Soldiers of the Sword, Soldiers of the Ploughshare

Quonset Huts in the Fort Collins Urban Growth Area

Historical Context and Survey Report

July 2003

HISTORITECTURE
Historic Preservation Specialists

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Submitted to:

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Quonset huts line the northeast side of Jefferson Street in Fort Collins. *(Photo by the author)*

Introduction

An Inverse Relationship

"Soldiers of the Ploughshare as well as Soldiers of the Sword."

— John Ruskin,
"Qui Judicatis Terram," Unto This Last, 1862

In 1944-45, as Allied forces battled to victory in Europe and the Pacific, American politicians and business leaders were less than elated. The end of World War I in 1919 had taught them a painful lesson; the return of soldiers to the private sector and retooling of industry for peacetime created a severe economic depression and sparked bitter, violent labor disputes. Moreover, the current war had helped the nation emerge from the Great Depression of the 1930s. With memories of bread lines and Hoovervilles fresh in their minds, Americans home and abroad desired to preserve their wartime prosperity. But victory would mean the return of 12 million troops and the elimination of millions of jobs in defense plants. Thus, in 1944, President Franklin Roosevelt submitted to Congress what he termed "a second Bill of Rights," in preparation for the return of American soldiers to their homeland. The legislation, officially termed the "Servicemen's Readjustment Act" but better known as the "G.I. Bill," guaranteed new veterans the right to employment, housing, food, clothing, recreation, medical care, and education.[1]

One of the most immediate and profound impacts of the G.I. Bill was on colleges and universities. The law effectively democratized higher education in the United States. With generous government grants and loans, a veteran could easily afford to become the first member of his family to obtain a college degree, regardless of his race, ethnicity, or financial ability. For each enrolled G.I., the federal government paid tuition and fees directly to the university and provided a $50 to $75 monthly stipend directly to the student. But colleges and universities were vastly ill-prepared for the onslaught. Student populations at most universities had remained stagnate or even declined from 1941 to '45. Moreover, the war had halted construction of new classroom and housing facilities. After 1945, some campuses faced student populations that dwarfed prewar and wartime numbers. In 1939, the total population of students enrolled in degree-granting programs in the United States was 1.3 million and remained steady through the war years. In 1946, that number exploded to 2 million, and, by the peak year of veteran enrollment in 1949, the student population numbered around 2.5 million.[2]

Thus, at the conclusion of World War II, the United States military and the nation's colleges and universities entered into a strange inverse relationship. As the armed forces mustered out millions of men, they also sought to dispose of an immense surplus of equipment. And as veterans enrolled in colleges and universities, those institutions found themselves with equally immense shortages of instructors, equipment, supplies and, most acutely, classrooms and housing. Moreover, many of the veterans were married with children on the way or already toddling about. Traditional single-sex dormitories simply could not house these new veteran-students.

But the problems this inverse relationship created

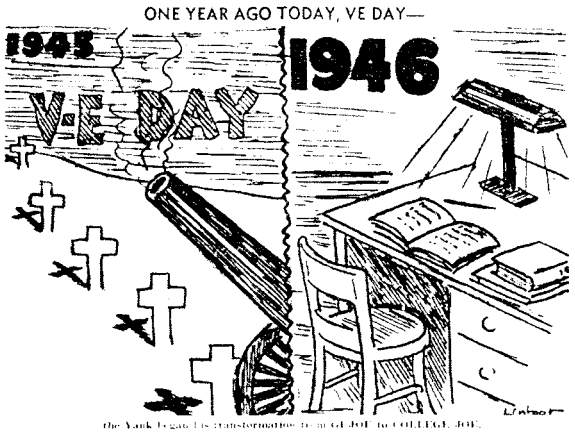


Figure 1. The end of World War II and the opportunities of the G.I. Bill quickly and profoundly altered the lives of returning servicemen. The caption reads "One year ago today, VE Day, the Yank began his transformation from GI JOE to COLLEGE JOE." (Rocky Mountain Collegian, *May 8, 1946)*

were solved in large part by one the most unique American building forms ever created – the Quonset hut. During the war, these corrugated metal, half cylinders had quickly remedied the military's vast housing and storage deficiencies. Now they would do the same at universities. These tubular swords were forged anew into ploughshares. By the late 1940s, the Quonset hut was as ubiquitous on American college campuses as the column-lined library or stately oak and elm trees. From there, it found itself in downtown commercial districts, residential neighborhoods, industrial parks, and farms. And Fort Collins was no exception. For more than half a century, these graceful arcs of steel and wood have left an indelible impression upon the city's built environment.

Section I

Historical Context

Chapter 1

Architectural Heritage of the Quonset Hut

Definitions

According to American Architecture: An Illustrated Encyclopedia, a Quonset hut is "[a] prefabricated structure…that has a semicylindrical shape; commonly constructed of corrugated steel fastened to arched steel ribs that are attached to a concrete slab floor."[3] In a true Quonset hut, the walls and roof are the same, seamless component; generally the curve of the roof begins at the floor. However, some Quonset huts feature short, vertical knee walls, which generally do not exceeded 4 feet in height. These short walls can be seamless – formed into the exterior cladding or structural support system – or are separate components, often extensions of the concrete foundation. Because the vertical wall can only represent a fraction of the overall side elevation, this criteria excludes airplane hangars and other barrel-roof, metal-frame buildings. Moreover, similar shaped, reinforced concrete structures are generally not considered Quonset huts. For the purposes of this context, semicylindrical green houses, whether with glass or plastic glazing, are not included because of their specific function, lack of metal cladding, and differences in structural support members. However, some former Quonset huts may have been converted into greenhouses. An analysis of these structures would require an examination of the support system and footprint. This context does, however, include wood-frame Quonset-like structures because of their historical relationship to the metal form.

Barrel-Roof Forms

Quonset huts share a common heritage with both high-style and vernacular curved-roof, rectangular-plan structures dating to Roman antiquity in Europe, Asia, and Africa, and to prehistoric times in North America. The most basic component of the Quonset hut – its very structural essence – is the arch, an architectural innovation perfected by the ancient Romans and an icon of their culture. The arch allowed Romans to span great distances with heavy masonry construction. When arches were placed behind each other in a row, they formed an arcade. The resulting ceiling structure was a barrel vault, which is a masonry canopy of semicylindrical cross sections supported by parallel walls. Most commonly employed in the naves of Romanesque cathedrals and other monumental structures, the barrel vault allowed masonry builders to incorporate vast amounts of space beneath a single roof.[4]

Barrel-roof structures also evolved early among the native peoples of North America. Native American tribes in what is now the northeast United States often constructed dwellings with arched roofs. These structures boasted a wood frame of light poles or branches fastened with leather cords. The curved roof supports were merely saplings or some other limber branch held in tension between the sides of the vertical frame. Like the corrugated metal sheets of the classic Quonset hut, the exterior wall cladding of these longhouses was not load bearing. These coverings, which like the modern Quonset did not vary from wall to roof, included bark, thatch, woven mats of vegetable fiber, or less frequently, tanned animal hides. The Ute People constructed similar structures, referred to as wickiups, on Colorado's western slope. Upon the introduction of the horse in North America, these structures were replaced with teepees, which were far more easy to transport.[5]

Figure 2. While similar in its roofline and exterior cladding to a true Quonset hut, this airplane hangar differs in that vertical walls comprise most of the side elevations. It is located at Christman Field, on CSU's Foothills Campus. *(Photo by the author)*

America's English colonies along the Atlantic seaboard also developed a convex roof form, referred to as a compass or compass-headed roof. This structure consisted of actual curved rafters, as in Quonset huts, or of a complex system of rafters and perlins forming a semi-cylindrical shape – the bow-string truss. Colonists rarely built residential structures with this roof form, reserving it predominately for early commercial structures, particularly warehouses.[6]

A more local curved-roof vernacular form emerged with the boom in Colorado's sugar beet industry. Like the Quonset hut, these structures were prefabricated to quickly remedy a housing shortage. Shortly after the region's first sugar refinery opened in Loveland, large numbers of Germans, who had originally settled in the Volga River region of Russia, arrived in Larimer County. In the spring of 1902, special trains, sponsored by the sugar companies, brought hundreds of Volga German families from Nebraska and Kansas to northern Colorado. Like the boom in the veteran-student population a half century later, sugar beet growers and producers scrambled to find housing for their workers. During the first few beet campaigns, these families often lived in tents, boxcars, or granaries, chicken coops, and other farm structures converted into housing. Quickly, however, local beet sugar manufacturers and farmers provided prefabricated, barrel-roofed shanties. By late December 1902, Fort Collins's Buckingham neighborhood boasted thirteen of these houses, which measured 20-by-12 feet, with four small, square windows. The curved roof eliminated the amount of lumber necessary to construct a gabled or hipped roof, but provided enough curvature to repel rain and melting snow.[7] Inside, most shanties were one or two rooms, a rather ancient hall-and-parlor division of corporate space. Larger, more permanent shanties contained an actual division between rooms, while suspended blankets divided sleeping from living and cooking areas of smaller structures. These shanties appear to have been moved from place to place and served function to function, just like modern Quonset huts.[8]

Metal Buildings

The history of mass-marketed and mass-produced metal buildings parallels a boom in American industry. As fortune-seekers converged on California gold fields in the late 1840s, Peter Naylor, a New-York-state metal roofer, sensed an opportunity. He devised a small structure of interlocking iron panels. The structures were easy to assemble, more comfortable than a canvas tent and, unlike wood shanties, were fireproof. Touted in advertisements as "portable iron houses for California," the structures proved quite popular with prospectors and miners; at the height of the gold rush in 1849, Naylor sold between 500 and 600 units. Similar structures also appeared at Colorado's mines and boomtowns. More often, however, these buildings featured wood frames covered in corrugated sheets of tin, a precedent of the Quonset hut's structural and cladding systems.[9]

Black gold created yet another rush demanding cheap, easily assembled metal buildings. In 1901, oil was discovered near Beaumont, Texas. Almost overnight, oil derricks covered the landscape, and beside nearly each of them was a new kind of prefabricated building featuring a metal frame with a corrugated metal skin. This kind of storage structure and equipment housing proliferated with the explosion of automobile ownership in the United States, particularly after Henry Ford introduced his very affordable Model T in 1908. In two years, Ford sold 500,000 of the automobiles, creating a huge demand for garages. Soon, advertisements for prefabricated, gable-roofed metal structures, with simple steel frames and sheets of corrugated metal, appeared in the popular press and could be mail ordered trough the Sears Roebuck & Company and Montgomery Ward catalogs. In 1916, these structures usually cost between $50 and $75.[10]

Figures 3 and 4. Round-roof sugar beet workers' shanties became a familiar site on the edges of northern Colorado's farm fields and German-Russian settlements. Above is a photograph of a Weld or Larimer county sugar beet shanty circa 1923. Below is a similar shanty, with an attached shed-roof addition along the left side, at 209 Third Street in Fort Collins's Buckingham Neighborhood. *(Top photo from U.S. Department of Labor; bottom photo by the author)*

Pre-engineered metal buildings continued to evolve through the 1920s and '30s. The maturation of the airplane through this period demanded even larger structures for hangars. During the 1933-34 World's Fair in Chicago, heralded as the "Century of Progress," an Armco exhibition introduced a standing seam metal roof, in which the support structure and cladding were the same material. Standing seams were interlocking, water-proof junctions between two sheets of metal, created by turning up the edges of adjacent sheets and then folding them over together. This design would later influence post-World War II Quonset huts and dominate those models manufactured today.[11]

Another building exhibit at the same World's Fair introduced an innovation that had an even more profound effect on the future development of the Quonset hut. The Stran-Steel Company, a division of Great Lakes Steel Corporation, worked with Good Housekeeping magazine to develop a low-cost, fireproof, prefabricated house. The structure was constructed of a steel frame clad with baked iron enamel panels. The most notable feature, however, solved one of the biggest shortcomings of metal-frame buildings: attaching exterior and interior wall cladding. Before the Good Housekeeping Stran-Steel house, attaching anything to a steel structure involved elaborate systems that hindered the efficiency of the buildings for light commercial or domestic use. To solve the problem, Stran-Steel developed a nailing groove for this demonstration house. This innovation allowed exterior wall cladding or interior wall finishes – what the company termed "collateral material" – to be nailed directly into the steel supporting member. Thus, installing a corrugated metal exterior or a wallboard interior was as easy as pounding a nail into a stud.[12]

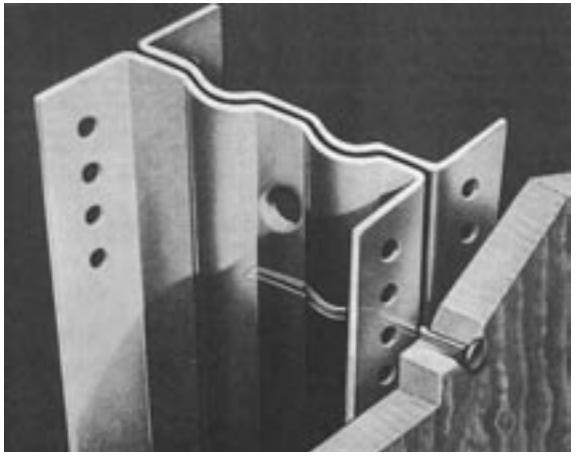


Figure 5. Stran-Steel nail groove. This innovation allowed the builder to install exterior and interior wall cladding by simply nailing it directly into the steel support structure. *(Great Lakes Steel Corporation, Stran-Steel Division)*

Chapter 2

Soldiers of the Sword: Quonset Huts in World War II

The American buildup for World War II began even before the Japanese bombed Pearl Harbor on December 7, 1941. But military preparations had to come quickly. The horrors of World War I left Americans steadfastly isolationist. Throughout the 1920s and '30s, Congress and the President consistently advocated a policy that removed the United States from foreign affairs, including the Senate's rejection of U.S. membership in the League of Nations' World Court, and the passage of the Neutrality Acts. Throughout this period, the American military waned. But as Japanese power increased in the Pacific and Hitler's army battled across Europe, Americans realized that war was inevitable. After all, the massive Nazi military machine had conquered Western Europe in just 70 days. As German soldiers and tanks occupied Paris, horrified leaders in Washington leapt from their isolation. In 1940-41, Congress agreed to lend or lease war material to Great Britain, the Soviet Union, and their allies; to enact the nation's first peacetime draft; and to triple the War Department's budget.[13]

With greatly increased funding, the branches of the U.S. Armed Forces initiated a colossal war preparation effort. For the Navy, a particularly pressing problem was a lack of facilities; it needed quickly deployable structures for housing, storage, headquarters, and an array of other purposes. In the late winter and early spring of 1941, Rear Admiral Ben Morell, chief of the Navy's Bureau of Yards and Docks, began considering the force's paucity of buildings. Morell know that the British had developed a semicylindrical, prefabricated structure during World War I. Termed the Nissan hut, it was the kind of building Morell envisioned for the U.S. Navy. But it had two major problems: first, there was no easy way to attach sheet-metal cladding to the frame, and second, it simply took up too much precious shipping space. Producing a practical structure would require some advanced pre-engineering. Thus, in March, Morell approached the George A. Fuller Construction Company, of New York City, and Stran-Steel, a division of the Great Lake Steel Corporation, with a challenge: design a hurricane-resistant, prefabricated building that could be quickly assembled by untrained men, shipped in small containers, and be used for any one of 48 purposes, including galleys, shower-latrines, dental offices, isolation wards, and even bakeries. And Morell gave the Fuller–Stran-Steel team only 60 days to complete the task. The companies did not hesitate to accept, sending a group of engineers and metalworkers, headed by Peter Dejongh and assisted by Otto Brandenberger, to the Navy yards at Quonset Point, Rhode Island. This place would soon lend its Native-American name to the structures designed and created there.[14]

Stran-Steel was an obvious choice to develop a structure to the Navy's specifications. The company had been engaged in the light construction industry for more than a decade before the outbreak of World War II. In addition to the nail groove, Stran-Steel had already developed methods to nest its building materials, reducing the unassembled size of its structures and, ultimately, the shipping cost. Thus, the company had already solved the Navy's two major problems with the Nissan hut.[15]

On the other hand, the Fuller Company and Dejongh appeared at first glance to be the least likely candidates for designing and constructing a Quonset hut. Fuller was among the preeminent builders of large-scale construc-

What's in a name?

According to a Great Lakes Steel Corporation, Stran Steel Division document, the Navy originally referred to the semi-cylindrical structures developed at Quonset Point, Rhode Island, as the Stran-Steel Arch Rib Hut. Stran-Steel, however, borrowed the place name Quonset to differentiate these structures from its other lines of prefabricated buildings. Soon Quonset became common parlance among military personnel and quickly reached the civilian population. Technically, "Quonset hut" is an official trademark of the Great Lakes Steel Corporation and is registered in the United States Patent Office.

Source: Great Lakes Steel Corporation, Stran-Steel Division

tion projects, particularly skyscrapers. Peter Dejongh was born in the Netherlands and graduated with a degree in engineering from the University of Delft. He joined the Fuller company in 1924. But this union of a huge construction company and a European-trained engineer was, upon second glace, the best choice to design a small, simple structure to the Navy's demanding specifications. After all, beginning in the 1920s, the construction of a skyscraper – or of any large building for that matter – required a steel skeleton. Fuller's engineers and workmen had an intimate, working knowledge of steel construction and its large-scale prefabrication. They had personally experienced the metal's capabilities and limits.[16]

Moreover, Dejongh's training at Delft was undoubtedly influenced by the work and philosophy of the Bauhaus movement in Germany. World War I left the European continent in ruins and an entire generation disillusioned. On the battlefield, traditional methods of warfare clashed with a new technology of destruction; the result was unprecedented massacre. As distrust of "old ways" grew, designers in Germany sparked a movement to reject the past and all falsity of historicist architecture. At the end of the war in 1919, Walter Gropius established the Bauhaus School of Architecture. Inspired by the day's socialist thinkers, instructors and students believed beauty came from function and the uninhibited display of modern materials: steel, glass, and reinforced concrete. Members of the Bauhaus reveled in the use of a repetitive interval between members of a building's framework, creating purely geometric forms. They sought to design spaces that were rational, efficient, and inexpensive – machines for living. "Functionalism, emphasizing how a building served its inhabitants, was of prime importance," write Virginia and Lee McAlester in their architectural guidebook. "Traditional elements…that were merely decorative, rather than functional, were to be discarded."[17] (Following the war, Dejongh served as construction engineer for many of the icons of International and Miesan architecture, including the Seagram, Union Carbide, and Exxon buildings in Manhattan and I.M. Pei's Mile High Center in Denver, that city's first modern skyscraper.) Bauhaus philosophy would prove extremely valuable in creating the Quonset hut. With its ability to house many uses, its purely geometric form, and its lack of any ornament, the structure was, after all, the epitome of the Bauhaus movement.[18]

The first Quonset hut that the Fuller–Stran-Steel team created manifested the companies' experiences in steel work and, through Dejongh, the influence of the Bauhaus. Completed from concept to prototype in only 30 days, the original Quonset hut measured 16 feet wide by 36 feet long. The arch-rib steel members, 8 feet in radius, were T-shaped, measuring 2 inches by 2 inches by a 1/4 inch. Perpendicular to these ribs were attached wood perlins,

Figure 6. The interior view of a 20-by-48-foot, war-surplus Quonset reveals the original arch-rib design Dejongh developed at Quonset Point, except that the original perlins are steel rather than wood. Colorado A&M (CSU) first acquired this particular Quonset for veteran-student housing. It is now located at the Swetsville Zoo, 4801 East Harmony Road. *(Photo by the author)*

which anchored the corrugated steel sheet exterior cladding. Most connections were made with standard-sized, self-tapping screws. The prototype featured pressed-wood interior lining, insulation, and a tongue-and-groove wood floor.[19]

Dejongh and his Fuller–Stan-Steel team redesigned and improved the Quonset hut throughout the war, even as they continued production at the Quonset Point facility. Engineers from the University of Michigan and the University of Detroit oversaw product proving, including grueling wind-tunnel tests. One of the biggest problems occurred when the team tried to modify the function – and thus interior space – of the building. Each of the 48 uses required individual drawings. Moreover, equipment, from ovens to beds, had to be redesigned and custom built to fit the curved, side walls. And Navy officials, adamant that every square foot count, lamented that the junction of the curved wall and the floor created unusable space; it reduced the effective width of the structure. In response, Dejongh and the Fuller–Stran-Steel team created a new structural support member. Measuring 2 inches by 3 5/8 inches, it consisted of two, lightweight steel U-shaped channels welded back to back. The channels hosted a previously developed Stran-Steel nail groove. But the most notable feature of these new supports was their shape; instead of the pure, semi-circle of the original T-shaped arch-ribs, these new supports left the floor at a 90-degree angle and continued vertically for four feet, at which point they arched over to form a barrel roof. This created a short vertical wall, eliminating the unusable space of the original Quonset hut. Simply termed "Quonset redesigned hut," these structures measured 16 feet wide by 36 feet long; plans for the various functions of the original Quonsets were redrawn to accommodate the new form.[20]

As the war continued, Dejongh and the Fuller–Stran-Steel team remained at Quonset Point, constantly refining its design and increasing its uses. They addressed details and problems as workers assembled each model at the proving grounds. The Navy had particular interest in the test assembly of each building because it determined the practicality of the structure for field use. In all, the Navy approved 86 different interior layouts for the small Quonset huts and a 40-by-100-foot warehouse model.[21]

Further redesigns were necessary when it came to shipping the structures to various theaters of war. Because of increasingly cramped holds in its ships, the Navy demanded the lowest tonnage and shipping space possible for each structure. The original models weighed 4 tons and assumed 450 cubic feet of space. The Fuller–Stran-Steel team decided to use lighter-gauge corrugated, galvanized steel sheets and half-inch plywood floors rather than the 1-inch tongue-and-groove floor of the prototype. They also determined that the true semicylindrical Quonset, despite its interior space deficiencies, was actually lighter than those with the four-foot vertical wall. The resulting modification allowed an increase in the size of the assembled structure to 20 by 48 feet but reduced each unit to 3 1/2 tons and 325 cubic feet of shipping space. Amazingly, these Quonset huts required less shipping space than did tents with wood floors and frames but could accommodate the same number of men – a testament to the skill of Dejongh and his production facility at Quonset Point.[22]

Other, more minor modifications were also made during the war. Originally, the structures were shipped with unpainted corrugated, galvanized steel sheets. This semi-reflective cladding, however, presented the risk on being spotted by enemy aircraft. Thus, Stran-Steel began to apply olive-drab camouflage paint at the factory. One last modification came in 1943 – the same year the Navy handed over all Quonset hut manufacturing to Stran-Steel – when the ends of hut were continued another four-feet over the bulkhead, providing protection from driving rains and direct sunlight. While the length of the structures increased to 56 feet, the interior living space remained at 48

The Military Build-Up

Numbers of Fuller–Stran-Steel Quonset Huts designed and built for the Navy.

T-rib Quonset	8,200
Quonset Redesigned	25,000
Quonset 20-by-48 (and 56)	120,000
Warehouse Type 40-by-100	11,800
Total:	155,000

Source: Department of Navy

Figure 7. This Stran-Steel, 40-by-100-foot warehouse-type Quonset hut is currently located on Colorado State University's main campus, north of West Lake Street on the Burlington Northern Santa Fe railroad. *(Photo by the author)*

feet. However, in the spring of 1945, the Navy determined that the overhangs were unnecessary in colder, northern climates. As a result, the remaining 56-foot versions became distinctive tropical Quonset huts.[23]

Fuller, Stran-Steel, and the Navy also designed and built larger models of the Quonset hut for use in establishing advance bases. At first, the Navy used 40-by-100-foot prefabricated metal buildings with vertical sides and a curved roof. However, they were heavy and required a large amount of shipping space. The team at Quonset Point then created a semicylindrical hut of the same dimensions. It reduced the shipping weight from 20 to 12 1/2 tons of steel and required only 350 cubic feet of space rather than 650. The Fuller team also designed multi-arch supports, which combined several 40-by-100-foot structures into a single warehouse under one roof. One of these multiple-unit Quonset huts in Guam created a 54,000-square-foot warehouse.[24]

For soldiers and sailors living and working in Quonset huts, the buildings provided a surreal existence. "They were as homely as sewer pipe," writes Elaine Viets, "and just as useful." The structures were hot in summer and cold in winter. They popped and pinged as the weather changed and metal contracted or expanded. A driving rain could prove deafening to the point of madness. Pinups of Betty Grable and other scantily clad women hung away from the curving walls, like a skirt from a pair of curvaceous legs. And as most pieces of military equipment, Quonset huts received affectionate yet often vulgar names from their residents. Some called the structures "tin tents;" Robert Finton wrote a play entitled Tents of Tin, set in World War II. But another name, associated with an equally maligned product of the war, stuck with the buildings – Spam cans.[25]

Despite these misgivings, Stran-Steel recognized in the waning days of the war that a domestic market existed for its Quonset huts. Even before armistice, the research crews at Quonset Point began experimenting with civilian applications of their buildings. After the war, they introduced more durable cladding and heavier arch ribs. By the mid 1950s, the company manufactured five models, which were all based on wartime developments. The models were identified by their width: the 20, 24, 36, 40, and multiple. The length of each model could be extended or contracted depending on the number of arch-rib support units ordered. The 20 and 24 were expanded in 12-foot increments while the rest grew in 20-foot units. The 24 featured one curved side wall, as usual, and one flat sidewall. It is identified in this document as a two-thirds Quonset.[26]

Moreover, America's major mail order catalog companies, which had offered prefabricated and kit buildings for decades, closely followed developments at Quonset Point. World War II brought shortages in materials and manufacturing capacity for these firms; the military received priority for construction materials over domestic manufacturers and required the retooling of factories for the war effort. But because it minimized the use of materials while maximizing efficiency of space, the Quonset form allowed Montgomery Ward and other retailers to offer some building kits during and immediately after the war. These kits would prove indispensable when a housing shortage gripped the nation at armistice.

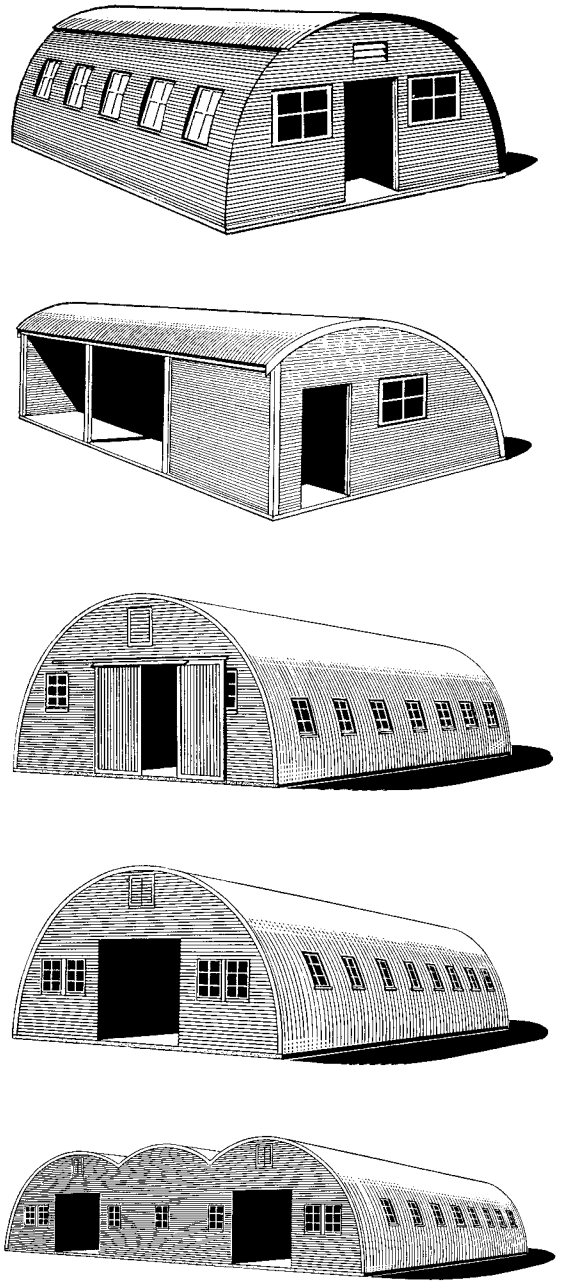


Figure 8. Stran-Steel Quonset hut models. From top to bottom: Quonset 20, Quonset 24, Quonset 36, Quonset 40, and Quonset Multiple *(Great Lakes Steel Corporation, Stran-Steel Division)*

Structural Support System

Stran-Steel, 40-by-100-Foot Quonset Hut

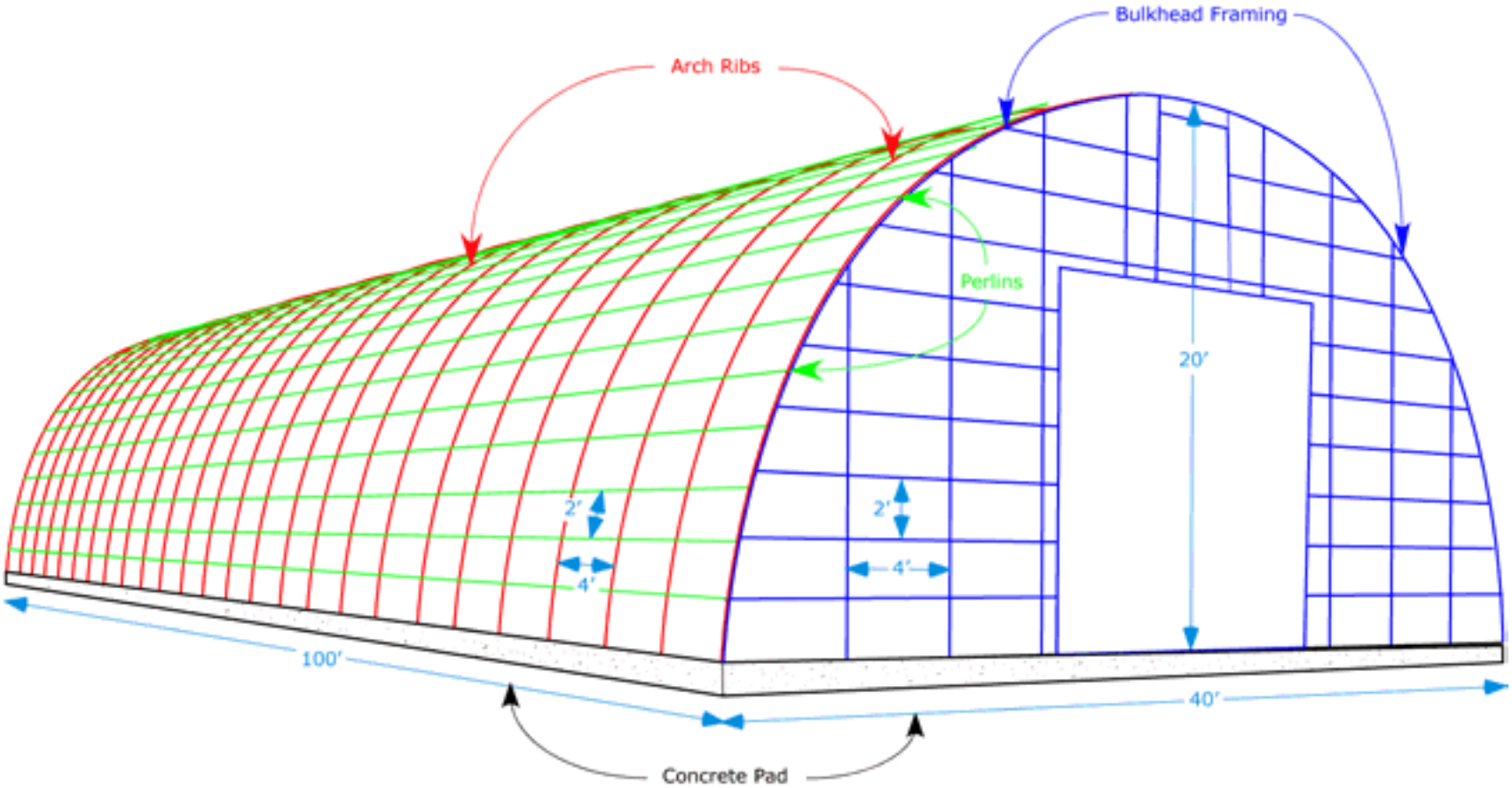


Figure 9. The interior structural support system of an original Stran-Steel Quonset hut was light, easy to assemble, and remarkably strong, even surviving Pacific typhoons. Colorado A&M acquired this particular structure following the war. It is currently located south of Prospect Road along the Burlington Northern Santa Fe Railway right-of-way. *(Photo and drawing by the author)*

Chapter 3

Soldiers of the Ploughshare: Quonset Huts in Fort Collins

Quonset Huts at CSU

In October 1944, less than a year before the end of World War II, Colorado Agricultural and Mechanical College President Roy M. Green, and his key administrators, attended the annual convention of the Association of Land-Grant Colleges and Universities. Among the most pressing issues addressed at the convention was the impact of the G.I. Bill on the association's members. Attendees realized that post-war education would revolutionize their institutions – that they were about to experience an unprecedented explosion in their student populations as millions of men left the military and entered the classroom. Fortunately for Colorado A & M, Green was among the most visionary of American college presidents. Even before World War II formally ended on August 25, 1945, the college, in cooperation with the Veterans Administration, trained disabled servicemen to construct a new men's dormitory on campus. Green also established a loan fund for veterans and switched the college's academic calendar from semesters to quarters, hastening the enrollment of returning servicemen. More than 225 of the 1,037 students enrolled in the fall quarter of 1945 were veterans. By winter quarter, over 650 veterans were enrolled, and by spring, when the student population exceeded 1,600, some 980 of them formerly served in the armed forces. Thus, during the course of the 1945-46 academic year, the number of enrolled veterans increased 435.6 percent.[27]

In the fall of 1945, while President Green struggled to head off a housing crisis on campus, Fort Collins business leaders grappled with the same problem in the wider community. In the months immediately following the war, rents in Fort Collins skyrocketed as vacancies plummeted, even though the construction of new houses was double any previous peacetime period.[28] At first, the Chamber of Commerce's housing committee attempted piecemeal solutions, trying to relocate some military surplus Quonset huts from Sidney, Nebraska. That deal appears to have collapsed. Soon, however, the chamber and the college realized that their problems were mutual; they would have to work together.[29]

Thus, in late October 1945, the Fort Collins Chamber of Commerce and the Colorado Agricultural and Mechanical College, with the Junior Chamber of Commerce and the Associated Veterans, initiated a cooperative effort to develop what they termed "Veterans' Village" on campus. "The college is our most important industry," commented then Chamber of Commerce President Chandler W. Post. "The veterans attending it are fine boys and will make some of our most solid citizens, and if we in Fort Collins don't do something for them now, somebody else will."[30]

The coalition, under the leadership of Post and Green, initially faced two quests: selecting a suitable location for the village and finding prefabricated houses that could be delivered quickly and cheaply. The chamber and the college originally tried to acquire Quonset huts from a prisoner of war camp in Greeley. However, the 4,000 German soldiers there in October would remain through the end of that season's sugar beet campaign. The Army did not expect to close the facility until the following spring. Moreover, it informed the college that veterans' hospitals would be given first priority for surplus buildings because these institutions needed to accommodate the families of their slowly recovering patients. Quickly eliminating the possibility of using

war-surplus structures, the coalition turned to the next best option – ordering prefabricated houses through the private sector. They first considered moving in trailers, but a poll of veterans overwhelmingly disapproved this idea. (Later, however, veterans were allowed to develop a mobile home park adjacent to Veterans' Village.) Then, in late October, F. T. Peterson, manager of the local Montgomery Ward store, approached Green with a solution; his company could furnish 100 prefabricated, pseudo-Quonsets within 30 days of an order.[31] The Rocky Mountain Collegian provided this description of the structures:

> Each house will be built of twenty-six gauge sheet metal outside and lined with insulated board. The cottages will be twelve by thirty-six feet and eight feet high with cottage type windows which open out. This prefabricated house will be fireproof and contain a shower stall, toilet, kitchenette, and will be completely furnished and ready to move into at a total cost of $1,250.[32]

Meanwhile, R. L. Lewis, of the college's engineering department, surveyed three prospective sites for the settlement: behind the civil engineering building, south of the original agricultural facilities, and on West Laurel Street north of Loomis Avenue. The problem with the first two sites was their size; Lewis calculated that neither location could support more than 60 units. But Green and other leaders of the coalition wanted to order approximately 100 units, and double that number as quickly as possible. Only the vacant and sprawling Laurel Street location could handle such a massive complex.[33]

With a housing model and location in mind, the college and chamber developed plans for a 96-unit settlement. The college determined that the project would cost $125,000 and, with the chamber, it developed an innovative yet ill-fated means of financing the endeavor. Members of the community would be asked to purchase "shares" in the village. In return, they would receive income gleaned from rents on the houses. The plan was extremely optimistic. "It is expected the project can be amortized over a four-year period," observed the Fort Collins Coloradoan, "during which the investors will clear their investments, with the possibility of additional returns from the sale of houses if they are no longer needed by that time."[34]

But this plan met with little support from Fort Collins residents. Indeed, many were horrified at the erupting student population on campus and resented the prospect of a corrugated-metal, Quonset hut village springing up in their midst. Residents of West Laurel Street began circulating a petition demanding that the college relocate the settlement. "Some of the residents are said to fear the loss of market value to present residence property in the vicinity," observed the Coloradoan.[35] Opposition continued to grow, gaining the support of at least one member of the city council. News of the opposition enraged veterans at the college. "One nature loving resident of West Laurel protests that the proposed community would destroy her view," wrote a veteran in a front-page Collegian letter to the editor. "We wonder how Miss X would enjoy looking out at a swastika floating over American's fair soil. Would it harm her enjoyment of life if a few of the veterans responsible for her freedom…[lived] in 'huts' obstructing her view?"[36]

Not surprisingly, the plan to finance the project pri-

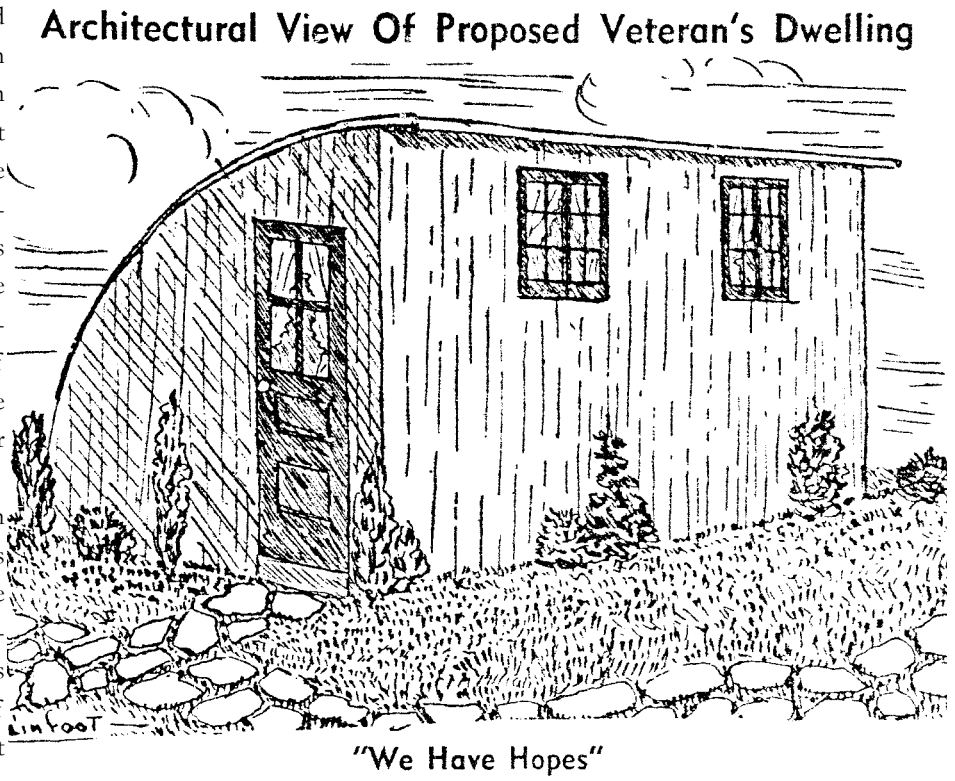


Figure 10. This sketch depicts the Quonset hut the Fort Collins Montgomery Ward store installed on its furniture sales floor for the inspection of Colorado A&M's veteran-students. The models delivered to campus were significantly larger than this model. *(*Rocky Mountain Collegian, *6 December 1945, p.*

vately collapsed. Desperate to find a solution to the housing problem before they were forced to turn away thousands of students, the administrators at Colorado A&M and the University of Colorado in Boulder turned to the Colorado General Assembly for assistance. The legislature agreed to convene a special session to consider the issue, which soon bogged down in political infighting. Governor John Vivian refused to grant a second special session. Finally, Green persisted in convincing the institution's governing body, the Colorado State Board of Agriculture, to issue bonds through the United States Bank of Denver. Veterans' Village would, at last, become a reality.[37]

Yet even before the financial problems had been addressed, veteran-students had a chance to preview their new homes. A model of one of the cottages arrived at the local Montgomery Ward store on November 13 and was assembled on the furniture sales floor in less than two days. Measuring 12 feet by 20 feet, the model was a standard Quonset hut divided in half lengthwise. Thus, the structure had flat end walls, or bulkheads, and one flat side wall; the remaining side wall was curved as usual. This modification had several advantages over true Quonset huts. The long, flat wall made it easier to install standard, mass-produced windows and appliances, as well as to accommodate furniture. But the model was only a small taste of things to come; the college ordered 56 single units, which measured 12 by 36 feet, and 40 double units, which included an additional 12 feet in length.[38]

The first carload of the Montgomery Ward half Quonsets arrived in Fort Collins, via the Colorado & Southern Railroad, in mid December. As promised, seven more carloads arrived in the next 30 days. But even as workers unloaded the housing kits from boxcars, administrators faced shortages of appliances, furniture, and, most notably, flooring, which the kits did not include. Plywood was still scarce in the months following the end of the war. Left with little choice, college work crews installed floors of dry-laid concrete blocks, covered with rough-planed wood planks, and finished with a sheet of linoleum. The floors themselves were proof of the temporary nature of Veterans' Village.[39]

The resulting settlement was as orderly and planned as barracks on a military base, perhaps lending some air of familiarity to the former servicemen. The dwellings were placed on streets anchored on the ends by concrete-block laundry facilities. Crews arranged the half Quonsets in pairs, with the curved sides facing each other. This arrangement produced a series of gracefully curving V's. As well, placing the windowed, flat walls outward increased privacy, allowed more natural light into the structures, and provided them with some chance of catching a breeze.

While administrators at Colorado A&M dealt with housing and material shortages through the fall and early winter of 1945, better times were ahead. President Green and college administrators across the country received a late but much-need Christmas present when, on December 29, the Department of the Navy declared as surplus $56 million in building materials and 5,000 Quonset huts. The Navy estimated that if the surplus Quonsets were used as barracks, they could house 70,000 people. As two-family dwellings, they would accommodate 10,000 families. Many of the Quonset huts had never been assembled. Then, on December 31, Congress approved legislation authorizing the Federal Housing Administration (FHA) to acquire and move war-surplus buildings to college campuses as housing for veterans and their families. Like Quonset huts themselves, this legislation was merely a stopgap measure. "Although America's institutions of higher learning probably would have preferred grant-in-aid and longer-term loans for the construction of more permanent facilities," writes James Hansen in his history of CSU, "Congress's solution had the merit of providing assistance swiftly and cheaply."[40]

Swift indeed. In January, Colorado A&M applied to

Veteran's Village Housing Policy

Established February 12, 1946, at a joint meeting of the faculty and veterans' housing committees.

1. The committee to make final selection of applicants shall be composed of the Faculty Housing Committee and the chairman of the Veterans' Housing Committee.
2. In as much as possible, the selection of veterans for housing units at the Veterans' Village will be conducted on the basis of careful evaluation of the need in each particular case.
3. All other factors being equal, the following points will be considered in the order named:
   (a) Veterans enrolled in college will be given preference over those not enrolled.
   (b) Preference will be given [to] veterans with two or more dependencies.
   (c) Preference will be given [to] veterans who are separated from their families at the present time.
   (d) Preference will be given [to] those veterans considered to be living in inadequate housing or considered to be paying excessive rent.

Source: "Applications Now Reopened To Vets For New Pre-Fabs," Rocky Mountain Collegian, 11 April 1946, p. 1.

Figure 11. This photograph, which appeared in the *Rocky Mountain Collegian* as Veterans' Village was assembled, shows the placement of the Montgomery Ward half Quonset huts. *(*Rocky Mountain Collegian, *28 February 1946, p. 1)*

FHA for 125 units then located at a former war housing project in Dallas. By mid February the college had secured 55 Quonsets; the end of the month brought 35 more. The college ultimately obtained over 100 Quonset huts by spring. The first 30 were ready for occupancy on June 1.[41]

Joining the half Quonsets at Veterans Village in the spring of 1946 were true Quonset huts, clad in sheets of corrugated metal broken only by a band of three-light, metal-frame awning windows across the sides. Sheets of black rolled asphalt covered the ends, which featured a central door flanked by pairs of two-light, wood-frame casement windows. A corrugated metal pent roof provided some protection for the door. The apartments in the double-unit Quonset huts were entered through either bulkhead. Each efficiency unit contained a combined living room, dining room, and kitchen; bathroom; and bedroom. Yet, as an indication that the huts were only a temporary measure, the structures lacked foundations, resting instead on concrete blocks, structural clay tile, and even bits of lumber.[42]

What emerged at the southwest corner of West Laurel Street and Loomis Avenue (now the location of Corbett and Parmelee halls) convinced many Fort Collins residents that the college had little interest in improving the appearance of the city. With dusty, unpaved streets, frolicking children, and line after line of drying laundry, the settlement was reminiscent of Hoovervilles a decade earlier. "Aesthetically, they confirmed the worst fears of townspeople concerned about the college's physical appearance.," observes Hansen.[43] The situation only got worse when administrators allowed veterans to established a trailer park adjacent to the village. But the residents of Fort Collins were not alone. In the latter half of the 1940s, almost every college and university in the nation turned to Quonset huts for their housing shortages, meeting with the same general horror from the townsfolk and students. The University of Wisconsin launched a public relations campaign to pacify appalled Madison residents. In a 1947 Daily Cardinal article, administrators promised that "the mushrooming of temporary classroom and laboratory buildings will not make lasting scars on the campus landscape."[44] (As of 2000, one Quonset hut still remained on the UW-Madison campus.) On many campuses, Quonset huts were a jarring departure from the high-style classical structures iconic in academia. After hearing of the demise of two Quonset huts on the campus of Washington University, in St. Louis, reporter Elaine Viets commented, "I wasn't sorry to see them go. The huts' humpbacked metal shapes always looked like they were mooning the university's dignified brick and stone buildings."[45]

Figure 12. From sword to ploughshare, a large shipment of Navy-surplus 20-by-48-foot true Quonset huts more than doubled the capacity of Colorado A&M's Veterans' Village. *(Hansen,* Democracy's College*)*

But Colorado A&M's Quonset hut acquisitions did not end with Veterans' Village. By November, the university had acquired and assembled two 40-by-50-foot, two-story Quonset huts to use as single men's dormitories. Each could accommodate 160 students in individual rooms. The buildings also included four small reading rooms, a restroom facility with showers, and an oil-fired, central heating plant. (At least one of the Quonsets came from the Kansas Ordnance Plant at Parsons, Kansas.) A lack of housing also meant a lack of classroom space. At first the college tried filling every usable space on campus with classrooms, eventually adopting a schedule that included Saturday classes. Then, in August 1946, the federal government once again came to the aid of severely overcrowded universities. It provided surplus buildings for non-residential use to institutions educating veterans. But competition for the structures was fierce; Colorado A&M did not gain approval for a prefabricated structure until 1947. The Quonset huts issued under this legislation were generally the larger 40-by-100-foot warehouse models, often divided into two floors or spit in half, forming two 40-by-50-foot units or, in other cases, 50-by-50 and 30-by-50 units. These structures became classrooms, offices, and warehouses.[46]

Yet even with the increasing availability of war-surplus Quonset huts, the housing and classroom shortage continued to worsen. Inheriting the problem was William Morgan, who was appointed president of the college following Roy Green's death in 1948. But unlike Green, Morgan had the luxury of being able to consider long-term solutions. He envisioned a ring of modern dormitories around the western end of campus. The structures would have a central service core with four attached wings capable of housing 100 students each. The first of these dormitories, Green Hall, was completed in 1953. Coincidentally, the new residence hall was located just south of Loomis (Meridian) Avenue from Veterans' Village, the Quonset hut settlement that the new dorm, and eight subsequent and nearly identical structures, would eliminate. But they shared, nonetheless, a common architectural heritage. Green Hall and its predecessors were icons of International and Miesen architecture, post-World War II incarnations of the Bauhaus movement. Quonset huts and the new dorms at Colorado A&M, renamed Colorado State University in 1957, were rational, efficient, and unadorned. They were both essentially geometric machines for living.[47] Indeed, the new dorms were based upon scientific observations of student life conducted by Courtlyn W. Hotchkiss, director of student housing. Morgan himself referred to dorm rooms as "living-cells," a description of the rooms themselves and of their places within a larger, organic structure. Like Dejongh and the Fuller–Stran-Steel team at Quonset Point, Morgan and Hotchkiss developed theoretical models for dorms based on a philosophy that would create one basic floor plan for any number of residential functions. Not only did Quonset huts and CSU's new dorms share a similar architectural and philosophical lineage, but also they quickly met unprecedented needs. Just as the Quonset hut allowed the nation to prepare and deploy quickly for a world war, the university's new dorms allowed the institution to efficiently house its student population at a time when its growth skyrocketed.[48]

Despite their shared historical circumstances and architectural lineage, CSU's new dormitories and classrooms replaced its Quonset huts through the 1960s. According to longtime Fort Collins resident Loren Maxey, Veterans Village still existed largely intact when he moved to Loomis Street in 1959. However, two years later, most of the Quonset huts had vanished.[49] Many were sold for approximately $200 to local residents, particularly farmers, who reused the structures as shops, migrant worker housing, or storage. Others were scrapped. Maxey said that most people preferred to purchased the half Quonsets because they were easier to move than the full models.

Figure 13. These 40-by-50-foot, two-story Quonset huts formerly served as dormitories at Colorado A&M. They are now offices and storage for the Holley Plant Research Center on CSU's main campus. *(Photo by the author)*

For a period in the 1960s and '70s, many of the full and half Quonsets from Veterans' Village were relocated to a makeshift Hispanic migrant labor camp, located on the northeast corner of North College Avenue and Willox Lane. Concrete slabs and foundations remain in this vacant lot.[50]

As of 2003, four Quonset huts, out of more than 200 acquired, remained on or near CSU's main campus. Two were 40-by-100-foot warehouse models, located west of the Burlington Northern Santa Fe railroad tracks on either side of Prospect Road. The others, located adjacent to each other, were the 40-by-50-foot dormitories. They are part of the Holley Plant Environmental Research Center, located at 630 West Lake Street. Of the structures that were removed from campus, only a handful remain within or near the boundary of the Fort Collins Urban Growth Area. Residential, 20-by-48-foot Quonset huts exist at Frank's Trout Pond, 2912 West Mulberry Street; the Swetsville Zoo, 4801 East Harmony Road; the Salazar property, 1721 North Whitcomb Street; the Pakech-Pitt property, 1522 Wood Lane; and the Peterson property, 1158 North Taft Hill Road. An identical model, used as a garage on Overland Trail near Laporte, is outside the Urban Growth Area. Only one of the quarter-cylindrical, half Quonset huts remains in Fort Collins. It is located behind the residence at 411 Tenth Street, in the Andersonville neighborhood. Another half Quonset appears behind the Masonville Mercantile, at the junction of County Roads 35 and 28 in Masonville. Attached to form an L-shaped plan, two more half Quonsets are located behind the Virginia Dale general store on U.S. Highway 287.

Other Quonset Huts

Many of the Quonset huts in Fort Collins today sidestepped CSU, coming directly to individual business owners and farmers. Among the most unique and earliest Quonset huts in Fort Collins are two small cottages – the only remaining wood-frame Quonset huts in the Fort Collins Urban Growth Area. (At least one other was situated at 903 East Laurel Avenue, but it has since been razed.) The structures were offered in 1946 through the local Gambles store, which not only sold the prefabricated cottage kits but also the interior wallboard, bathroom fixtures, and even furnishings. Refereed to in advertising

Figure 14. Veterans' Village sprawls west of recently constructed Green Hall, circa 1953. Note the placement of half and full Quonsets. *(Hansen, Democracy's College)*

as "your prefab cottage home," the wood-frame Quonset huts, like their metal-frame relatives at Colorado A&M, would have been an inexpensive and quick housing solution. In 1946 wartime material shortages lingered, but the Quonset form greatly reduced the amount of lumber necessary to construct a house by condensing the exterior side wall and roof into the same component. Moreover, the Gambles Quonset cottages featured a wartime structural innovation that made possible whimsical modern architectural styles – the glue-lam beam. Similar in construction to plywood, glue-lam beams were comprised of thin strips of wood, bent into a desired shape, then layered and glued together. (They became particularly identified with 1950s and '60s supermarkets, such as the former Safeway, now Gart Sports, on the northwest corner of Mulberry Street and College Avenue in Fort Collins.)[51]

The earliest large-scale, war-surplus Quonset hut assembled in the city was located on U.S. Highway 287 and housed Ladd's Covered Wagon, a restaurant and dance hall. Daisy and Lloyd Ladd opened the facility on May 15, 1948. Apparently the coupled decided to start the business after failing to find a place to dine and dance in celebration of their thirteenth wedding anniversary. Soon after it opened, the restaurant and dance hall quickly became the premier facility in Fort Collins for private parties, dances, and service club functions; the Quonset hut, which appears in photographs to have been at least a 40-by-100-foot structure, could easily accommodate 300 people. The Ladd family leased its operation in November 1965. The Quonset hut was gutted in a fire on March 15, 1966, and dismantled three months later.[52]

Most commercial Quonset huts in Fort Collins, however, were associated with heavy equipment rather than dining and dancing. Following the war, a strip of small manufacturing firms and farm equipment dealerships developed on the north side of Jefferson Street's 300 and 400 blocks, adjacent to long-standing grain milling operations and feed stores; four of these new businesses housed themselves in Quonset huts. First among them was a war surplus 40-by-100 dormitory-type Quonset assembled in 1947-48 for the Johnson Equipment Company at 360 Jefferson. The firm sold tractors, loaders, and other automated farm implements, offering repair service as well. (The company later moved to another, far larger Quonset hut on East Lincoln Avenue, near East Mulberry Street). A year later, the C.G. Richardson Manufacturing Company assembled an identical Quonset hut at 400 Jefferson. Established by Guy D. and Truth Richardson, the company produced another post-war industrial phenomenon – plastics. The firm also manufactured metal products, gym mats, and textiles until 1965. In 1950, a 40-by-100-foot warehouse-type Quonset appeared at 410 Jefferson. It was home to the McMurtry Seed and Fertilizer Company. The seed and supply store remained at this location until around 1989. The fourth and final Quonset hut to appear in the strip was at 416 Jefferson Street. Roy B. Case acquired and assembled this structure in 1955 to house his Fort Collins Equipment Company, a farm machinery supplier. While the structure retained its half-cylindrical form, this newly manufactured Quonset hut was a vast departure from its wartime predecessors on Jefferson Street – its structural-support system and exterior cladding were integrated into the same component.[53]

Beginning with the Stran-Steel Company, which assumed all Quonset manufacturing in 1943, private-sec-

Figure 15 and 16. Fort Collins hosts two wood-frame, kit-built Quonset hut cottages. Both were built in 1947. This one, located on Lesser Drive, retains many of its original details. The Fort Collins Gambles store began advertising these structures (below) in the summer of 1946. *(Photo by the author; Fort Collins* Coloradoan, 7 July 1946, p. 7*)*

tor metal building companies began to produce their own models of the now-ubiquitous design after the war. Foremost among them was the Behlen Manufacturing Company of Columbus, Nebraska. Established in 1936 in a garage behind his house, Walter D. Behlen began producing steel-toe caps for workers' boots and lid clamps for wood egg crates. Following World War II, Behlen began experimenting with a new method of constructing Quonset huts. By 1950, he perfected the self-framing building system that characterizes nearly all Quonset huts from that time to the present.[54]

Instead of a system of steel arch-ribs with exterior, corrugated metal cladding, Behlen developed a self-supporting Quonset in which the structural support system and cladding consisted of the same members. The only framing materials sent to the construction site were rolls of sheet metal. Machines on site then pressed a single, wide, convex rib into the strips, which measured from two to three feet in width. Either end of the strips were then placed into preformed sockets embedded into a concrete pad or sill. The resulting arches were bolted together to form a single structure. The Behlen system was the Stran-Steel Quonset boiled down to its very essence – the pinnacle of efficient design. Hut kits could be shipped cheaply and assembled in some cases in hours. Moreover, workers could bolt together the 51-foot wide (17.5-foot heigh) or 68-foot wide (23-foot heigh) individual arches into any length.[55]

Beyond its commercial use, such as at 416 Jefferson Street, Behlen Quonset huts proved particularly popular for farmers. Following the war, the number of farms decreased while the size of the average farm increased. Farmers relied on larger and larger pieces of farm equipment. But older farm buildings were too small for these new implements, forcing farmers to purchase inexpensive, prefabricated metal buildings, particularly Behlen Quonsets. These structures were also popular for use as grain and loose material storage bins. Farmers who had acquired surplus, Steel-Stan Quonset huts for this purpose were often disappointed; the outward stress of the loose grain against the corrugated metal sheets often popped the nails attaching the cladding to the arch-ribs. The Behlen design, on the other hand, could carry stresses from the inside as it did from the outside.

In general, however, Quonset huts fell out of favor among consumers and metal building manufacturers. Revealing the popularity of the structures during 1950s, the Metal Building Manufacturers Association (MBMA), established in 1956, depicted a Quonset hut in its logo. The structure was, at that time, the iconic metal building. However, through the '60s and '70s, that popularity diminished rapidly as manufactures developed cheaper and stronger metal-frame structures. By the late '70s or early '80s, the MBMA logo was changed to reflect a straight-sided, gabled building. And while manufactures developed more efficient, straight-sided design, the owners of older Quonset huts became increasingly frustrated the buildings' limitations. Without considerable expense and additional construction, doors and windows could not be added along the sides of Quonsets, just at the ends. An examination of the Quonsets of Jefferson Street reveals the amount of additional framing necessary to install garage doors on the sides of the structures. Moreover, as Dejongh and his team at Quonset Point had realized early in the development of the huts, the junction of the curved wall and floor created unusable space. And as Loren Maxey notes, many distributors began using standardized pallets, which were difficult to store in Quonset hut warehouses.[56]

Beginning with Stran-Steel's Quonset 24, manufacturers promoted a design modification that solved the side door problem. They created a structure in which the curved wall-roof began at the floor, as usual, and extended a few feet past the apex of the arch, and ended. This design produced one flat sidewall, similar to the Montgomery

Figure 17. This Quonset hut, at 416 Jefferson Street, differs from the other huts on the same street because its structural support system and exterior cladding are the same component. *(Photo by the author)*

Figure 18. Two-thirds Quonset huts, in this case a Stran-Steel Quonset 24, provide a flat side for the installation of doors larger than could be accommodated in the ends. This structure is located at 413 U.S. Highway 287 North. *(Photo by the author)*

Ward half Quonset, but with slightly increased interior space. The flat side could be equipped easily with sliding doors or left entirely open. Both kinds exist in the Fort Collins Urban Growth Area, at 413 U.S. Highway 287 North; County Road 9; and two at 300 West Drake Road. Behlen continues to manufacture this form, which it calls the "Rancher." Many of Behlen's structures can be found throughout the Fort Collins area today as the company remains the leader in new Quonset hut manufacturing.[57]

But not all semicylindrical, metal buildings were manufactured as Quonset huts. In Estes Park, for instance, a structure the National Park Service currently uses as a warehouse originally began its life as a tunnel, carrying one of the Hidden Valley ski runs over Trail Ridge Road. In Fort Collins, an inventive resident split a metal grain silo in half and placed it on parallel knee walls (see figure 19). The resulting garage, located at 1909 Timberline Lane, exhibits all the characteristics of a Quonset hut when, in fact, it originally served as a granary. These adaptations of other structures into Quonset huts extend well beyond the Navy's original demand for 48 different uses.

Conclusion

The variety of forms and materials of Fort Collins's Quonset huts reveals the extent to which the city's residents hammered these swords into ploughshares. But regardless of type or function, like or disgust, Quonset huts embody the American spirit of innovation. Like Rosie the Riviter, these structures are not only icons of Americans at war, but of a can-do people quickly and practically solving the problems before them. "Much more than just relics of war, [Quonset huts] are icons of a day in our history – icons that spread all the way from North Africa to the Aleutian Islands," concludes John H. Lienhard in a Engines of Our Ingenuity radio episode on the structures. "Once in a while, a really good design surfaces – robust, simple, and enduring."[58]

Figure 19. This Quonset hut garage, located at 1909 Timberline Lane, is actually a grain silo cut in half, placed on its side, and anchored on parallel knee walls. *(Photo by the author)*

Section II

Reconnaissance Survey Report

Chapter 4

Definitions and Methodology

On paper, defining a Quonset hut is an easy task. Cyril M. Harris, in his American Architecture: An Illustrated Encyclopedia, provides a typical definition:

> **Quonset hut.** A prefabricated structure, developed during World War II, that has a semicylindrical shape; commonly constructed of corrugated steel fasted to arched steel ribs that are attached to a concrete slab floor; used for a wide variety of temporary structures, such as barracks, storage sheds, and transient housing. First erected at Fort Davis in Quonset, Rhode Island.[59]

In practice however, the variety of shapes, materials, structural support systems, and functions of Quonset huts is astounding. All kinds appear in the Fort Collins Urban Growth Area (UGA). This report attempts to identify the locations of all Quonset huts in the Fort Collins UGA. In addition, basic structural information is included along with limited histories when available. Additional historical and architectural information is contained in the preceding context.

Project Area

The area investigated through this reconnaissance survey included all of Fort Collins within its legal limits of incorporation. However, the survey was extended beyond those limits to the outermost edges of the Urban Growth Area. The UGA was established by the city as a planning tool, determining the extent of future urban development. In addition, some Quonset huts just outside the UGA have also been recorded, their locations noted on maps that follow. For more geographic information on Fort Collins and its UGA, consult the Fort Collins 7.5-foot United States Geological Survey quadrangle map.

Methodology

Searching for a particular structural form in an expansive and often densely built area such as the Fort Collins UGA can be the proverbial needle in a haystack. However, the Quonset hut form is so distinctive that any quick search will inevitably return results.

Adam Thomas, principal historian, Historitecture, L.L.C., conducted this reconnaissance survey in a period of three, eight-hour days on November 15 and 29, and December 6, 2002. On the first day he traveled to the location of all previously recorded Quonset huts. In addition, he visited the sites of Quonset huts with which he was already familiar or to which residents referred him. On the second day he traveled by automobile on every major north-south and east-west thoroughfare within the UGA. Those streets are generally arranged on a grid of one-mile squares. Adam then visited the likely locations of Quonset huts on the third day. These sites included institutional campuses, such as CSU; corporate and government motor pools and facility management compounds; industrial parks; and farmsteads.

Adam did not include Quonset-like greenhouses because of their unique materials, specific use, and lack of relation, other than form, to archetypal Quonset huts. The same criteria also eliminated large-scale, reinforced concrete structures, such as Gym of the Rockies, at 1800 Heath Parkway. Barrel-roof structures will full-height vertical walls, such as airplane hangars, were also excluded.

Dates of manufacture and assembly are based on previous architectural inventories, when available. But because the object of a reconnaissance survey is primarily to identify and locate certain structures rather than produce detailed histories, dates reflect field observations, assessor records, and best guesses. More accurate dates would require in-depth historical research beyond the scope of this survey and report.

Typology

All Quonset huts share the same architectural heritage, historical circumstances, and general form. Yet in the Fort Collins Urban Growth area, differences in function, materials, and accretions have created an astounding variety of Quonset hut types. Each contributes in its own way to the built environment and exists because of a unique convergence of international, national, and local events. Types of Quonset huts in Fort Collins can be defined by four characteristics: profile (curvature), structural support system, exterior wall cladding, and the location of the principal elevation. As originally designed by the George Fuller Construction and Stran-Steel companies, the archetypal Quonset hut has a true Quonset form; interior, metal structural system; metal cladding; and the principal elevation is located on the end. All other types are a variation of this form.

❒ Profile

To the right are the six forms of Quonset huts found in Fort Collins. These forms are largely determined by the character of the structure's arc.

True Quonset. This form features a complete, smooth semicylinder from foundation to foundation and lacks a peak at the top of the arc.

Two-thirds Quonset. In this form, the arc continues over the apex a few feet and drops suddenly into a 90-degree angle. The flat side is usually dominated by sliding garage doors or is entirely open. Stran-Steel originally developed this model in the late 1940s and referred to it as Quonset 24.

Half Quonset. Essentially a true Quonset hut cut in half lengthwise, this form has the advantage of providing an additional flat wall for windows and doors on a side elevation.

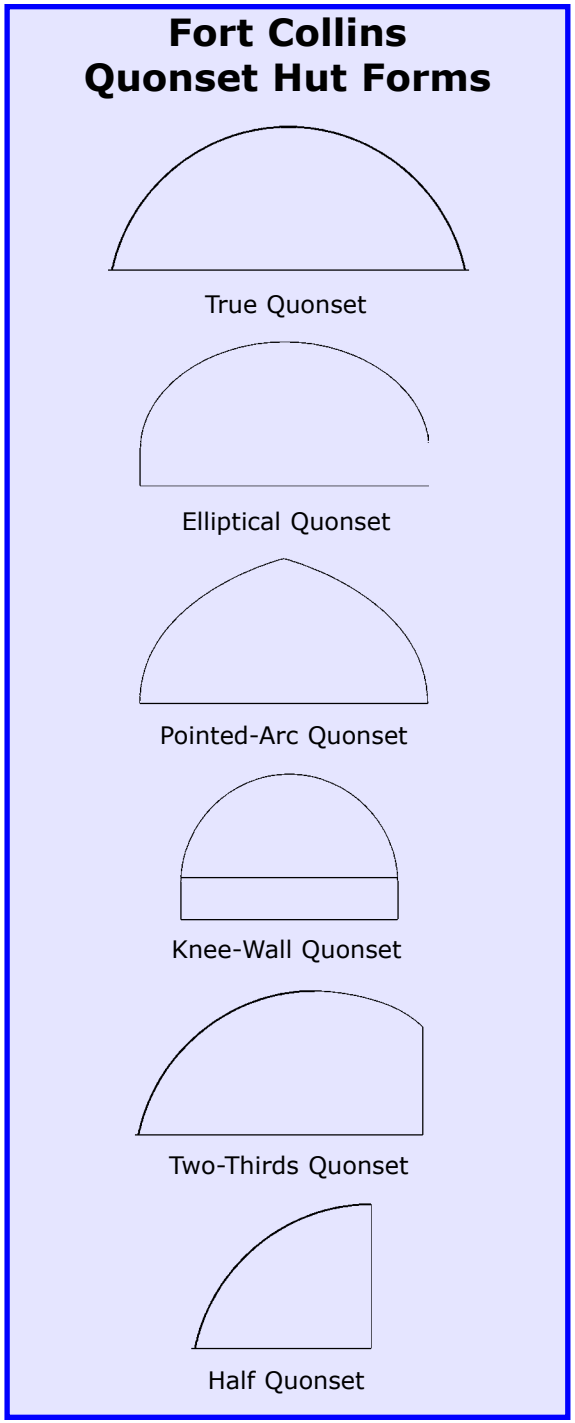
Elliptical Quonset. In this form, the junction of the arc and the ground occurs at a 90-degree angle. It differs from a knee-wall Quonset in that the arc and side wall are one continuous piece.

Pointed-arc Quonset. This form features a point at the apex of the arc. Occasionally, this point houses an elementary ventilation system. While the form does not appear by itself in Fort Collins, two domestic knee-wall Quonsets (see below) have pointed arcs.

Knee-wall Quonset. The arc of the wall/roof begins at the top of short, vertical walls. These walls may be an extended foundation or independent structural component. Knee-wall Quonset huts differ from other barrel-roofed structures, such as common airplane hangars, in that the vertical wall comprises only a fraction of the total side elevation; the knee walls are no more than 4 feet high. Windows on the sides must still be accommodated in shed-roof dormers.

❒ Structural Support Systems

In Fort Collins, Quonset huts feature three kinds of structural support systems. The most common is an interior, metal (usually steel) system. It features parallel sets of metal ribs, which often continue through the concrete pad foundation. A second and related system uses wood members rather than metal. A third system uses pre-formed, ribbed, heavy-gauge sheet metal. These pre-arched sheets are bolted together to form a self-supporting structure. The structural system and the exterior wall cladding are contained in the same members.



❒ Exterior Wall Cladding

By far the most common cladding for Quonset huts is corrugated sheet metal (usually steel). As mentioned above, others have structural metal cladding that also acts as the support system. Domestic, interior wood-frame Quonset huts have asphalt shingles.

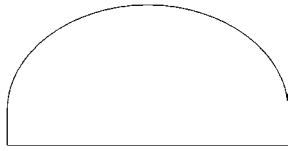
❒ Location of Principal Elevation

Most Quonset huts in Fort Collins are entered on their ends. This is more a practical matter than a stylistic decision because doors and windows are difficult to install on the curved sides. Often, the principal elevation is accentuated with a false front, particularly on those Quonsets used as retail outlets. However, some are entered on their sides. For instance, all two-thirds Quonset forms have their principal elevation on the side, as do knee-wall Quonsets.

Table 1. Fort Collins Quonset Hut Profiles

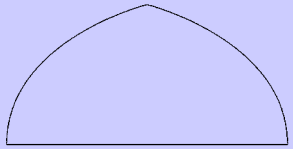
True Quonset

Q01 Laporte Ave. (west of Hollywood St.)
Q03 2912 W. Mulberry St.
Q04 1800 N. Taft Hill Rd.
Q05 1040 N. Taft Hill Rd.
Q07 630 W. Lake Street (North)
Q08 630 W. Lake Street (South)
Q09 S. College Ave. at Pitkin St.
Q11 103 E. Vine Dr.
Q13 360 Jefferson St.
Q14 400 Jefferson St.
Q15 410 Jefferson St.
Q16 416 Jefferson St.
Q19 1911 E. Lincoln Ave.
Q20 2104 E. Lincoln Ave.
Q22 E. Vine Dr. (east of I-25)
Q23 I-25 Frontage Road at Prospect Road
Q25 3520 Mariah Lane
Q26 4801 E. Harmony Rd. (North)
Q27 4801 E. Harmony Rd. (South)
Q28 1505 W. College Ave.
Q31 1721 N. Whitcomb St.
Q32 1522 Wood Lane
Q33 1158 N Taft Hill Road



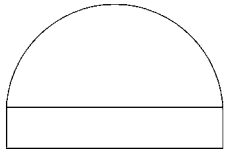
Elliptical Quonset

Q12 107 E Vine Dr.



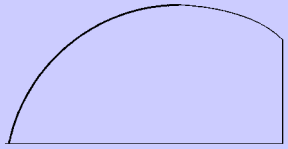
Pointed-Arc Quonset

None identified in the survey area.



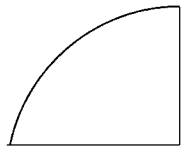
Knee-Wall Quonset

Q02 Rampart Rd. (west of Overland Trail)
Q06 219 N. Shields St.
Q17 622 Lesser Dr.
Q24 1909 Timberline Lane



Two-Thirds Quonset

Q10 413 U.S. Highway 287 North
Q21 County Road 9
Q29 300 W. Drake Rd. (East)
Q30 300 W. Drake Rd. (West)

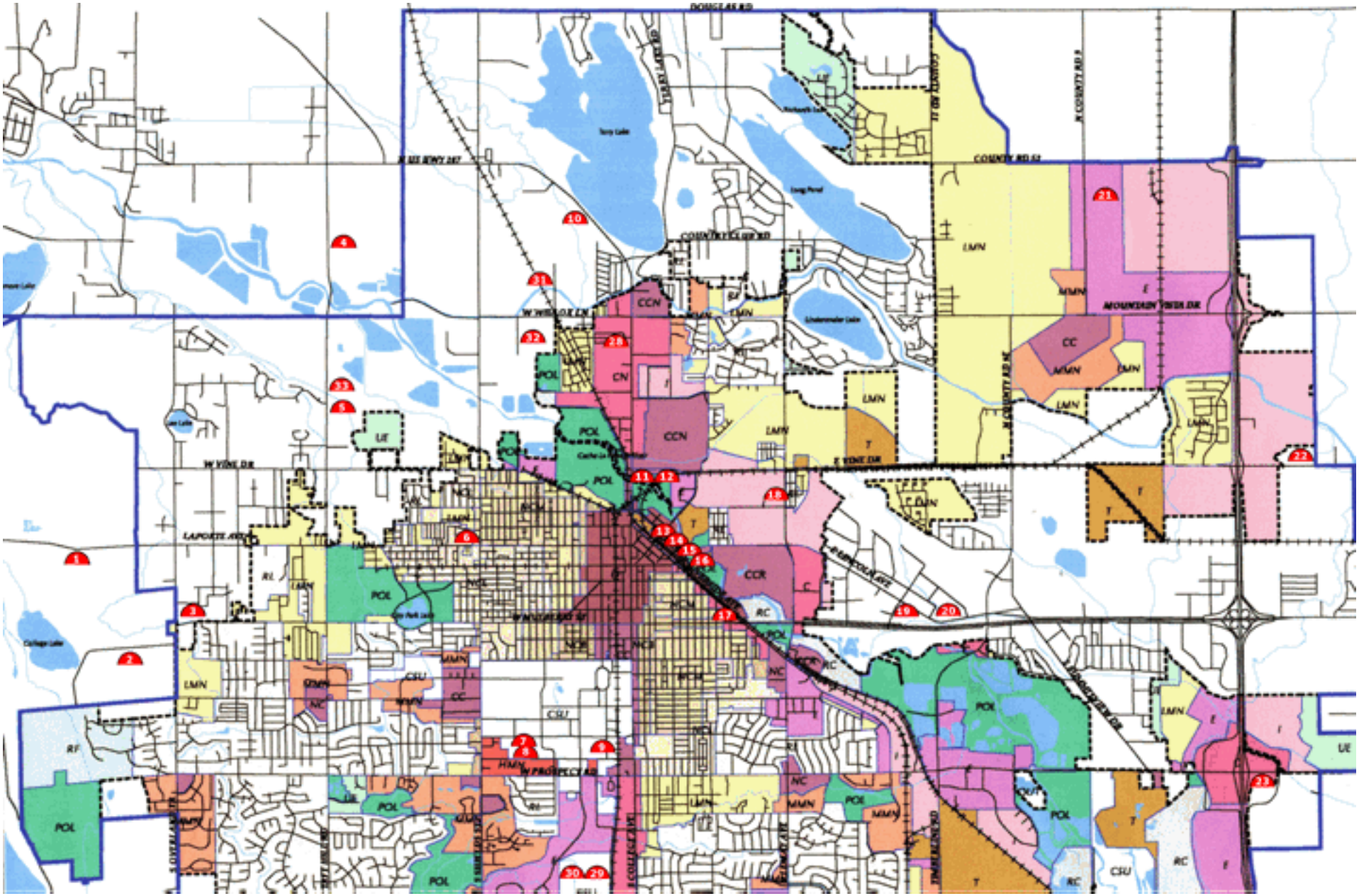


Half Quonset

Q18 411 Tenth St.

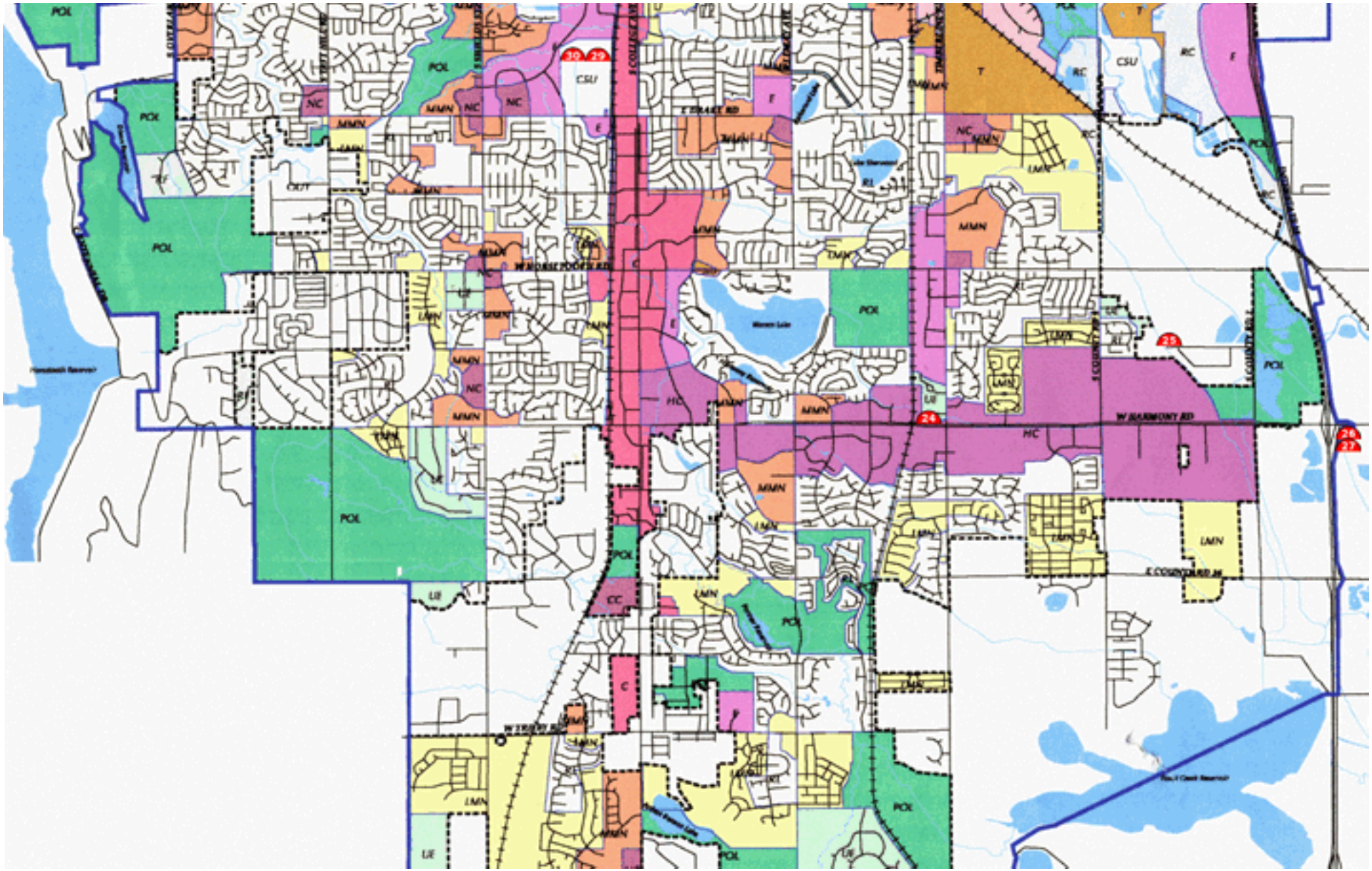
Location Map (North)

Based on City of Fort Collins Zoning Map



Location Map (South)

Based on City of Fort Collins Zoning Map



Chapter 5

Summary of Findings

This reconnaissance survey found 30 Quonset huts within the Fort Collins Urban Growth area and another three just outside of those boundaries. This summary compares the dates of manufacture, function, and types of all 33 Quonset huts.

Decades of Manufacture

Decade	Number	Percent
1941-1950	20	60.6
1951-1960	7	21.2
1961-1970	0	0
1971-1980	1	3
1981-1990	3	9.1
1991-2000	2	6.1

Historic Functions

Function	Number	Percent
Warehouse/Garage	5	15.2
Industrial/Production	1	3
Commercial/Retail	3	9.1
Domestic/Residential	10	30.3
Office	0	0
Unknown	14	42.4

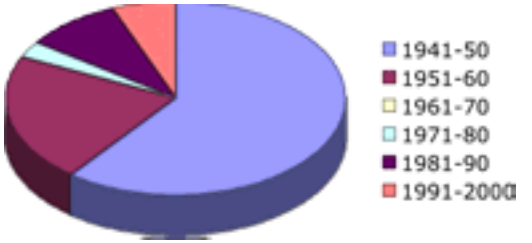
Current Functions

Function	Number	Percent
Warehouse/Garage	24	72.7
Industrial/Production	1	3
Commercial/Retail	3	9.1
Domestic/Residential	4	12.1
Office	1	3

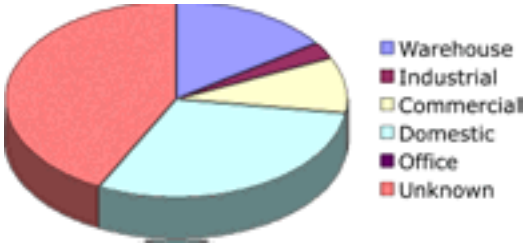
Forms

Form	Number	Percent
True Quonset	23	69.7
Two-thirds Quonset	4	12.1
Half Quonset	1	3
Elliptical-arc Quonset	1	3
Pointed-arc Quonset	0	0
Knee-wall Quonset	4	12.1

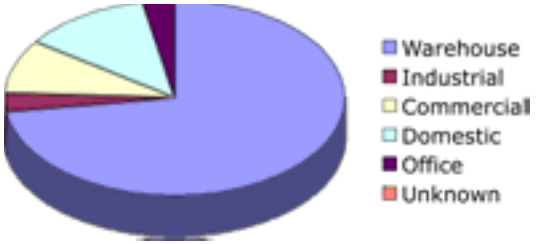
Decades of Manufacture



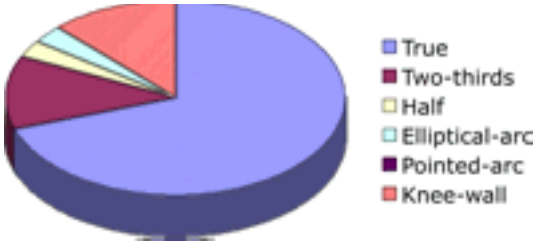
Historic Function



Current Function



Form



Structural Support Systems

System	Number	Percent
Interior metal	22	66.7
Interior wood	2	6.1
Self-supporting	9	27.3

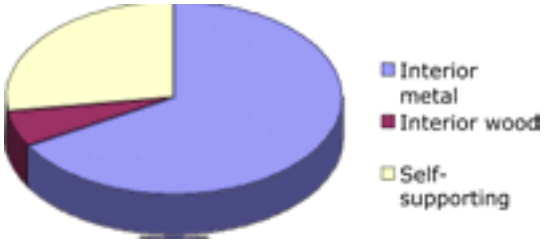
Exterior Wall Cladding Materials

Material	Number	Percent
Corrugated Metal	22	66.7
Asphalt Shingle	2	6.1
Structural Metal	9	27.3

Location of Principal Elevation

Location	Number	Percent
End	26	78.8
Side	7	21.2

Structural System



Exterior Wall Cladding

Location of Principal Elevation

Chapter 6

Survey Results

NOTE: In the descriptions below, "Year Manufactured" refers to the year in which the Quonset hut was produced at the factory. "Year Assembled on Site" is the year in which the structure was constructed at its current location. Differences in these dates suggest that a Quonset hut was either stored at a warehouse before assembly or was previously erected at a different location. Dates in Larimer County tax assessor records indicate only the year the structure was assembled at its current location, with no reference to the year of manufacture. In most cases, the year of manufacture is estimated based on the model design and materials.

Quonset 1: Laporte Avenue (West of Hollywood Street)

Identification
Smith. Number: N/A
Owner: State of Colorado
Facility: Colorado State Forest Service/CSU Nursery-Warehouse

Function
Historic: Unknown
Current: Warehouse/Garage

Notes: Not in UGA.

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: ca. 1961

Quonset 2: Rampart Road (West of Overland Trail)

Identification
Smith. Number: N/A
Owner: Colorado Board of Agriculture
Facility: CSU Foothills Campus

Function
Historic: Unknown
Current: Warehouse/Garage

Notes: Not in UGA.

Structure
Size: 24 x 20 feet (approximately)
Foundation: Concrete
Form: Knee-wall Quonset
Support: Self-Supporting
Cladding: Structural metal
Principal Elevation: End
Manufacturer: Unknown
Year Manufactured: ca. 1991
Year Assembled on Site: ca. 1991

Quonset 3: 2912 West Mulberry Street

Identification
Smithsonian Number: N/A
Owner: JDS Group
Facility: Frank's Trout Pond

Function
Historic: Domestic/Residential
Current: Warehouse/Garage

Notes: This structure appears to be one of the Quonset huts purchased after World War II by CSU for married student housing.

Structure
Size: N/A
Foundation: Unknown
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal; plywood sheets (in ends)
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: ca. 1971

Quonset 4: 1800 North Taft Hill Road

Identification
Smithsonian Number: N/A
Owner: Lafarge West, Inc.
Facility: N/A

Function
Historic: Unknown
Current: Warehouse/Garage

Notes: This structure has been integrated into a front-gabled warehouse. However, its remaining exposed side is still clearly visible. Not in UGA.

Structure
Size: N/A
Foundation: Unknown
Form: True Quonset
Support: Interior Metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer : Stran-Steel
Year Manufactured: ca 1945
Year Assembled on Site: ca. 1961

Quonset 5: 1040 North Taft Hill Road

Identification
Smithsonian Number: N/A
Owner: Abbe M. and Frank J. Mazzuca
Facility: N/A

Function
Historic: Warehouse/Garage
Current: Warehouse/Garage

Notes:

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Self-supporting
Cladding: Pressed metal
Principal Elevation: End
Manufacturer: Behlen Manufacturing Company
Year Manufactured: ca. 1981
Year Assembled on Site: ca. 1985

Quonset 6: 219 North Shields Street

Identification
Smithsonian Number: N/A
Owner: Larry D. Peterson
Facility: N/A

Function
Historic: Domestic/Residential
Current: Domestic/Residential

Notes: Identical to the Quonset hut at 622 Lesser Drive.

Structure
Size: 24 x 20 feet
Foundation: Concrete
Form: Knee-wall Quonset
Support: Interior wood
Cladding: Asphalt shingles; horizontal wood siding
Principal Elevation: Side
Manufacturer: Gambles
Year Manufactured: ca. 1945
Year Assembled on Site: 1946

Quonset 7: 630 West Lake Street (North Quonset Hut)

Identification
Smithsonian Number: N/A
Owner: Colorado Board of Agriculture
Facility: CSU Main Campus

Function
Historic: Unknown
Current: Warehouse/Garage

Notes: Associated with another Quonset hut to the south (left on photograph).

Structure
Size: 50 x 50 feet
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca 1945
Year Assembled on Site: ca. 1950

Quonset 8: 630 West Lake Street (South Quonset Hut)

Identification
Smithsonian Number: N/A
Owner: Colorado Board of Agriculture
Facility: CSU Main Campus

Function
Historic: Unknown
Current: Office

Notes: Associated with another Quonset hut to the north (right on photograph).

Structure
Size: 50 x 50 feet
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca 1945
Year Assembled on Site: ca. 1950

Quonset 9: South College Avenue at Pitkin Street

Identification
Smithsonian Number: N/A
Owner: Colorado Board of Agriculture
Facility: CSU Main Campus

Function
Historic: Unknown
Current: Warehouse/Garage

Notes:

Structure
Size: 100 x 50 feet
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: ca. 1961

Quonset 10: 413 U.S. Highway 287 North

Identification
Smithsonian Number: N/A
Owner: Wray Plumbing and Heating
Facility: N/A

Function
Historic: Unknown
Current: Warehouse/Garage

Notes: This structure is identical to the 2/3 Quonset hut on County Road 9.

Structure
Size: 24 x18 feet
Foundation: Concrete pad
Form: Two-thirds Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: Side
Manufacturer: Stran-Steel
Year Manufactured: ca. 1951
Year Assembled on Site: ca. 1961

Quonset 11: 103 East Vine Drive

Identification
Smithsonian Number: 5LR10314
Owner: Division Seven Systems
Facility: N/A

Function
Historic: Unknown
Current: Domestic/Residential

Notes: This structure is identical the the Quonset hut located at 416 Jefferson.

Structure
Size: 80 x 20 Feet
Foundation: Concrete pad
Form: True Quonset
Support: Self-supporting
Cladding: Structural metal; horizontal wooden siding
Principal Elevation: End
Manufacturer: Behlen Manufacturing Company (most likely)
Year Manufactured: ca. 1955
Year Assembled on Site: ca. 1956

Quonset 12: 107 East Vine Drive

Identification
Smithsonian Number: 5LR10315
Owner: Imogene Hersh
Facility: Hersh Trucking

Function
Historic: Warehouse/Garage
Current: Warehouse/Garage

Notes: Associated with a house to the west, at 105 East Vine Drive.

Structure
Size: N/A
Foundation: Concrete pad
Form: Elliptical Quonset
Support: Self-supporting
Cladding: Structural metal
Principal Elevation: End
Manufacturer: Unknown
Year Manufactured: ca. 1955
Year Assembled on Site: ca. 1955

Quonset 13: 360 Jefferson Street

Identification
Smithsonian Number: 5LR10300
Owner: Black's Glass
Facility: N/A

Function
Historic: Commercial/Retail
Current: Commercial/Retail

Notes: This structure has a glazed, corrugated metal and stucco storefront attached to the front elevation.

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: 1947-48

Quonset 14: 400 Jefferson Street

Identification
Smithsonian Number: 5LR10301
Owner: Ray B. and Audry Hess
Facility: Hidden Treasures

Function
Historic: Industrial/Production
Current: Industrial/Production

Notes: This structure has been modified with a corrugated metal false front.

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: Side
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: 1948-49

Quonset 15: 410 Jefferson Street

Identification
Smithsonian Number: 5LR10302
Owner: Barbara Watterson and C. Carneailous
Facility: Rocky Mountain Diaper Service / Rocky Mountain Linen Service

Function
Historic: Commercial/Retail
Current: Commercial/Retail

Notes: This structure has been modified with a glazed false front with sheet-metal cladding.

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: 1950

Quonset 16: 416 Jefferson Street

Identification
Smithsonian Number: 5LR10303
Owner: Vogel Enterprises, Ltd.
Facility: Diamond Vogel Paints

Function
Historic: Commercial/Retail
Current: Commercial/Retail

Notes: This structure is identical to the Quonset hut located at 103 East Vine Drive.

Structure
Size: 80 x 20 feet
Foundation: Concrete pad
Form: True Quonset
Support: Self-supporting
Cladding: Structural metal
Principal Elevation: End
Manufacturer: Behlen Manufacturing Company (most likely)
Year Manufactured: ca. 1950
Year Assembled on Site: 1955

Quonset 17: 622 Lesser Drive

Identification
Smithsonian Number: N/A
Owner: Kenneth G. Wegener
Facility: N/A

Function
Historic: Domestic/Residential
Current: Domestic/Residential

Notes: Identical to the Quonset hut at 219 North Shields Street.

Structure
Size: 24 x 20 feet
Foundation: Concrete
Form: Knee-wall Quonset
Support: Interior wood
Cladding: Asphalt shingles; horizontal wood siding
Principal Elevation: Side
Manufacturer: Gambles
Year Manufactured: ca 1945
Year Assembled on Site: 1947

Quonset 18: 411 Tenth Street

Identification
Smithsonian Number: 5LR10605
Owner: Manuel and Mary Vera
Facility: N/A

Function
Historic: Domestic/Residential
Current: Domestic/Residential

Notes: This structure was one of the first Quonsets assembled at CSU's Veteran's Village in 1946. The university purchased in from the local Montgomery Ward store.

Structure
Size: N/A
Foundation: Concrete
Form: Half Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Montgomery Ward
Year Manufactured: 1946
Year Assembled on Site: ca. 1960

Quonset 19: 1911 East Lincoln Avenue

Identification
Smithsonian Number: N/A
Owner: Gallegos Sanitation, Inc.
Facility: Container Repair and Storage Facility

Function
Historic: Unknown
Current: Warehouse/Garage

Notes: This structure appears to be the largest Quonset hut in Fort Collins. It may actually consist of two huts connected end-to-end.

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: corrugated metal; concrete block (false front)
Principal Elevation: End (false front)
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: ca. 1971

Quonset 20: 2104 East Lincoln Avenue

Identification
Smithsonian Number: N/A
Owner: John's RV and Boat Service
Facility: Storage Facility

Function
Historic: Unknown
Current: Warehouse/Garage

Notes: This structure feature large, translucent fiberglass skylights.

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: corrugated metal; corrugated, translucent fiberglass
Principal Elevation: End
Manufacturer: Unknown
Year Manufactured: ca. 1945
Year Assembled on Site: ca. 1971

Quonset 21: County Road 9

Identification
Smithsonian Number: N/A
Owner: Unknown
Facility: N/A

Function
Historic: Unknown
Current: Warehouse/Garage

Notes: This structure is identical to the 2/3 Quonset hut at 415 Highway 287 North..

Structure
Size: N/A
Foundation: Concrete pad
Form: Two-thirds Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: Side
Manufacturer: Stran-Steel
Year Manufactured: ca. 1955
Year Assembled on Site: ca. 1961

Quonset 22: East Vine Drive (East of Interstate 25)

Identification
Smithsonian Number: N/A
Owner: Unknown
Facility: N/A

Function
Historic: Warehouse/Garage
Current: Warehouse/Garage

Notes: This structure feature corrugated, translucent fiberglass skylights.

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Self-supporting
Cladding: Structural metal
Principal Elevation: End
Manufacturer: Wedgcor
Year Manufactured: ca. 1970
Year Assembled on Site: ca. 1975

Quonset 23: Interstate 25 East Frontage Road (at Prospect Road)

Identification
Smithsonian Number: N/A
Owner: Unknown
Facility: N/A

Function
Historic: Warehouse/Garage
Current: Warehouse/Garage

Notes:

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Self-supporting
Cladding: Structural metal
Principal Elevation: End
Manufacturer: Behlen Manufacturing Company
Year Manufactured: ca. 1980
Year Assembled on Site: ca. 1985

Quonset 24: 1909 Timberline Lane

Identification
Smithsonian Number: N/A
Owner: Donald D. Murphy
Facility: N/A

Function
Historic: Unknown
Current: Warehouse/Garage

Notes: According to Bill Swets, of the Swetsville Zoo, this structure was originally a grain bin. It was cut in half for its current use.

Structure
Size: N/A
Foundation: Concrete
Form: Knee-wall Quonset
Support: Self-supporting
Cladding: Structural metal; concrete block
Principal Elevation: End
Manufacturer: Unknown
Year Manufactured: ca. 1985
Year Assembled on Site: ca. 1985

Quonset 25: 3520 Mariah Lane

Identification
Smithsonian Number: N/A
Owner: Earl D. Grange
Facility: N/A

Function
Historic: Unknown
Current: Warehouse/Garage

Notes:

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Self-supporting
Cladding: Structural metal
Principal Elevation: End
Manufacturer: Behlen Manufacturing Company
Year Manufactured: ca 1990
Year Assembled on Site: 1994

Quonset 26: 4801 East Harmony Road (North Quonset Hut)

Identification
Smithsonian Number: N/A
Owner: Bill Swets
Facility: Swetsville Zoo

Function
Historic: Domestic/Residential
Current: Warehouse/Garage

Notes: This structure appears to be one of the Quonset huts purchased after World War II by CSU for married student housing.

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: ca. 1971

Quonset 27: 4801 East Harmony Road (South Quonset Hut)

Identification
Smithsonian Number: N/A
Owner: Bill Swets
Facility: Swetsville Zoo

Function
Historic: Warehouse/Garage
Current: Warehouse/Garage

Notes:

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: ca. 1971

Quonset 28: 1505 North College Avenue

Identification
Smithsonian Number: N/A
Owner: Marcia Joy Jones
Facility: N/A

Function
Historic: Unknown
Current: Warehouse/Garage

Notes:

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: ca. 1961

Quonset 29: 300 West Drake Road (East Quonset Hut)

Identification
Smithsonian Number: N/A
Owner: Colorado State University
Facility: James L. Voss Veterinary Teaching Hospital

Function
Historic: Unknown
Current: Warehouse/Garage

Notes:

Structure
Size: N/A
Foundation: Post-and-beam
Form: Two-thirds Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: Side
Manufacturer: Stran-Steel
Year Manufactured: ca. 1955
Year Assembled on Site: ca. 1961

Quonset 30: 300 West Drake Road (West Quonset Hut)

Identification
Smithsonian Number: N/A
Owner: Colorado State University
Facility: James L. Voss Veterinary Teaching Hospital

Function
Historic: Unknown
Current: Warehouse/Garage

Notes:

Structure
Size: N/A
Foundation: Post-and-beam
Form: Two-thirds Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: Side
Manufacturer: Stran-Steel
Year Manufactured: ca. 1955
Year Assembled on Site: ca. 1961

Quonset 31: 1721 North Whitcomb Street

Identification
Smithsonian Number: N/A
Owner: Julian L. and Jeri S. Salazar
Facility: N/A

Function
Historic: Domestic/Residential
Current: Warehouse/Garage

Notes: This structure appears to be one of the Quonset huts purchased after World War II by CSU for married student housing.

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: ca. 1965

Quonset 32: 1522 Wood Lane

Identification
Smithsonian Number: N/A
Owner: Jean Pakech and Patrick Pitt
Facility: N/A

Function
Historic: Domestic/Residential
Current: Warehouse/Garage

Notes: This structure appears to be one of the Quonset huts purchased after World War II by CSU for married student housing.

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: 1960

Quonset 33: 1158 North Taft Hill Road

Identification
Smithsonian Number: N/A
Owner: Jean Peterson
Facility: N/a

Function
Historic: Domestic/Residential
Current: Warehouse/Garage

Notes: Originally CSU married student housing, this Quonset was purchased by Clyde Moffit, a CSU employee, and moved to his home. He used it as a bunkhouse for his large family.

Structure
Size: N/A
Foundation: Concrete pad
Form: True Quonset
Support: Interior metal
Cladding: Corrugated metal
Principal Elevation: End
Manufacturer: Stran-Steel
Year Manufactured: ca. 1945
Year Assembled on Site: ca. 1960

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