sheet.)	USGS Topographic Quad name NEW LONDON
1 <u>1/8 7/4/2/2/6/6</u> <u>4/6/8/4/1/5/0</u> Zone Easting Northing	2 / //////////////////////////////////
3 / / / / / / / / / / / / / / / / / / /	4 / / / / / / / / / / / / / / / / / / /
Verbal Boundary Description (Describe the boundaries The nominated property includes the house known a follows: north by a line 10' from the garage's no Route 132), south by a line 8' from the south wal wall.	is 130 Mohegan Avenue, along with land bounded as orth wall, east by Mohegan Avenue (Connecticut 1, and west by a line 42' from the garage's west
Boundary Justification (Explain why the boundaries were so The boundary includes the house and a reasonable setting for the house.	amount of surrounding land, which forms the
11. Form Prepared By	See continuation sheet(s) for Section No. 10
name/title Douglas Royalty	
organization Connecticut College	date July 1, 2008
street & number 270 Mohegan Avenue	telephone (860) 439-5083
city or town New London, Conn.	state <u>cr</u> zip code 06320-419
email address doug.royalty@conncoll.edu	
Additional Documentation The National Register requires each nomination consist x Continuation Sheets for narrative x A USGS topographic quad map (7.5 or 15 minute se A Sketch map for historic districts or properties hav A Photo identification map for districts; one map of x black and white photographs of the property. See p	eries) indicating the property's location ving large acreage or numerous resources
	aquires the following for all pominations:
The Connecticut Commission on Culture and Tourism m x An additional set of black and white photographs in x Floor plans of properties whose significance is based x Color slides or PowerPoint images and presentation	that remains at the SHPO
x An additional set of black and white photographs in x Floor plans of properties whose significance is based	that remains at the SHPO d on their plans
x An additional set of black and white photographs to x Floor plans of properties whose significance is based x Color slides or PowerPoint images and presentation Property Owner	that remains at the SHPO d on their plans
x An additional set of black and white photographs is x Floor plans of properties whose significance is based x Color slides or PowerPoint images and presentation Property Owner name/title <u>Connecticut</u> College	that remains at the SHPO d on their plans n of the property to the Connecticut State Review Board

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 1

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography

Ames, Winslow. Unpublished autobiography. Smithsonian Institution Archives of American Art, Washington, D.C.

American Institute of Architects. AIA Fellow nomination materials for Howard T. Fisher, 1974.

The Architectural Record, 1933-34.

- "Sectional Steel House for Miss Ruth Page," Apr., 1933, 289.
- "Houses Built With New Construction Methods," Apr. 1933, 288.

- "A Fabricated House at Elmhurst, Illinois," Nov., 1933, 409.

- "House for Mr. and Mrs. Walter T. Fisher," Nov., 1929, 459-64.
- "General Houses, Inc.," Jan., 1934, 18-19.
- "Recreation House for Huntington B. Henry," Oct., 1934, 255.

Arieff, Allison. Prefab. Salt Lake City: Globe Smith, 2000.

Art Institute of Chicago. Chicago Architects Oral History Project. www.artic.edu/aic/libraries/caohp.

Auer, Michael J., Burns, John A., and Jandl, H. Ward. Yesterday's Houses of Tomorrow: Innovative American Homes 1850 to 1950. Washington, D.C.: The Preservation Press, 1991.

Bemis, Albert Farwell and Burchard, John. The Evolving House (Vol. 1): A History of the Home. Cambridge, Mass: The Technology Press (Massachusetts Institute of Technology), 1933.

Bemis, Albert Farwell. The Evolving House (Vol. 2): The Economics of Shelter. Cambridge, Mass: The Technology Press (Massachusetts Institute of Technology), 1934.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 2

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography (continued)

Bemis, Albert Farwell. The Evolving House (Vol. 3): Rational Design. Cambridge, Mass.: Technology Press (Massachusetts Institute of Technology), 1936.

Bruce, Alfred, and Sandbank, Harold. A History of Prefabrication. New York: John B. Pierce Foundation, 1944.

Burchard, John Jr. "The Quest for a Better House." Technology Review, Jan., 1933.

Corn, Joseph J., ed. Imagining Tomorrow: History, Technology, and the American Future. Cambridge, Mass.: MIT Press, 1986.

Davies, Colin. The Prefabricated Home. London: Reaktion, 2005.

The Day, New London
- "Application Filed to Construct Steel Fabricated Dwelling; First in
City," Sept. 16, 1933.
- "12 Applications for Building Permits Approved by Board in
September," Oct. 7, 1933.
- "Framework Started for Two Steel Fabricated Houses in Mohegan Ave.,"
Nov., 1933 (approximate date).
- "Steel Fabricated House in Mohegan Avenue, Enclosed, Attracts
Attention," Dec. 2, 1933.

Fisher, Howard T. Papers, Harvard University Archives.

Fisher, Howard T. "New Elements in Home Design." The Architectural Record, Nov., 1929.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 3

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography (continued)

"48 Systems of Prefabrication." American Architect and Architecture, Sept., 1936, 28-40.

Fortune

"Five Questions...And a Striking Answer." July, 1932, 60-69, 104-10.
 "Mass-Produced Houses in Review." April, 1933, 52-57, 78, 80, 83-84, 87.

Gaddis, Eugene R. Magician of the Modern: Chick Austin and the Transformation of the Arts in America. New York: Knopf, 2000.

Gaddis, Eugene R. "Modernist and Connoisseur: Winslow Ames at the Lyman Allyn Museum," in *The Vision and Influence of Winslow Ames*. Exh. cat. New London: Lyman Allyn Art Museum, 2002.

General Houses, Inc. General Houses, Inc. N.p., 1933. University of Chicago Special Collections Center.

General Houses, Inc. Our Homes. Chicago: General Houses, Inc., 1934.

Gorst, Jake. "Modeled in Metal: The Aluminaire House," Modernism, Summer 2007, pp. 43-49.

Haskell, Douglas. "Houses Like Fords." Harper's Weekly, Feb. 1934, pp. 286-97.

Hitchcock, Henry-Russell. "A House in Winnetka," The Arts, Feb., 1930.

House Beautiful. "The Home of Mr. and Mrs. Walter T. Fisher." March, 1930.

OMB No. 10240018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 4

130 MOHEGAN AVENUE NEW LONDON, CT

130 Mohegan Avenue New London, Connecticut

Bibliography (continued)

Kelly, Burnham. The Prefabrication of Houses. New York: Technology Press of the Massachusetts Institute of Technology/John Wiley and Sons, 1951.

Le Corbusier. Towards a New Architecture. Mineola, N.Y.: Dover, 1986 (originally published: London: J. Rodker, 1931).

Mock, Elizabeth, ed. Built in USA: 1932-1944. New York: Museum of Modern Art, 1944.

New London City Directories, 1933-1974.

The New York Times - Carolyn Battista, "The View from New London; A House for the Future Finally Lives Up to its Billing," April 10, 1994. - Jewell, Edward Alden, "The Lyman Allyn Museum," Aug. 12, 1934. - "Winslow Ames, Writer and Museum Head, 83," Oct. 8, 1990.

Raley, Dorothy (ed). A Century of Progress Homes and Furnishings. Chicago: M.A. Ring Co., 1934.

Ruddy, John J. Reinventing New London. Charleston, S.C.: Arcadia, 2000.

Time. "Prefabrications." March 27, 1933.

Winnetka Talk. "Walter L. Fisher Dies; Was Former Cabinet Member." Nov. 14, 1935.
NPS Form 10-900-a (8-86) OMB No. 1024-0018 (Expires 1-31-2009)

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Photographs

130 MOHEGAN AVENUE NEW LONDON, CT

Photographs

The photographs accompanying this nomination are black-and-white film images, properly processed with black-and-white chemicals and thoroughly washed on archival-grade paper.

All photographs were taken in New London County, Connecticut, by Theodore Hendrickson in May, 2008. Negatives are located at the Art Studio Dept., Connecticut College.

Photo numbers correspond to the photographs as labeled in the photograph and maps section of the National Register form.

Photograph 1. View of west facades of house and garage, 130 Mohegan Avenue (foreground, right) and 132 Mohegan Avenue (background, left). Camera facing northeast.

Photograph 2. View of south and east facades of 130 Mohegan Avenue. Camera facing northwest.

Photograph 3. View of north facade with main entry, portico, and garage of 130 Mohegan Avenue. Camera facing south.

Photograph 4. View of west and south facades, including rear entry. Camera facing east.

Photograph 5. Interior view of living room with steel wall and ceiling panels, fireplace.

Photograph 6. Interior view through living room, with built-in cases and utility closet, and hall to bedroom No. 2.

Photograph 7. Interior view through bedroom No. 1, with built-in cases, to hall.





FIRST FLOOR PLAN	STEEL HOUSE CONNECTICUT COLLEGE	SCALE: 1/8" = 1'-0"	Barun Basu DATE DATE CONTRACTOR SOCIATES 9/10/07 CONTRACTOR STORES 9/1
------------------	------------------------------------	---------------------	--

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION/RETURN SHEET

REQUESTED ACTION: RESUBMISSION

PROPERTY House at 130 Mohegan Avenue NAME :

MULTIPLE NAME :

STATE & COUNTY: CONNECTICUT, New London

RETURN

DATE OF PENDING LIST: DATE RECEIVED: 10/27/09 12/10/09 DATE OF 45TH DAY: DATE OF 16TH DAY: DATE OF WEEKLY LIST:

REFERENCE NUMBER: 08001379

REASONS FOR REVIEW:

APPEAL:	N	DATA PROBLEM:	N	LANDSCAPE:	N	LESS THAN 50 YEARS:	N
OTHER:	N	PDIL:	N	PERIOD:	N	PROGRAM UNAPPROVED:	N
REQUEST:	N	SAMPLE:	N	SLR DRAFT:	N	NATIONAL:	N

COMMENT WAIVER: N

ACCEPT

DATE REJECT

ABSTRACT/SUMMARY COMMENTS:

The house is listed at the state level of significance attage the Still had requested national level. John Burns, Acting Mar HARS/HAEN/HALS Was consulted in this regard. It is pessible that stee additional Documentation May was consulted in this regard. It is pessible that stee additional Documentation May support a regard of the level of Significance.

RECOM./CRITERIA	
REVIEWER DAD	DISCIPLINE Historia
Phone	Date 10/28/2007

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the National Park Service.

















There may be private inholdings within the boundaries of the National or State reservations shown on this map





CONNECTICUT COLLEGE

Vice President for Administration

270 Mohegan Avenue New London, Connecticut 06320-4196

September 5, 2008

Karen Senich State Historic Preservation Officer Connecticut Commission on Culture & Tourism One Constitution Plaza Second Floor Hartford, CT 06103

Dear Ms. Senich,

Thank you for your letter of August 7 informing me that 130 Mohegan Avenue will be considered by the State Historic Preservation Board for nomination to the National Register of Historic Places on October 16.

Connecticut College has owned 130 Mohegan Avenue since 1949 and has no objection to listing the building on the National Register of Historic Places. Indeed, the Winslow Ames house next door (also owned by the College) was listed on the National Register in 1995. Not only is it extremely rare-even unprecedented-to have two examples of early modern prefabricated houses standing side by side, but these particular houses demonstrate innovative strategies for minimizing building footprints of single-family houses. Thus, they contribute to one of the chief cornerstones of the College's mission: to preserve and protect the environment, both locally and globally, and to prepare citizens sensitive to the need for responsible environmental stewardship. Our plans for the adaptive reuse of 130 Mohegan Avenue include housing student clubs focused on environmental issues and supporting on-campus initiatives aimed at providing locally-grown food.

In short, we are proud to be associated with the preservation and reuse of 130 Mohegan Avenue and acknowledge listing on the National Register of Historic Places as an important step in this process.

Sineerely,

Ukysses B. Hammond Vice President for Administration



Arts Tourism Film History

One Constitution Plaza Second Floor Hartford, Connecticut 06103

860.256.2800 860.256.2811 (f)

Connecticut Commission on Culture & Tourism

MEMORANDUM



TO: J. Paul Loether, Chief National Register of Historic Places
FROM: Stacey Vairo, National Register Coordinator SSV
DATE: July 29, 2009
SUBJECT: National Register Nomination – 130 Mohegan Avenue, New London, CT

Please find attached revisions to Sections 7 and 8 of the 130 Mohegan Avenue, New London, CT nomination.

These revisions reflect changes requested by the memo from your office dated January 30, 2009.

Please feel free to contact me at (860) 256-2766 or <u>stacey.vairo@ct.gov</u> with any questions.



www.cultureandtourism.org

An Affirmative Action Equal Opportunity Employer



Arts Tourism Film History

One Constitution Plaza Second Floor Hartford, Connecticut 06103

860.256.2800 860.256.2811 (f)

Connecticut Commission on Culture & Tourism

MEMORANDUM

NAT. RECIS, EN JAN STORIC PLACES OCL 5 1 5003 SECEIVED 2280

TO:	J. Paul Loether, Chief National Register of Historic Places
FROM:	Stacey Vairo, National Register Coordinator
DATE:	October 23, 2009
SUBJECT:	National Register Nomination Edits 130 Mohegan Avenue

The following materials are submitted for nomination of the <u>House at 130</u> Mohegan Avenue, New London, CT

Connecticut_ to the National Register of Historic Places:

- x Sig. page and remainder of Nomination form
 - Multiple Property Nomination form
- Photographs
 - Original USGS maps
 - Sketch map(s)/figure(s)/exhibit(s)
 - Pieces of correspondence
 - Other

COMMENTS:

Please insure that this nomination is reviewed

This property has been certified under 36 CFR 67

CONNECTICOT	mi 1 1	An ora	
www.cultureandtourism.org	 The enclosed owner objections do	do not	
	constitute a majority of property owners.		

An Affirmative Action Equal Opportunity Employer

MINICOTIOUT

Other:



Arts Tourism Film History

One Constitution Plaza Second Floor Hartford, Connecticut 06103

860.256.2800 860.256.2811 (f)

Connecticut Commission on Culture & Tourism

8501379

MEMORANDUM

OCT 2 3 2009	
201 20 2005	1

10:	J. Paul Loether, Chief National Register of Historic Places	L PARK SERVIC
FROM:	Stacey Vairo, National Register Coordinator	
DATE:	October 21, 2009	
SUBJECT:	National Register Nomination Edits 130 Mohega	n Avenue

The following materials are submitted for nomination of the House at 130 Mohegan Avenue, New London, CT

Connecticut to the National Register of Historic Places:

<u> </u>	Edited National Register of Historic Places nomination form
	Multiple Property Nomination form
	Photographs
si	Original USGS maps
	Sketch map(s)/figure(s)/exhibit(s)
	Pieces of correspondence
	Other

COMMENTS:

Please insure that this nomination is reviewed This property has been certified under 36 CFR 67 CONNECTICUT The enclosed owner objections do do not constitute a majority of property owners. Other:

www.cultureandtourism.org

An Affirmative Action Equal Opportunity Employer



Other:

Recommendation	: SLR Ret	urn	Action:	SLR Re	turn 1	Vone
						TOHE
4 () 4 ()	Documentat	ion Issues	-Discussion	Sheet		
State Name: (7 Coun	ty Name Name	lander	Deserver			1 11 1
					50 97.17	0 Mili 99
Reference No. 08 -	1379 M	ultiple Nar	ne			
Solution:						
solution:						
					-	
· · · · · · · · · · · · · · · · · · ·			÷			
		+1		•		
Problem: Sec. 3	incomplete.	Codid	"/ocg / 1	· · · · · · · · · · · · · · · · · · · ·	3.4	
Problem: Sec. 3	incomplete.	Codid	"locg / 1	· · · · · · · · · · · · · · · · · · ·	2 H	
Problem: Sec. 3	incomplete.	Codid	"locg / 't			
Problem: Sec. 3	incomplete.	Codid	"locg / 4			
Problem: Sec. 3	incomplete.	Codid	"/ocg / 4			
Problem: Sec. 3	incomplete.	Codid	"/ocg / 4	· · · · · · · · · · · · · · · · · · · ·		
Problem: Sec. 3	incomplete.	Codid	"/ocy / 1			
Problem: Sec. 3	incomplete.	Codid	"/ocy / 1			m
	incomplete.	Codid	"locy / 1			m
Resolution:	in complete.	Codid	"/ocq / 1			
Resolution: SLR: Yes No	incomplete.	Codid	"/oc4 / 1			m m
Problem: Sec 3 /	in Complete.	Codid	"/oc4 / 1			