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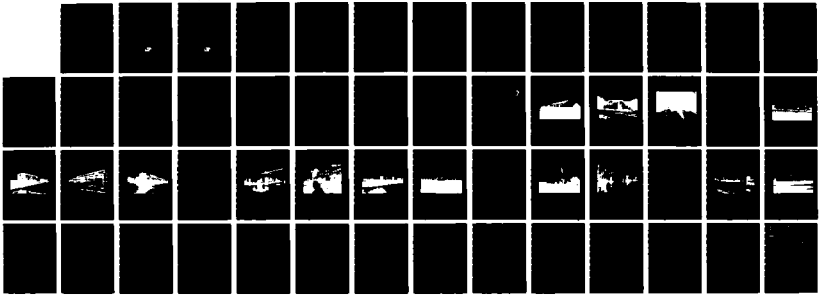

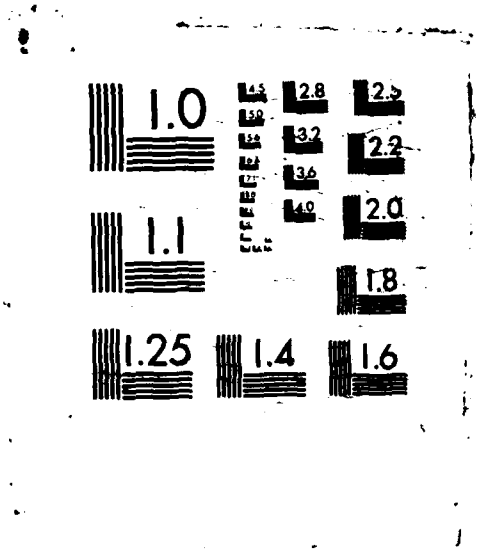
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HISTORIC PROPERTIES REPORT

RED RIVER ARMY DEPOT

TEXARKANA, TEXAS

FINAL REPORT

AUGUST 1984

This document was prepared by the MacDonald and Mack Partnership, Minneapolis, Minnesota, under Contract CX-0001-2-0033 between Building Technology Incorporated, Silver Spring, Maryland, and the Historic American Buildings Survey/Historic American Engineering Record, National Park Service, U.S. Department of the Interior.

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EXECUTIVE SUMMARY

Red River Army Depot (RRAD) is a government-owned-and-operated installation occupying approximately 20,000 acres in northeast Texas, about eighteen miles west of Texarkana. The installation is part of the Army's Depot System Command (DESCOM). Constructed in 1941-1942 as an ammunition depot, RRAD was soon expanded by the addition of a large warehousing area for general military supplies, a combat vehicle repair complex, and an Ordnance Department training center. RRAD's combined roles as a storage, repair, and training facility have continued to the present time. The most significant change in the installation's operation occurred during the late 1950s and 1960s, when the depot became a major guided missile assembly and maintenance center. At present, RRAD comprises about 1390 buildings, three-fourths of which date from World War II. There are no Category I, Category II, or Category III historic properties at the installation.

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PREFACE

This report presents the results of an historic properties survey of the Red River Army Depot (RRAD). Prepared for the United States Army Materiel Development and Readiness Command (DARCOM), the report is intended to assist the Army in bringing this installation into compliance with the National Historic Preservation Act of 1966 and its amendments, and related federal laws and regulations. To this end, the report focuses on the identification, evaluation, documentation, nomination, and preservation of historic properties at the RRAD. Chapter 1 sets forth the survey's scope and methodology; Chapter 2 presents an architectural, historical, and technological overview of the installation and its properties; and Chapter 3 identifies significant properties by Army category and sets forth preservation recommendations. Illustrations and an annotated bibliography supplement the text.

This report is part of a program initiated through a memorandum of agreement between the National Park Service, Department of the Interior, and the U.S. Department of the Army. The program covers 74 DARCOM installations and has two components: 1) a survey of historic properties (districts, buildings, structures, and objects), and 2) the development of archaeological overviews. Stanley H. Fried, Chief, Real Estate Branch of Headquarters DARCOM, directed the program for the Army, and Dr. Robert J. Kapsch, Chief of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) directed the program for the National Park Service. Sally Kress Tompkins was program manager, and Robie S. Lange was

project manager for the historic properties survey. Technical assistance was provided by Donald C. Jackson.

Building Technology Incorporated acted as primary contractor to HABS/HAER for the historic properties survey. William A. Brenner was BTI's principal-in-charge and Dr. Larry D. Lankton was the chief technical consultant. Major subcontractors were the MacDonald and Mack Partnership and Jeffrey A. Hess. The author of this report was Jeffrey A. Hess. The author would like to thank the many employees at RRAD who graciously assisted him in his research and field surveys. He especially acknowledges the help of Robert Brewer, Public Affairs Officer; Gayle Williams, Historical Clerk; Deloise Reece, Writer/Editor; Jessie Freeman, Records Management; Helen Hicks, Management Analyst; C. R. Wilcox, Facilities Engineer; Virginia Onyet, Management Analyst; and Richard Moore, Industrial Engineering Technician.

The complete HABS/HAER documentation for this installation will be included in the HABS/HAER collections at the Library of Congress, Prints and Photographs Division, under the designation HAER No. TX-4.

Chapter 1

INTRODUCTION

SCOPE

This report is based on an historic properties survey conducted in December 1983 of all Army-owned properties located within the official boundaries of the Red River Army Depot (RRAD). The survey included the following tasks:

- Completion of documentary research on the history of the installation and its properties.

- Completion of a field inventory of all properties at the installation.

- Preparation of a combined architectural, historical, and technological overview for the installation.

- Evaluation of historic properties and development of recommendations for preservation of these properties.

Also completed as a part of the historic properties survey of the installation, but not included in this report, are HABS/HAER Inventory cards for 30 individual properties. These cards, which constitute HABS/HAER Documentation Level IV, will be provided to the Department of the Army. Archival copies of the cards, with their accompanying photographic

negatives, will be transmitted to the HABS/HAER collections at the Library of Congress.

The methodology used to complete these tasks is described in the following section of this report.

METHODOLOGY

1. Documentary Research

RRAD was one of several government-owned, government-operated facilities constructed in the continental United States during 1940-1943 to store and ship ammunition and other military supplies. Since the installation was part of a national depot network, an evaluation of its historical significance requires a general understanding of the military warehousing program. To identify relevant published sources, research was conducted in standard bibliographies of military history, engineering, and the applied sciences. Unpublished sources were identified by researching the historical and technical archives of the U.S. Army Depot System Command (DESCOM) at Letterkenny Army Depot in Chambersburg, Pennsylvania, and of the U.S. Armament, Munitions and Chemical Command (AMCCOM) at Rock Island Arsenal in Rock Island, Illinois.[1]

In addition to such industry-wide research, a concerted effort was made to locate sources dealing specifically with the history of RRAD. This site-specific research was conducted primarily at the

installation's engineering and public relations archives at RRAD, and the Texarkana Public Library in Texarkana, Texas. The Texas State Historic Preservation Office (Texas State Historical Commission, Austin) was also contacted for information and provided photocopies of secondary source material on the installation.

Army records used for the field inventory included current Real Property Inventory (RPI) printouts that listed all officially recorded buildings and structures by facility classification and date of construction; the installation's property record cards; base maps and photographs supplied by installation personnel; and installation master planning, archaeological, environmental assessment, and related reports and documents. A complete listing of this documentary material may be found in the bibliography.

2. Field Inventory

An architectural field survey was conducted in December 1983 by Jeffrey A. Hess. Following general discussions of the project with Robert Brewer, Public Affairs Officer, and Virginia Onyet, Management Analyst, the surveyor was permitted to inspect most exterior and interior areas of the installation. Richard Moore, Industrial Engineering Technician, served as escort. For either safety or security reasons, the surveyor was not permitted to inspect Area F or the interiors of Buildings 420, 421, 561, 581, 594, 922, 935, 939, 957, and 1174 (see Appendix).

Field inventory procedures were based on the HABS/HAER Guidelines for Inventories of Historic Buildings and Engineering and Industrial Structures.[2] All areas and properties were visually surveyed. Building locations and approximate dates of construction were noted from the installation's property records and field-verified. Interior surveys were made of major facilities to permit adequate evaluation of architectural features, building technology, and production equipment.

Field inventory forms were prepared for, and black and white 35 mm photographs taken of all buildings and structures through 1945 except basic utilitarian structures of no architectural, historical, or technological interest. When groups of similar ("prototypical") buildings were found, one field form was normally prepared to represent all buildings of that type. Field inventory forms were also completed for representative post-1945 buildings and structures.[3] Information collected on the field forms was later evaluated, condensed, and transferred to HABS/HAER Inventory cards.

3. Historical Overview

A combined architectural, historical, and technological overview was prepared from information developed from the documentary research and the field inventory. It was written in two parts: 1) an introductory description of the installation, and 2) a history of the installation by periods of development, beginning with pre-military land uses. Maps and photographs were selected to supplement the text as appropriate.

The objectives of the overview were to 1) establish the periods of major construction at the installation, 2) identify important events and individuals associated with specific historic properties, 3) describe patterns and locations of historic property types, and 4) analyze specific building and industrial technologies employed at the installation.

4. Property Evaluation and Preservation Measures

Based on information developed in the historical overviews, properties were first evaluated for historical significance in accordance with the eligibility criteria for nomination to the National Register of Historic Places. These criteria require that eligible properties possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that they meet one or more of the following:[4]

A. Are associated with events that have made a significant contribution to the broad patterns of our history.

B. Are associated with the lives of persons significant in the nation's past.

C. Embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and

distinguishable entity whose components may lack individual distinction.

D. Have yielded, or may be likely to yield, information important in pre-history or history.

Properties thus evaluated were further assessed for placement in one of five Army historic property categories as described in Army Regulation 420-40:[5]

Category I	Properties of major importance
Category II	Properties of importance
Category III	Properties of minor importance
Category IV	Properties of little or no importance
Category V	Properties detrimental to the significance of adjacent historic properties.

Based on an extensive review of the architectural, historical, and technological resources identified on DARCOM installations nationwide, four criteria were developed to help determine the appropriate categorization level for each Army property. These criteria were used to assess the importance not only of properties of traditional historical interest, but also of the vast number of standardized or prototypical buildings, structures and production processes that were built and put into service during World War II, as well as of properties associated with many post-war technological achievements. The four criteria were often used in combination and are as follows:

1) Degree of importance as a work of architectural, engineering, or industrial design. This criterion took into account the qualitative factors by which design is normally judged: artistic merit, workmanship, appropriate use of materials, and functionality.

2) Degree of rarity as a remaining example of a once widely used architectural, engineering, or industrial design or process. This criterion was applied primarily to the many standardized or prototypical DARCOM buildings, structures, or industrial processes. The more widespread or influential the design or process, the greater the importance of the remaining examples of the design or process was considered to be. This criterion was also used for non-military structures such as farmhouses and other once prevalent building types.

3) Degree of integrity or completeness. This criterion compared the current condition, appearance, and function of a building, structure, architectural assemblage, or industrial process to its original or most historically important condition, appearance, and function. Those properties that were highly intact were generally considered of greater importance than those that were not.

4) Degree of association with an important person, program, or event. This criterion was used to examine the relationship

of a property to a famous personage, wartime project, or similar factor that lent the property special importance.

The majority of DARCOM properties were built just prior to or during World War II, and special attention was given to their evaluation. Those that still remain do not often possess individual importance, but collectively they represent the remnants of a vast construction undertaking whose architectural, historical, and technological importance needed to be assessed before their numbers diminished further. This assessment centered on an extensive review of the military construction of the 1940-1945 period, and its contribution to the history of World War II and the post-war Army landscape.

Because technology has advanced so rapidly since the war, post-World War II properties were also given attention. These properties were evaluated in terms of the nation's more recent accomplishments in weaponry, rocketry, electronics, and related technological and scientific endeavors. Thus the traditional definition of "historic" as a property 50 or more years old was not germane in the assessment of either World War II or post-war DARCOM buildings and structures; rather, the historic importance of all properties was evaluated as completely as possible regardless of age.

Property designations by category are expected to be useful for approximately ten years, after which all categorizations should be reviewed and updated.

Following this categorization procedure, Category I, II, and III historic properties were analyzed in terms of:

- Current structural condition and state of repair. This information was taken from the field inventory forms and photographs, and was often supplemented by rechecking with facilities engineering personnel.

- The nature of possible future adverse impacts to the property. This information was gathered from the installation's master planning documents and rechecked with facilities engineering personnel.

Based on the above considerations, the general preservation recommendations presented in Chapter 3 for Category I, II, and III historic properties were developed. Special preservation recommendations were created for individual properties as circumstances required.

5. Report Review

Prior to being completed in final form, this report was subjected to an in-house review by Building Technology Incorporated. It was then sent in draft to the subject installation for comment and clearance and, with its associated historical materials, to HABS/HAER staff for technical review. When the installation cleared the report, additional draft copies were sent to DARCOM, the appropriate State

Historic Preservation Officer, and, when requested, to the archaeological contractor performing parallel work at the installation. The report was revised based on all comments collected, then published in final form.

NOTES

1. The following bibliographies of published sources were consulted: Industrial Arts Index, 1938-1957; Applied Science and Technology Index, 1958-1980; Engineering Index, 1938-1983; Robin Higham, ed., A Guide to the Sources of United States Military History (Hamden, Conn.: Archon Books, 1975); John E. Jessup and Robert W. Coakley, A Guide to the Study and Use of Military History (Washington, D.C.: U.S. Government Printing Office, 1979); "Military Installations," Public Works History in the United States, eds., Suellen M. Hoy and Michael C. Robinson (Nashville: American Association for State and Local History, 1982), pp. 380-400. DESCOM, with headquarters at Letterkenny Army Depot in Chambersburg, Pennsylvania, is the miilitary agency responsible for supervising the operation of government-owned depots. AMCCOM (formerly ARRCOM, or Army Materiel Readiness Command) is the military agency responsible for supervising the operation of government-owned munitions plants, which frequently contain sizeable storage facilities. AMCCOM head-quarters are located at Rock Island Arsenal in Rock Island, Illinois. Although there are no comprehensive indices to DESCOM and AMCCOM Achival holdings, microfiche copies of many unpublished reports by both agencies are listed in ARRCOM, Catalog of Common Sources, Fiscal Year 1983, 2 vols. (no pl.: Historical Office, ARRCOM, Rock Island Arsenal, n.d.).

2. Historic American Buildings Survey/Historic American Engineering Record, National Park Service, Guidelines for Inventories of Historic Buildings and Engineering and Industrial Structures (unpublished draft, 1982).

3. Representative post-World War II buildings and structures were defined as properties that were: (a) "representative" by virtue of construction type, architectural type, function, or a combination of these, (b) of obvious Category I, II, or III historic importance, or (c) prominent on the installation by virtue of size, location, or other distinctive feature.

4. National Park Service, How to Complete National Register Forms (Washington, D.C.: U.S. Government Printing Office, January 1977).

5. Army Regulation 420-40, Historic Preservation (Headquarters, U.S. Army: Washington D.C., 15 April 1984).

Chapter 2

HISTORICAL OVERVIEW

BACKGROUND

Red River Army Depot (RRAD) is a government-owned-and-operated installation occupying approximately 20,000 acres in northeast Texas, about eighteen miles west of Texarkana. Constructed in 1941-1942 as an ammunition depot, the installation was soon expanded by the addition of a large warehousing area for general military supplies, a combat vehicle repair complex, and an Ordnance Department training center. RRAD's combined roles as a storage, repair, and training facility have continued to the present time. The most significant change in the installation's operation occurred during the late 1950s and 1960s, when the depot became a major guided missile assembly and maintenance center. At present, RRAD comprises about 1390 buildings, three-fourths of which date from World War II. In terms of architectural design, the original buildings and subsequent additions are utilitarian in style.

WORLD WAR II

At the outbreak of war in Europe in September 1939, the United States had virtually no industrial capacity for manufacturing military ammunition. This situation changed dramatically in June 1940, when Congress, alarmed by the fall of France, authorized the construction of several government-owned munitions plants to outfit a new army of two million men. Although raising troops and manufacturing ordnance were essential for military

preparedness, the success of these efforts ultimately depended upon a third measure that, initially, received inadequate attention. As historian Constance McLaughlin Green observes in her study of Ordnance Department planning during World War II: "The corresponding need for a series of new depots to store the materiel that the enlarged procurement program must accumulate was not immediately understood."[1] Construction of new munitions plants was well under way before military planners, in the fall of 1940, began selecting sites for eight new ammunition depots. An additional eight depots were approved in the summer of 1941. RRAD was among the last depots constructed under the first authorization.[2]

Site Selection and Former Land Use

The selection of the RRAD site was governed by the same basic criteria used in evaluating locations for most of the new depots. These considerations included:

1) a location at least two hundred miles from the coast as a defense against possible enemy bombardment
2) proximity to a major railroad line
3) remoteness from large centers of population
4) availability of large tracts of land to permit necessary safe distances between ammunition magazines
5) suitable soil and topography to reduce construction and operation costs.[3]

The RRAD site in the extreme northeast corner of Texas satisfied all criteria. Situated on U. S. Highway 82, about eighteen miles west of the City of Texarkana, the location was isolated from populated areas, yet readily accessible by a large labor force. Rail connections were excellent: the Texas and Pacific Railway skirted the installation on the north; the St. Louis and Southwestern Railway on the south. The selection of the ammunition storage site was also favorably influenced by the Army's decision to build a large shell-loading facility, the Lone Star Ordnance Plant, along the depot's eastern border (Figure 1). When the government took possession of the RRAD site in July 1941, the boundaries enclosed approximately 20,000 acres "of what was formerly farms and woodland."[4] All structures acquired with the land were subsequently removed.

Construction and Operation

Under the general supervision of the Quartermaster Corps, construction work at RRAD commenced on August 15, 1941. Gieb, LaRoche, Dahl and Chappal of Dallas provided architectural and engineering services, while Brown and Root, Inc. of Houston served as principal building contractor. When the first phase of construction was completed in the spring of 1942, the depot numbered about 860 buildings, the vast majority of which were munitions storage facilties located in the western half of the installation (Figure 2).[5] These included a grouping of eighteen, standard, above-ground, clay-tile magazines (Buildings 610, 612, 614, 616, 618, 620, 624, 626, 628, 630, 632, 634, 650, 652, 654, 656, 658, 660) (Figure 3) and about 700 conventional, earth-sheltered, reinforced-concrete, igloo magazines (A-G series buildings) (Figures 4, 5) divided into seven blocks. Blocks of

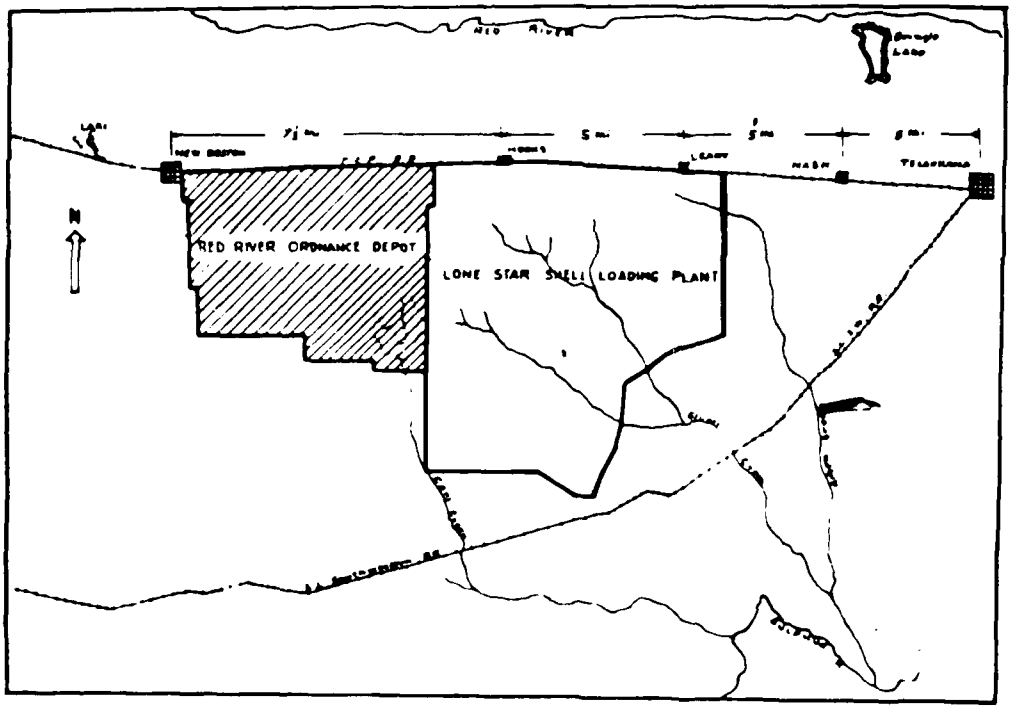

Figure 1: Location map of Red River Army Depot. (Source: "History of Red River Ordnance Depot, 1941-1942," Appendix C, unpublished report, 1942, RRAD Records Management Center.)

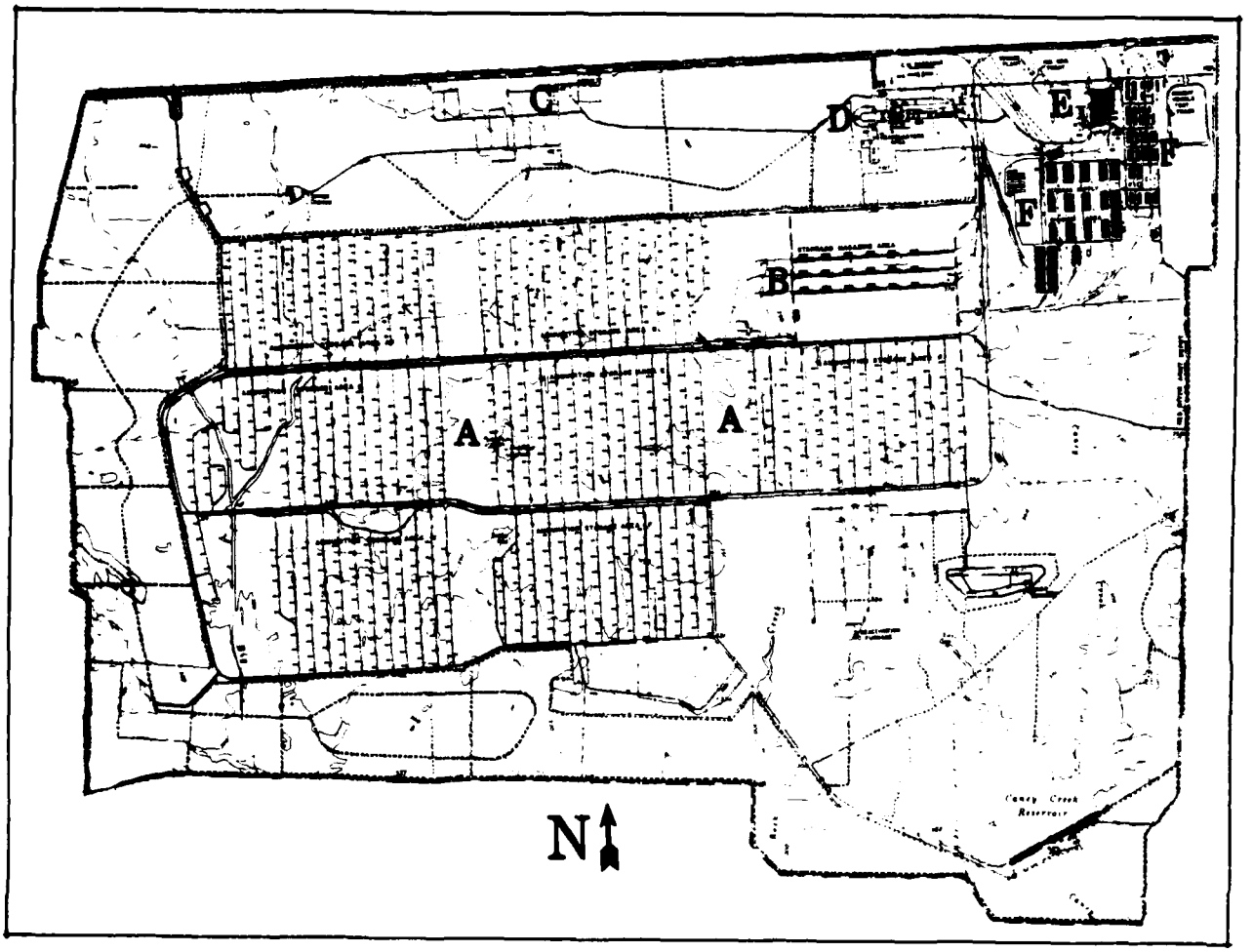

Figure 2: General site plan of Red River Army Depot. (Source: Unpublished drawing, n.d., RRAD Facilities Engineer's Office.)

A. Igloo area
B. Standard magazine area
C. Site of base regiment and old training center
D. Headquarters and utilities area
E. Tank repair area
F. Combat equipment warehouse area

Figure 3: Building 628 is typical of the depot's clay-tile magazines. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 4: Building E107 is representative of the depot's earth-sheltered igloo magazines. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 5: Loading bombs into an igloo at the depot during World War II. (Source: "History of Red River Ordnance Depot, 1 January -31 March, 1945," Appendix B, unpublished report, 1945, RRAD Records Management Center.)

magazines, as well as individual storage structures, were separated from one another by distances sufficient to preclude the possibility of catastrophic incident in one area causing sympathetic explosions or structural damage in adjacent areas. Such required distances were calculated using standard spacing formulas relating distances in feet to quantities of explosives in pounds. The depot's igloos, for example, were generally "built in blocks of not more than 100 each, the blocks being 1,400 feet apart [with] a distance of 400 feet between igloos." The structures were also "staggered so that the front of each was at least 800 feet from the rear of the one opposite."[6]

The remainder of the depot's major buildings were clustered in a "Headquarters and Utilities Area" situated northeast of the igloo area. Principal structures included the Administration Building (Building 15) (Figure 6), Fire and Guard House (Building 4) (Figure 7), Carpenter's Shop, (164) Locomotive House (Building 166), Machine Shop (150) (Figures 8, 9), Garage (Building 154), and Inert Materials Warehouses (Buildings 33, 35). All were of "permanent type" masonry construction, with the shops and warehouses displaying especially durable design: "Concrete spot footings, reinforced concrete piers and grade beams, 12-inch brick walls, concrete floor slabs on sand cushions on earth fills, structural steel framing, steel sash and doors, and asbestos shingles on wood roof sheathing." [7]

Although RRAD was originally planned to serve only as an ammunition storage facility, its responsibilities quickly expanded in the months following Pearl Harbor. In January 1942, the depot was authorized to build and

Figure 6: Administration Building (Building 15). (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

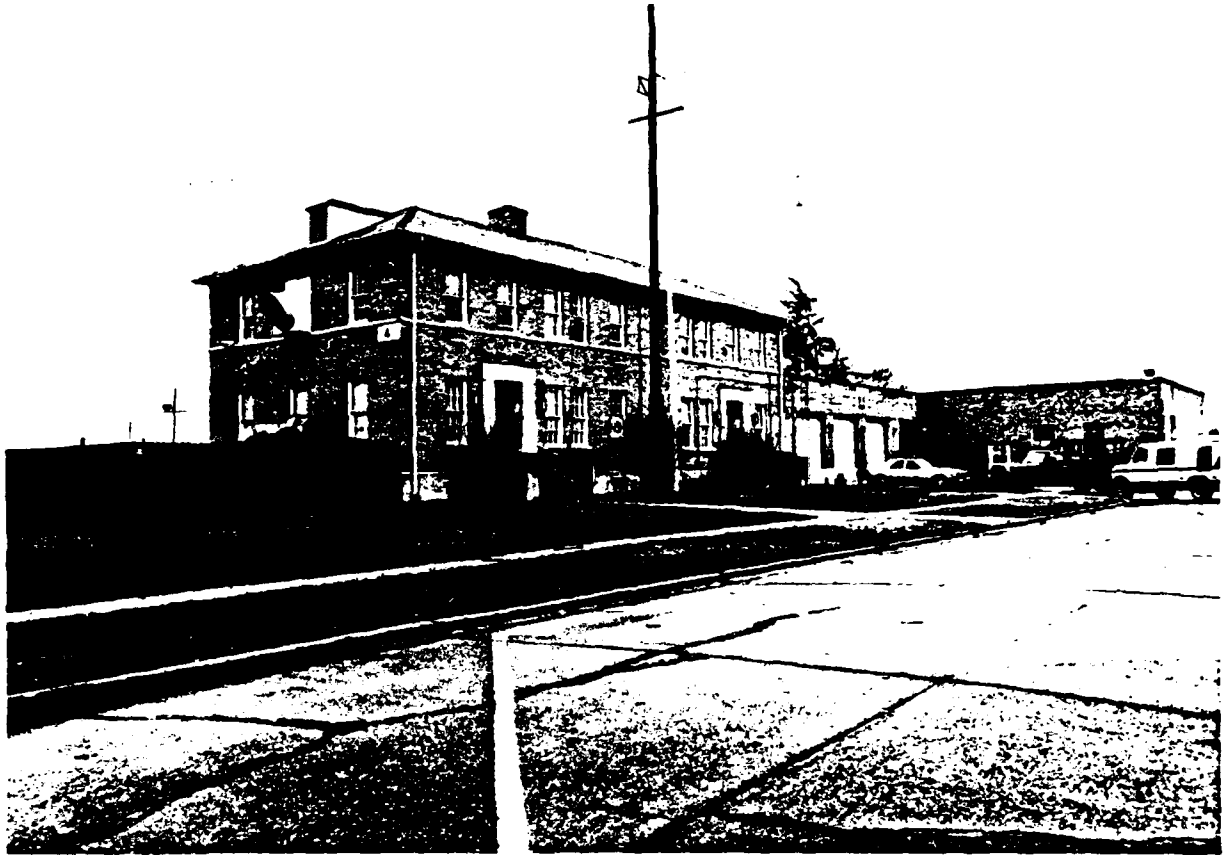

Figure 7: Fire and Guard House (Building 4). (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 8: Steel framing of Machine Shop (Building 150). (Source: "History of Red River Ordnance, 1941-1942," unpublished report, 1942, RRAD Records Management Center.)

Figure 9: Machine Shop (Building 150). (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

operate a tank repair facility, and a month later, it was selected for an extensive warehousing complex for "combat equipment," or general military supplies.[8] Located in the extreme north-east corner of the installation, both new facilities were substantially complete by the end of 1942. The tank repair center consisted of about ten structures, including an Administration Building (Building 325), Heating Plant (Building 319), Paint Shop (Building 323) and three interconnected buildings used for dismantling, machining, and reassembling operations (Buildings 315, 321, 345) (Figures 10, 11). The shops were of heavy reinforced-concrete construction with steel doors and sash.[9] The new storage area for combat equipment expanded the depot's warehouse space by roughly 1.6 million square feet. About thirty percent of this space was furnished by prefabricated steel buildings (Buildings 415, 416, 419, 423-426, 429, 435-439, 445-447, 449) (Figure 12) and the balance by stock-plan masonry structures (Buildings 421, 431, 433, 441, 443, 551, 561, 571-573, 581-583, 591-593) (Figure 13).[10]

In August 1942, RRAD embarked on its last major construction project of World War II. In that month, the depot was designated host installation for an Ordnance Department base regiment and officers' training center, which called for "housing and facilities to accommodate . . . 3,712 enlisted men, twenty warrant officers and 180 other officers."[11] Ready for occupancy in January 1943, the new cantonment and training center was located in the north-central section of the depot and comprised several hundred buildings, mostly of wood-frame construction. The facility was dismantled after the Korean War so that "today, nothing remains of the huge training complex except streets, concrete foundations, and a couple of

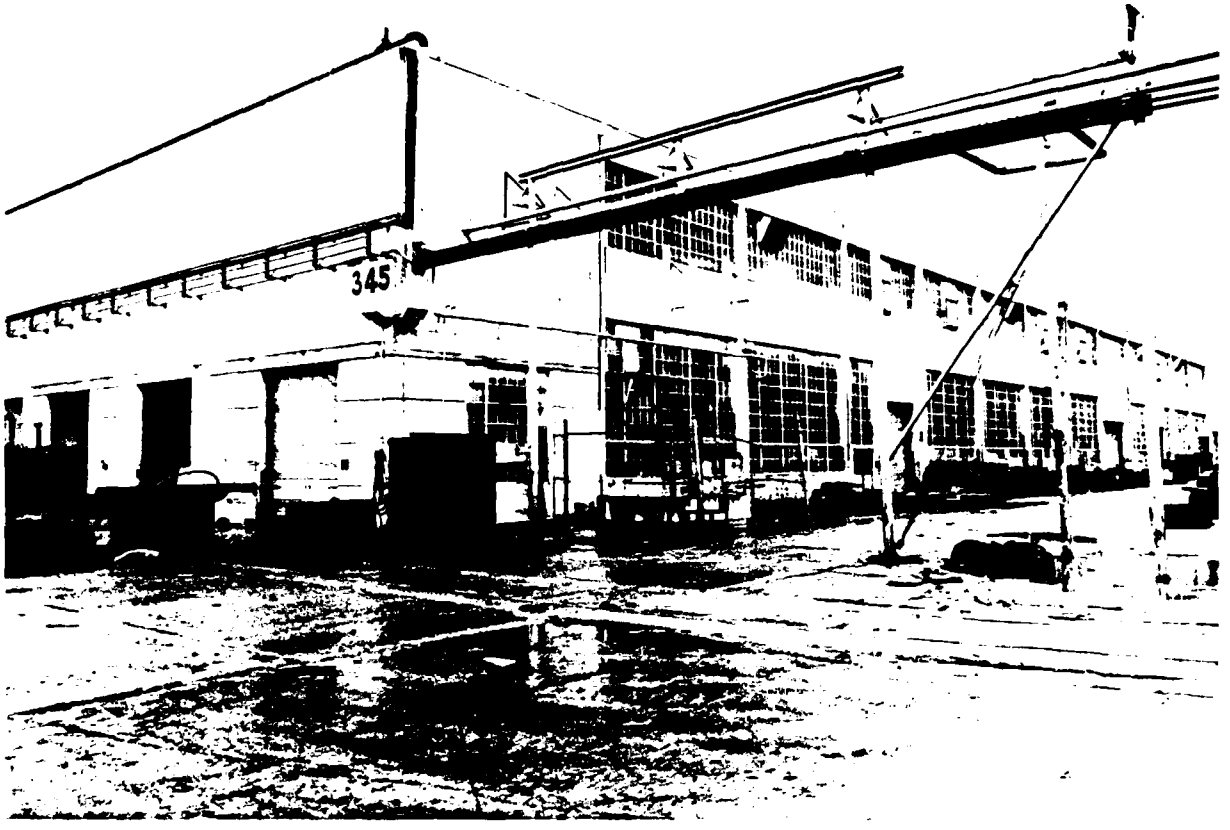

Figure 10: Tank Repair Shop (Building 345). (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 11: Interior view of the tank repair complex during World War II. (Source: "History of Red River Ordnance Depot, 1 April - 30 June 1943," unpublished report, 1943, RRAD Records Management Center.)

Figure 12: Building 449 is typical of the prefabricated steel construction used in the combat equipment warehouse area during World War II. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 13: Building 431 is representative of the masonry warehouses erected in the combat equipment storage area during World War II. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

aging buildings."[12] Surviving structures include a Warehouse (Building S-722), Commissary (Building S-729), and Chapel (Building S-7) (Figure 14), which has been moved from its original site to a location in the Headquarters and Utilities Area.

Throughout World War II, RRAD functioned as a government-operated installation, managed by Ordnance Department personnel who supervised a civilian work force. This arrangement continued after V-J Day, when the installation's administrative responsibilities and boundaries were greatly increased by its absorption of the adjacent Lone Star Ordnance Plant, which had previously been a contractor-operated facilty.[13] At the same time, RRAD expanded its rebuild and remanufacture activities at the tank repair center:

> All types of Ordnance vehicles and accessories were rebuilt — vehicles at the rate of between six and seven hundred monthly in 1948 and twice that many in the next two years. Artillery and small arms were repaired and/or rebuilt in even greater numbers; and other Ordnance materiel in proportion, such as fire control instruments, tires and tubes, and all necessary parts when they became unavailable from normal supply sources.[14]

Repair work on vehicles was expedited by the construction of a new Dynamometer Shop (Building 373) (Figure 15) designed by Giffels and Vallet, Inc. and built by Eckert-Fair Construction Company, both of Dallas. Completed in the summer of 1947, the reinforced-concrete structure contained "22 cells, capable of testing all types of internal combustion engines, from one horsepower to 700-horsepower."[15]

KOREAN WAR TO THE PRESENT

In 1951 RRAD was reduced to its original size by the reactivation of Lone

Figure 14: Chapel (Building S-7). (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

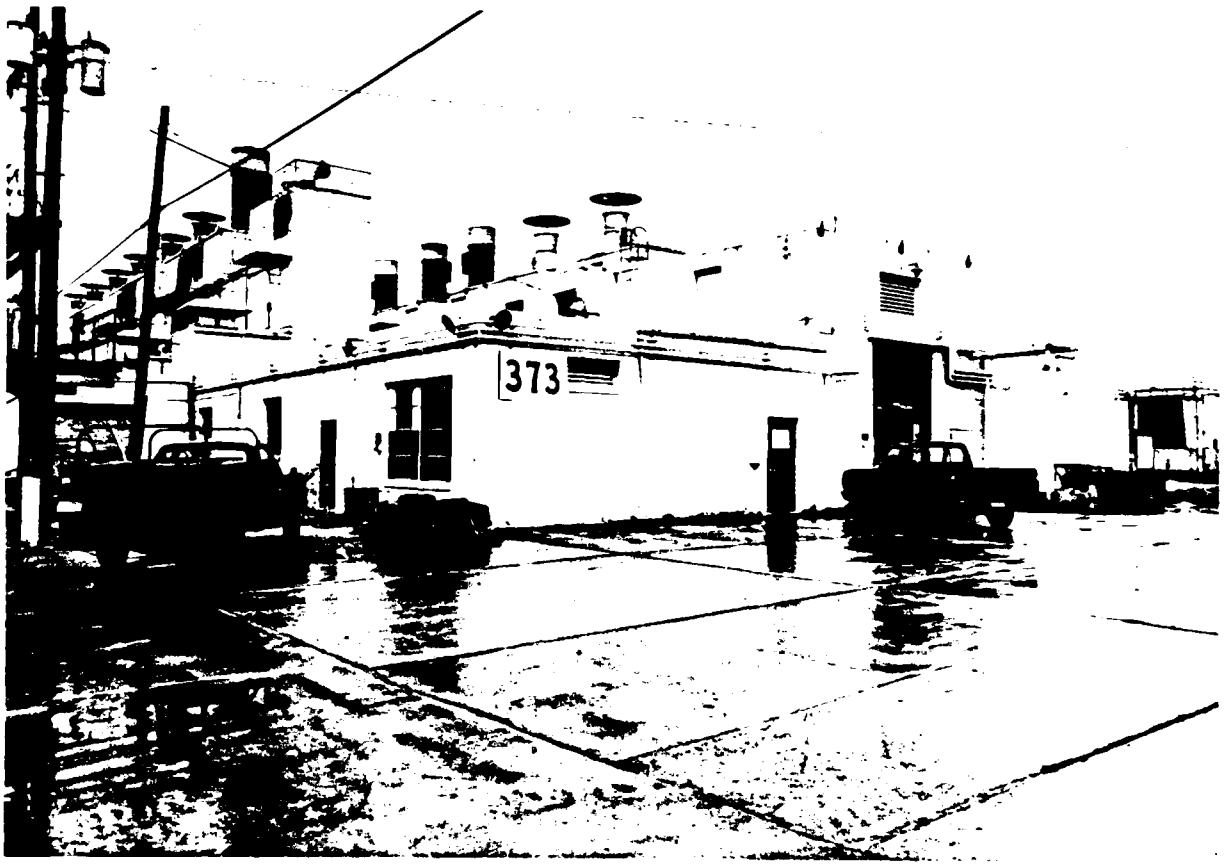

Figure 15: Each exhaust stack marks the location of an engine testing cell in the Dynamometer Shop (Building 373). (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Star Ordnance Plant as an independent, contractor-operated facility. Although RRAD remained responsible for certain types of maintenance at the neighboring installation, its primary activities during the Korean War involved the storage and shipment of military supplies, the rebuilding and remanufacturing of materiel, and the training of supply officers. Major construction projects, completed in the mid-1950s, added several concrete-block buildings to the depot, including two almost identical Controlled Humidity Warehouses (Building 593, 595) (Figure 16) with a combined storage area of one-half million square feet, two Barracks (Buildings 110, 112) (Figure 17), and a new Intern Training Center (Building 468) for "training civilians for a career in Ordnance."[16] Although tanks continued as the depot's main repair item, the official post historian noted in 1957 that "rockets and guided missiles were entering its plans and programming":

> Several key employees had taken courses in guided missiles and ballistic missile ammunition; others were scheduled to do so. . . . Planning was under way for the storage of parts and ammunition for the new types of weapons. A two-year course was planned to train some specially selected mechanics as guided missile repairmen, so they could instruct others when Red River should be assigned missile maintenance and rebuild.[17]

In 1959 RRAD employees were given the opportunity to apply newly mastered skills when the depot was authorized to be an assembly site for the Hawk Missile. And in the mid-1960s, the installation "was selected as the prime depot for maintenance support of the Chaparral [Missile] Weapon System ... primarily because of the availability of personnel possessing basic electronic skills and facilities which could be converted to the operation."[18] For the most part, the new missile maintenance facilities were housed in existing warehouses and shops, which were remodeled for the

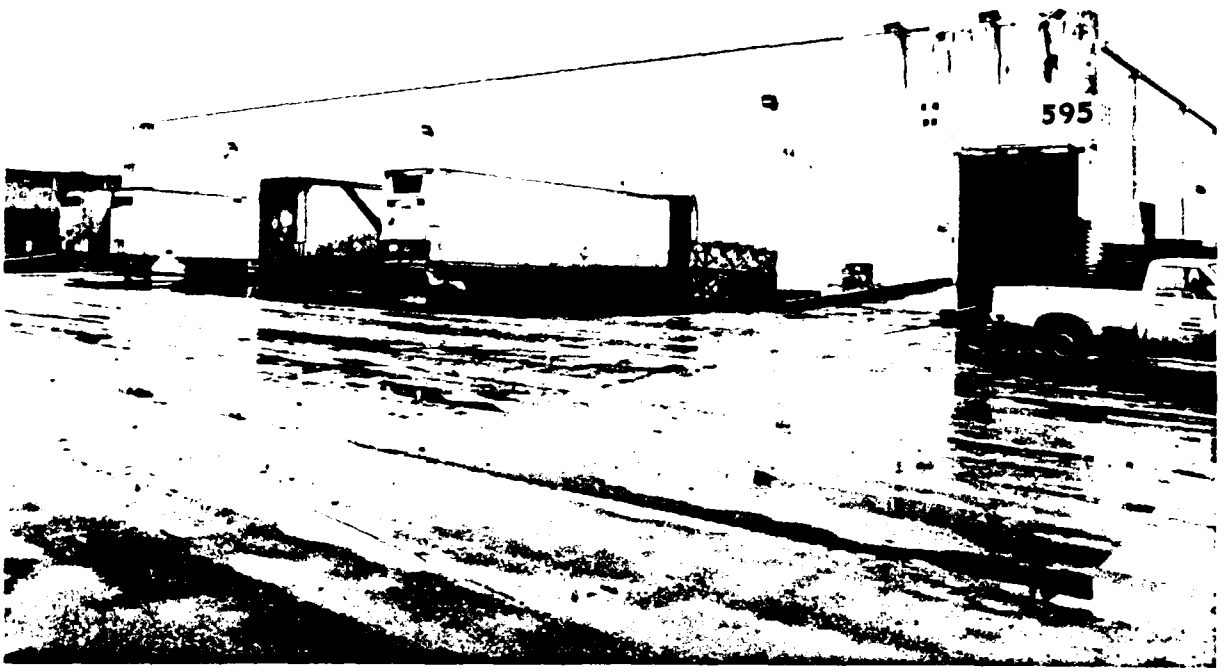

Figure 16: The concrete-block construction of this Controlled Humidity Warehouse (Building 595) is typical of the buildings erected at the depot during the 1950s. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

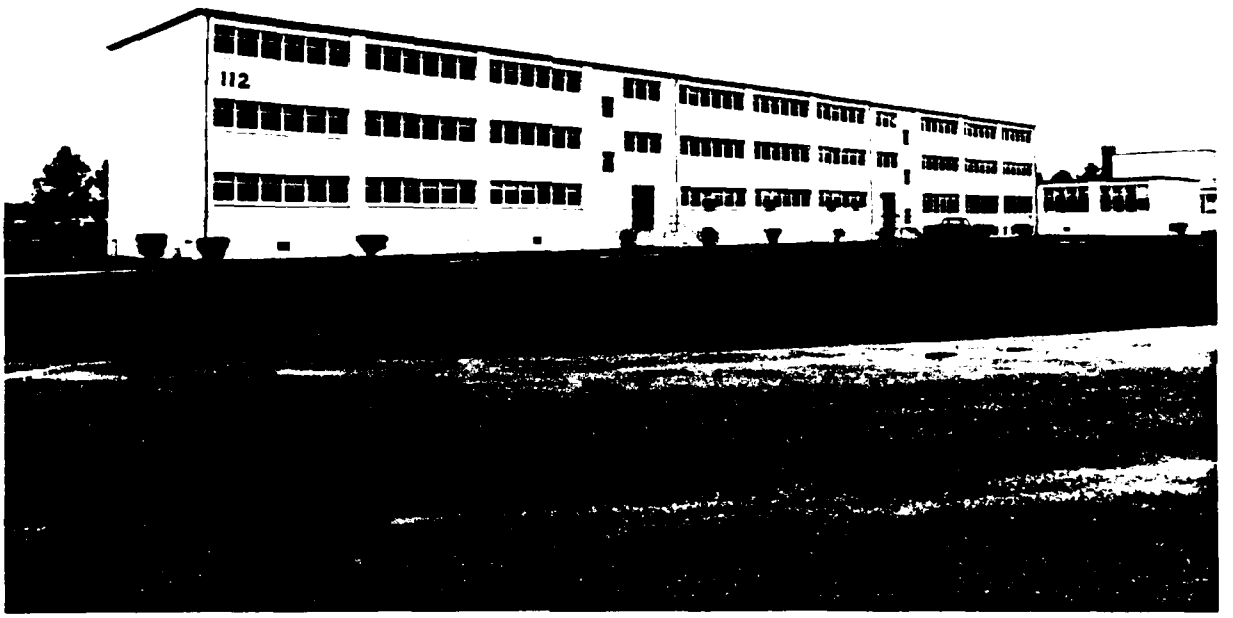

Figure 17: Constructed in 1953, Building 112 still serves its original purpose as a barracks. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

purpose. In 1970, for example, an "adequate facility for overhaul/rebuild of . . . [the] Chaparral Missile" was created by means of a "7,000 s[quare] f[oot] steel building addition on concrete slab and footing to Building [421]."[19] The use of prefabricated steel construction became increasingly common at RRAD during the 1970s, when more than fifty such buildings, accounting for over 650,000 square feet of space, were erected. The new prefabricated structures served a wide variety of purposes, including office space (Building 228), maintenance (Building 320), storage (Building 544), and missile testing (Building 1174).[20]

NOTES

1. Constance McLaughlin Green and others, The Ordnance Department: Planning Munitions for War (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1955), p. 80.

2. Green, p. 81; Harry C. Thomson and Lida Mayo, The Ordnance Department: Procurement and Supply (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1960), pp. 366-376.

3. Green, p. 81; Thomson and Mayo, p.367.

4. Frances Lucile Cotman, "Historical Report, 1941-1942," p. 1, RRAD Records Management Center. Originally designated Red River Ordnance Depot, the installation was renamed Red River Arsenal in 1945, when it was consolidated with Lone Star Ordnance Plant. Its present name, Red River Army Depot (RRAD), dates from the early 1960s.

5. Cotman, pp. 17, 44b; Thomson and Mayo (p. 361) note that the magazine was "called an 'igloo' from its resemblance to Eskimo shelters [.] It was a low, earth-covered structure of reinforced concrete, its sides arched to form a semicircular roof. The shape directed the power of an explosion upward rather than outward. It was the best type of storage yet devised for such dangerous ammunition as loaded bombs and large-caliber shells." The standard clay-tile magazine is described in E. E. MacMorland, "Ordnance Supply System," Mechanical Engineering, 67 (December 1945), 791-792. According to MacMorland (791), the typical ammunition depot contained "700 or 800 igloo magazines, and . . . 6 to 15 standard above-ground magazines."

6. Thomson and Mayo, p. 368; see also C. H. Cotter, "Naval Ammunition Depot Near Hawthorne, Nev.,Built to Serve the Pacific Coast," Engineering News-Record, 105 (November 20, 1930), 803-805.

7. Cotman, pp. 38, 40. "At all depots the igloo construction was of permanent type, but in other respects there was a difference between buildings erected at the first eight depots, called the 'A' program, and the second, called the 'B.' At Anniston, Umatilla, Portage, Wingate, Milan, Seneca, San Jacinto, and Red River, all begun in 1941 and nearing completion in the spring of 1942 when materials became critical, most of the administration buildings, warehouses for inert supplies, and like construction were of permanent type; but at the 'B' depots, Sierra, Navajo, Letterkenny, Sioux, Black Hills, Tooele, Blue Grass, and Pueblo, most construction was of a type called 'mobilization,' designed to last five years, or 'theater-of-operations,' designed to last only for the duration of the war"; Thomson and Mayo, p. 378.

8. Cotman, pp. 26, 41.

9. Cotman, pp. 43-43.

10. Cotman, pp. 26-29.

11. Cotman, p. 43.

12. "Red River Used As Training Center During WWII," Texarkana Gazette, June 15, 1975. This source gives the following account of the facility: "From its beginning until the final curtain of World War II had fallen, the training center was a beehive of activity . . . . When the war was over a phasing-out period began so that no troops remained by March, 1947. In August, 1950, two months after the Korean War began, the Unit Training Center was reactivated. A flurry of activity put barracks and other buildings back in usable condition. Later new shops, maintenance buildings and a new theater were added . . . . Five years after it was reactivated, the Training Center again closed its doors . . . . In 1960 the depot received orders for disposition of almost all buildings and equipment. All told, around 250 barracks and other type buildings were sold. Others were disposed of through donation to public schools of the local area."

13. Historical Sketch of RRAD, unpublished, p. 2, n.d., RRAD Public Affairs Office.

14. Frances L. Jordan, "History of Red River Arsenal, 1948-1950," p. 133, unpublished, 1956, RRAD Records Management Center.

15. Frances L. Jordan, "History of Red River Arsenal, 1 January - 30 June 1947," p. 105, unpublished, 1947, retyped 1953, RRAD Records Management Center.

16. Historical Sketch, n. p.; "History of Red River Arsenal, July - December 1957," n. p., unpublished, 1958, RRAD Records Management Center. The Intern Training Center was later placed under the

direction of the U. S. Army Logistics Management Center, Fort Lee, Virginia. It currently offers instruction "within the areas of supply and maintenance management, maintainability, product-production, quality-reliability; and safety engineering" for "approximately 250 college caliber interns [who, each year,] begin their careers within Federal service by entering one of these programs"; see Red River Army Depot (San Diego, California: Marcoa Publishing Inc., 1983), p. 14.

17. "History of Red River Arsenal, July - December 1958, n. p. By the late 1970s, tank repair at RRAD had been phased out and replaced by the rebuild of armored personnel carriers. At present, RRAD "is the only United States-based Army depot which overhauls all of the vehicular types in the M113 family of armored personnel carriers"; Red River Army Depot, p. 9.

18. "Annual Historical Summary, CY 1970, Red River Army Depot," p. 71, unpublished, 1971, RRAD Records Management Center.

19. Billy B. Sikes, "Annual Historical Summary, CY 1969, Red River Army Depot,", p. 155, unpublished, 1969, RRAD Records Management Center. This source lists the remodeled facility as Building 422, which was later renumbered Building 421; see "Red River Army Depot Facilities List New Number Sequence," p. 16, unpublished, 1977, RRAD Facilities Engineer's Office.

20. Statistical information on prefabricated construction was compiled from RRAD Real Property Inventory, unpublished computer printout, 1982, RRAD Facilities Engineers Office.

Chapter 3

PRESERVATION RECOMMENDATIONS

BACKGROUND

Army Regulation 420-40 requires that an historic preservation plan be developed as an integral part of each installation's planning and long-range maintenance and development scheduling.[1] The purpose of such a program is to:

- Preserve historic properties to reflect the Army's role in history and its continuing concern for the protection of the nation's heritage.
- Implement historic preservation projects as an integral part of the installation's maintenance and construction programs.
- Find adaptive uses for historic properties in order to maintain them as actively used facilities on the installation.
- Eliminate damage or destruction due to improper maintenance, repair, or use that may alter or destroy the significant elements of any property.
- Enhance the most historically significant areas of the installation through appropriate landscaping and conservation.

To meet these overall preservation objectives, the general preservation recommendations set forth below have been developed:

Category I Historic Properties

All Category I historic properties not currently listed on or nominated to the National Register of Historic Places are assumed to be eligible for

nomination regardless of age. The following general preservation recommendations apply to these properties:

a) Each Category I historic property should be treated as if it were on the National Register, whether listed or not. Properties not currently listed should be nominated. Category I historic properties should not be altered or demolished. All work on such properties shall be performed in accordance with Sections 106 and 110(f) of the National Historic Preservation Act as amended in 1980, and the regulations of the Advisory Council for Historic Preservation (ACHP) as outlined in the "Protection of Historic and Cultural Properties" (36 CFR 800).

b) An individual preservation plan should be developed and put into effect for each Category I historic property. This plan should delineate the appropriate restoration or preservation program to be carried out for the property. It should include a maintenance and repair schedule and estimated initial and annual costs. The preservation plan should be approved by the State Historic Preservation Officer and the Advisory Council in accordance with the above-referenced ACHP regulation. Until the historic preservation plan is put into effect, Category I historic properties should be maintained in accordance with the recommended approaches of the Secretary of Interior's Standards for Rehabilitation and Revised Guidelines for Rehabilitating Historic Buildings[2] and

in consultation with the State Historic Preservation Officer.

c) Each Category I historic property should be documented in accordance with Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) Documentation Level II, and the documentation submitted for inclusion in the HABS/HAER collections in the Library of Congress.[3] When no adequate architectural drawings exist for a Category I historic property, it should be documented in accordance with Documentation Level I of these standards. In cases where standard measured drawings are unable to record significant features of a property or technological process, interpretive drawings also should be prepared.

Category II Historic Properties

All Category II historic properties not currently listed on or nominated to the National Register of Historic Places are assumed to be eligible for nomination regardless of age. The following general preservation recommendations apply to these properties:

a) Each Category II historic property should be treated as if it were on the National Register, whether listed or not. Properties not currently listed should be nominated. Category II historic properties should not be altered or demolished. All work on such properties shall be performed

in accordance with Sections 106 and 110(f) of the National Historic Preservation Act as amended in 1980, and the regulations of the Advisory Council for Historic Preservation (ACHP) as outlined in the "Protection of Historic and Cultural Properties" (36 CFR 800).

b) An individual preservation plan should be developed and put into effect for each Category II historic property. This plan should delineate the appropriate preservation or rehabilitation program to be carried out for the property or for those parts of the property which contribute to its historical, architectural, or technological importance. It should include a maintenance and repair schedule and estimated initial and annual costs. The preservation plan should be approved by the State Historic Preservation Officer and the Advisory Council in accordance with the above-referenced ACHP regulations. Until the historic preservation plan is put into effect, Category II historic properties should be maintained in accordance with the recommended approaches in the Secretary of the Interior's Standards for Rehabilitation and Revised Guidelines for Rehabilitating Historic Buildings[4] and in consultation with the State Historic Preservation Officer.

c) Each Category II historic property should be documented in accordance with Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) Documentation Level

II, and the documentation submitted for inclusion in the HABS/HAER collections in the Library of Congress.[5]

Category III Historic Properties

The following preservation recommendations apply to Category III historic properties:

a) Category III historic properties listed on or eligible for nomination to the National Register as part of a district or thematic group should be treated in accordance with Sections 106 and 110(f) of the National Historic Preservation Act as amended in 1980, and the regulations of the Advisory Council for Historic Preservation as outlined in the "Protection of Historic and Cultural Properties" (36 CFR 800). Such properties should not be demolished and their facades, or those parts of the property that contribute to the historical landscape, should be protected from major modifications. Preservation plans should be developed for groupings of Category III historic properties within a district or thematic group. The scope of these plans should be limited to those parts of each property that contribute to the district or group's importance. Until such plans are put into effect, these properties should be maintained in accordance with the recommended approaches in the Secretary of the Interior's Standards for Rehabilitation and Revised

Guidelines for Rehabilitating Historic Buildings[6] and in consultation with the State Historic Preservation Officer.

b) Category III historic properties not listed on or eligible for nomination to the National Register as part of a district or thematic group should receive routine maintenance. Such properties should not be demolished, and their facades, or those parts of the property that contribute to the historical landscape, should be protected from modification. If the properties are unoccupied, they should, as a minimum, be maintained in stable condition and prevented from deteriorating.

HABS/HAER Documentation Level IV has been completed for all Category III historic properties, and no additional documentation is required as long as they are not endangered. Category III historic properties that are endangered for operational or other reasons should be documented in accordance with HABS/HAER Documentation Level III, and submitted for inclusion in the HABS/HAER collections in the Library of Congress.[7] Similar structures need only be documented once.

CATEGORY I HISTORIC PROPERTIES

There are no Category I historic properties at RRAD.

CATEGORY II HISTORIC PROPERTIES

There are no Category II historic properties at RRAD.

CATEGORY III HISTORIC PROPERTIES

There are no Category II historic properties at RRAD.

NOTES

1. Army Regulation 420-40, Historic Preservation (Headquarters, U.S. Army: Washington, D.C., 15 April 1984).

2. National Park Service, Secretary of Interior's Standards for Rehabilitation and Revised Guidelines for Rehabilitating Historic Buildings, 1983 (Washington, D.C.: Preservation Assistance Division, National Park Service, 1983).

3. National Park Service, "Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines," Federal Register, Part IV, 28 September 1983, pp. 44730-44734.

4. National Park Service, Secretary of the Interior's Standards.

5. National Park Service, "Archeology and Historic Preservation."

6. National Park Service, Secretary of the Interior's Standards.

7. National Park Service, "Archeology and Historic Preservation."

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Sikes, Billy B. "Annual Historical Summary, CY 1969, Red River Army Depot." Unpublished, 1969. RRAD Records Management Center.

Thomson, Harry C. and Mayo, Lida. The Ordnance Department: Procurement and Supply. Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1960. Standard history of development and production of munitions by United States during World War II; contains good overview of depot system.

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DEPARTMENT OF THE ARMY
RED RIVER ARMY DEPOT
TEXARKANA, TEXAS 75507

December 13, 1983

[APPENDIX]

Mr. Jeffrey A. Hess
MacDonald & Mack Partnership
215 Grain Exchange Building
Minneapolis, Minnesota 55415

Dear Mr. Hess:

All buildings on RRAD are accessible for your inspection in relation to the DARCOM Historical/Archeological Surveys (DHAS) with the exception of the following:

Bldg	420
Bldg	421
Bldg	561
Bldg	581
Bldg	594 S
Bldg	922
Bldg	935
Bldg	939
Bldg	957
Bldg	1174
Area	F

Sincerely,

C. R. WILCOX, P. E.
Facilities Engineer

END

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