THEMATIC SURVEY OF GRAIN ELEVATORS

IN WESTERN OKLAHOMA

1889 - 1950

By

W. David Baird, Pepperdine University
(Project Director)

With Comment By

David Gebhard, University of California, Santa Barbara
(Architectural History Consultant)

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I. ABSTRACT

Under contract to the Oklahoma State Historic Preservation Office, W. David Baird of Pepperdine University, Malibu, California, conducted the Western Oklahoma Grain Elevator Survey during the fiscal year 1989-1990. That survey encompassed 32 counties and included initially 490 different sites, requiring the project director to drive more than 5300 miles to complete it...from Waurika to Boise City, from Newkirk to Hollis. The results of that effort are chronicled in the following pages. Specifically, this document includes an extensive narrative that supplies an historical and architectural context for the subject of grain elevators both in Oklahoma and at large, it illustrates with maps the area surveyed, it sets forth the initial research design of the project and the methodology utilized to implement it, and most important the document supplies the results of the elevator survey. Among those results are a discussion of types of grain elevators encountered in the field, an identification of those properties by county, an evaluation of their architectural significance by Professor David Gebhard of the University of California, Santa Barbara, a listing of properties where historic resources no longer exist, and an indication of properties with National Register potential. An annotated bibliography of sources pertinent to the study of grain elevators in Western Oklahoma is also included.

II. HISTORICAL CONTEXT

Grain elevators in western Oklahoma, as elsewhere in the state and nation, are historically and architecturally significant. Early in this century the Swiss-French architect, Le Corbusier, taught that architecture was "the masterful, correct and magnificent play of masses brought together in light."[1] Numerous structures in Europe embodied this principle, but nothing illustrated it quite so well, he thought, as the concrete grain elevators and factories in America. These, he said in 1927, were "the magnificent first fruits of the New Age" of architecture.[2]

Determined by engineering and without artistic ornamentation, the great primary forms of the elevator and the factory for him bespoke functionalism and modernity. Moreover, they symbolized and embodied the Modern (International) Style that dominated architecture during the first four decades of the century.[3] So far as is known, Le Corbusier never saw the concrete grain elevators of western Oklahoma, but doubtless they would have been just as symbolic of the much proclaimed "New Age" as those further East.

On the Great Plains in general and Oklahoma in specific, grain elevators were less a language of forms for industrial architecture than representations of human habitation. Looming well above the flat horizon, they identified and continue to identify commercial centers, agricultural settlements, and market points. They celebrate

the frontiersman's historic subjugation of nature and, given western Oklahoma's long occupation by Plains Indian tribes, even the primacy of civilization over savagery. They proclaim an ever abundant granary, an infatuation with technology, and even citizenship in the world community. Put differently, grain elevators are to Oklahomans profound symbols of both time and place rather than classic examples of functional architecture.

However it is viewed, the grain elevator in the 32 county study area had its genesis in the evolution of commercial agriculture. That development came late to western Oklahoma. The Comanche and Kiowa, the Cheyenne and Arapaho, and the Wichita and Caddo, despite the best efforts of their agents and Christian missionaries, engaged in little more than subsistence farming during the so-called reservation era (1867-1892). Their unwillingness to become cultivators of the land--to make nature produce more--accounted in part for demands to allot the tribal reservations in 160 acre units to individual Indians and to sell the "surplus" to land-hungry whites. Surely this explained the rhetoric of the infamous Oklahoma Boomers, C. C. Carpenter and David L. Payne, both of whom saw Indian Territory as "the Promised Land" for white agriculturalists.

With the opening of the Unassigned Lands for non-Indian settlement in 1889 and the subsequent organization of Oklahoma Territory, the demands for cheap land merely

intensified. Unsupported by federal officials, the Indians could no longer resist. Between 1890 and 1894, therefore, the different Indian groups of western Oklahoma reluctantly consented to the allotment of their reservations in severalty, the termination of tribal government and the sale of "surplus" land.

Once formal agreements were negotiated, United States officials promptly made the reservations available for non-Indian settlement. The Cheyenne and Arapaho Reservation and the Cherokee Outlet were opened by runs on April 19, 1892, and September 16, 1893, respectively. The Comanche and Kiowa and the Wichita and Caddo reservations were opened by lottery during the summer of 1901, while the "Big Pasture" was opened by sealed bids in December, 1906. In the meantime, old Greer County had been attached to Oklahoma by United States Supreme Court decision and opened to public settlement in 1896. With these openings, the population of Oklahoma Territory (the western one-half of the modern state) swelled to 700,000.

In addition to dramatic increases in Euroamerican population, to "open" the tribal domains in western Oklahoma meant to begin commercial agriculture. A persistent drouth that gripped the Great Plains made farming primarily an act of faith during the early years, although in 1891 the harvest was sufficiently large that part of it could be shipped by special train to market in the North.* Abundant

moisture during the winter and spring of 1896 enabled Oklahoma farmers to harvest 2,250,000 bushels of wheat from approximately 250,000 acres placed in production. The next year the harvest was 11,700,000 bushels from 650,000 acres. By 1899 Oklahoma farmers produced 20,309,000 bushels on 1,527,000 acres.[5] New production on lands opened by lottery two years later only increased the totals. By 1920, Oklahomans produced 55,905,000 bushels of wheat on 3,727,000 acres, most of which were in the western counties.[6]

Usually winter wheat was the principal cash crop in territorial Oklahoma. The amount of revenue derived from its sale determined how well, or if at all a farmer survived on his new homestead. Accessibility to the market place, therefore, was absolutely critical. Abundant harvests had little value if they remained in the field or in the barn. Oklahoma agriculturalists were more fortunate than those in other areas just newly opened to settlement. Even before many broke sod, some access to the market was virtually assured.

In the study area, railroads generally preceded settlement. The Santa Fe Railroad, for example, completed two lines connecting Kansas with Texas in 1887, one across central Oklahoma and the other through Woodward in northwestern Oklahoma. At the time only Boomers contested Indian control of the area. By 1890, the Chicago, Rock Island and Pacific linked Kansas and Texas via points that

two and three years later would become Enid, El Reno and Chickasha. The Rock Island established another link through Hooker in the Panhandle in 1901. After 1895, the Choctaw, Oklahoma, and Gulf Railway Company (later controlled by the Rock Island) built west from El Reno via Clinton to Texas. The St. Louis and San Francisco Railroad (Frisco) as well as the Missouri, Kansas, and Texas Railroad (MK&T) also built north-south lines across western Oklahoma.

Not only did railroad construction precede land openings, but it actually channelled settlement. Agriculturalists generally selected their new homesteads so that it would be within a day's wagon ride of the line, preferably a stopping point on it. Such a location had numerous advantages. It facilitated communication with family "in the states"; it gave access to a commercial center; it permitted interaction with a local community. Most important, being near the railroad assured access to a market for winter wheat at some terminal or mill "up the line." So critical was the railroad to the success of any given farmstead that some areas (Mangum north to Woodward, for example) developed agriculturally only after the rail line (the M.K.T. in this instance) arrived.

From the beginning of settlement, therefore, profitable commercial agriculture in western Oklahoma depended upon the railroad, primarily to transport winter wheat to market outside of the state by box car. But there was an important

intermediate step between the harvested crop and its shipment to a processing plant. During it, the grain was received from the grower, graded, cleaned, dried, weighed, and elevated to the top of a building where it was distributed by gravity to vertical storage bins or waiting railroad cars. This entire process was completed at the country elevator. The elevator and the railroad combined, the Scientific American hymned in 1909, "enabled the United States to handle wheat with an economy and dispatch...not to be matched in any part of the world."[7]

Technically, the grain elevator was (and is) a facility that stored dry, small cereal grains. It had a function different, for example, from cribs and silos which stored, respectively, corn still on the ear and fermenting pieces of an entire plant. Elevators also handled grain in bulk, rather than in bags or other containers, and stored, moved and processed grain vertically.[8]

The modern grain elevator had evolved a half-century before commercial agriculture appeared in Oklahoma. As American farmers began to produce for a market economy, they first shipped their grain to customers in bags. This method kept the grain intact and identifiable all the way to the mill, where it was unloaded (as it had been loaded) by hand. Especially for mass, long distance distribution, however, such a system was both cumbersome and inefficient.[9]

Two simultaneous and interrelated developments altered

the shipping process. On the one hand, a new system of grading and pricing made identification of an individual shipment unnecessary and permitted grain to be transported in bulk. On the other, new technology enabled the vertical lifting of that grain mechanically. The two together made bagging wholly unnecessary and gave birth to the elevator.

Actually the technology was not all that new. In 1785, Oliver Evans first conceived of lifting grain by a bucket conveyor, or series of scoops affixed to a belt which passed over two end pulleys. His friend, Joseph Dart of Buffalo, New York, in 1843 applied the technology, driven by steam power, to the task of "elevating" grain from the holds of large lake vessels to the top of intermediate storage bins whose outflow could be directed to canal barges or railroad cars. Loading and unloading tasks that once took several days could be accomplished in a matter of hours. Dart's application was so successful that Buffalo became the principal terminal port handling western American grain destined for eastern and European markets.[10]

By the time of the American Civil War, the vertical handling and storage of bulk grain was commonplace throughout the Midwest, in ports, mills and country elevators. The system expanded rapidly to the Great Plains and then, almost as an afterthought, to Oklahoma with its belated opening to non-Indian settlement in 1889. By then the country elevator contained a "boot" into which farmers

dumped their crop, a vertical belt-and-bucket conveyer that lifted the grain from the boot to a cupola (or headhouse) from which it was sprouted to a series of walled bins for bulk storage. At the bottom of the bins were openings out of which the grain emptied by gravity, to be shoveled or conveyed along a trough to the boot where it would be lifted again, but this time to chutes connected to waiting railroad cars.[11]

Storage of wheat in tall, narrow bins proved eminently functional. Small grain acted neither as a liquid nor a solid when stored. Within the mass of grain, internal friction produced an arching effect, which in turn was partly transferred by friction to a downward vertical compression in the bin walls. Consequently, there was little force exerted on the floor of the bin, and the floor could stand unsupported over an emptying trough. More important is that little outward, horizontal tension-producing force was exerted (as it was with a fluid) and the walls could be thin. This was particularly important in encouraging the early use of concrete, strong in compression but weak in tension.[12]

The first country elevators in Oklahoma, however, were not built of concrete but of wood. As was the practice elsewhere in 1889, carpenters used a "cribbed" technique of unknown origin to construct elevator walls. Two-inch-thick planks, four to ten inches wide depending upon the height of

the elevator, were laid flat and spiked through one another. The planks were overlapped at the corners. To protect the exterior, wood walls from natural elements and sparks from locomotives, builders usually added corrugated, galvanized iron or tin sheeting. Strong and heavy, elevators of this type had a storage capacity of 20,000 to 40,000 bushels of wheat and cost .20 to .25 cents per bushel to build.[13] This was the model for most of the 249 elevators operating in Oklahoma in 1901.[14] Several notable elevators of this type of construction have survived to this day. They include those at Hunter, Waurika, Hooker, Gansel (Perry vic.), Carter, Gate, Geary, and Elk City.[15]

Wood elevators were also constructed with lapped-board sides. These structures had balloon frames with 1 x 6 wood siding nailed to the studs. Tie rods extended through the bins and were anchored to horizontal braces on the exterior walls. These elevators too were covered with some kind of tin or corrugated iron sheeting. A large number of this type of "iron clad" has also survived. Among the better examples are those at Okeene, Moorewood, Reydon, Rosston, May, Sentinel, Yewed, Carrier, Carmen, and Turpin.

Whether cribbed or lapped, wood elevators had distinct disadvantages. They were easily infested by insects and rodents; grain caught in cracks spoiled and rotted. They depreciated in value rapidly, and they were seldom useful for more than fifteen years. Most important was that wood

elevators were susceptible to fire, an ever present concern that drove insurance rates to fantastic heights. Nonetheless, "iron clads" remained relatively popular throughout western, especially southwestern Oklahoma, with many new ones being constructed shortly after World War II and some as late as 1956 (Trail in Dewey County, for example).

As an alternative to wood, elevator operators nationally experimented with other materials. By 1900 in "an entirely new departure," some had turned to steel. Circular storage bins constructed of multiple quarter inch or one-half inch plate steel panels bolted together were advertised as "Fireproof Elevators That Pay For Themselves." Presumably they were air tight and moisture proof, factors that eliminated the twin dangers of weevils and fire and worked to reduce the cost of insurance.[16] Steel was widely used in terminal elevators in Buffalo and Minneapolis, but it was also utilized by elevator operators in newly settled Oklahoma.[17] Flour millers at Yukon, Altus, and Alva were among the earliest to employ steel. Country elevators, especially in southwestern Oklahoma, also used steel bins, including those at Geary, Minco, Verden, Frederick, Cordell and Grandfield. Many plate steel tanks were installed as late as the 1950s, and, of course, today (1990) most new grain storage bins (as opposed to elevators per se) are constructed of corrugated steel.

As an option to wood some operators preferred glazed, clay tile rather than steel. The circular bins were constructed of hollow tiles a foot square and approximately four inches thick. They were always reinforced with horizontal and/or vertical steel rods or straps, and their exterior walls were often coated with some kind of sealant to prevent moisture damage.[18] Less costly than steel bins but just as fireproof, these terracotta tiles proved a popular construction material in Oklahoma farm cooperative elevators after World War I. They were relatively cheap and laying them was not beyond the skills of local farmers. A number of them still stand, including two each at Buffalo and Lone Wolf, and one each at Ingersoll, Cherokee, Goltry, Pond Creek, Jefferson, Carmargo and Imo. The latter, in Garfield County, is especially impressive for its height and construction technique.[19]

But tile and even steel were never as widely used as concrete. Horace Peavey built the first concrete elevator in North America on the outskirts of Minneapolis in 1900. It was cylindrical in shape, 25 feet in diameter, 80 feet in height (later raised to 120 feet), and had walls 12 inches thick at the base and 6 inches thick at the top. Cast-in-place with walls raised by slip-forms, the structure had a storage capacity of 30,000 bushels of wheat. When "Peavey's Folly" failed to collapse as it emptied, Peavey went on to build a cluster of elevators that had a storage capacity of

one million bushels.[20]

Rapidly thereafter concrete became the material of choice for large terminal elevators such as those at Buffalo, Chicago, and Minneapolis. In country elevators the shift came more slowly. The cost of concrete construction exceeded that for wood, steel, or tile. Yet by World War I hazard insurance costs for concrete elevators was only 15 to 20 percent of those assessed on wood elevators, a fact that made it possible to recoup additional initial costs within five years of operation.[21] This, plus the fact that depreciation was much less, meant that by far the majority of all rural elevators nationwide were constructed of concrete after 1920. In Oklahoma, significantly, the shift to concrete elevators lagged behind the national schedule by at least a decade.

Not until 1914, when Sooner farmers planted 2.7 million acres of wheat, did the state become one of the major wheat producers in the nation. It enhanced its position as local growers met the international demands of World War I, with acreage planted climbing to nearly 4.7 million acres in 1919, a level maintained on the average for the next two decades.[22] But the record yield of 66 million bushels of wheat in 1919 inundated the 17.5 million bushel storage capacity of the state's 866 elevators. The more normal harvest of 48 million bushels produced on the average between 1920 and 1940 taxed it as well.[23]

The lack of storage meant that growers had to sell their crop as it was harvested. Because of the large supply of grain nationwide at that point in time, prices were always lower. Moreover, the price per bushel of wheat went on a 25 year decline after 1920. Given the generally depressed conditions, farmers hoped to minimize their losses by holding new crops off the market until well after harvest when prices usually increased. Yet to gain this small advantage growers had to have much larger storage capacities.[24]

To respond to these market conditions as well as to accommodate Oklahoma's every-flowing granary, elevator operators modernized and expanded their old facilities or built entirely new ones. In addition to "iron clads," among the latter were farmer-built tile elevators, the most conspicuous of which was at Imo.[25] They also entered Le Corbusier's "New Age" of modernity by building additional elevators out of concrete. This "flood" of construction activity was so profound, so widespread that by 1950 most of the nearly 500 grain elevators operating in western Oklahoma were less than 30 years old.[26]

Of that number, surprisingly, probably no more than one-half had been constructed from concrete. The oldest, the Opitz Elevator at Binger which dated from 1906, was rectangular in design, as was the D. L. Spencer Elevator in Ponca City and the Light Grain Company Elevator in Hooker,

constructed in 1913 and 1920 respectively. Oklahoma's flour mills were the first to employ circular bin construction, beginning in 1915 with Chickasha Milling. A handful of country elevators like those at Ingersoll, Driftwood and Numa employed the technique early in the 1920s. It was not until the late 1920s and 1930s, however, that concrete elevators so often identified with the wheat belt appeared with any frequency.

Beyond the skills of local carpenters who had built wood, tile and even concrete models, the new concrete structures required the talents of contractors and engineers trained in the nuances of industrial construction. Not just anyone could cast walls in place with slip-form technology! Put differently, specialized replaced vernacular construction. One of the more successful firms doing that kind of technical construction in Oklahoma was Chalmers and Borton of Hutchinson, Kansas (now Borton, Inc.). During the 1930s it built twenty-two elevators in communities such as Goodwell, Altus, Alva, Okeene, Thomas, and Henton. One of its largest undertakings was the Union Equity Exchange complex in Enid. Other successful contractors operating in the state included Burrell Engineering, Chicago, Ill., Southwest Engineering, Fort Worth, Texas, A. F. Roberts of Sabetha, Kansas, Johnson and Sampson Company, and later just Sampson Company, Hutchinson, Kansas, and Tillotson Co., Omaha, Nebraska.[27]

Concrete country elevators constructed in Oklahoma during the 1930s and 1940s varied little in design and setting. Central to each was the so-called "main house." The heart of the grain elevator, it contained storage bins, work bins for handling and blending grain, the truck driveway and dump pit (boot), the main elevator leg and distributor for directing the grain to various storage units, and equipment to load the grain into rail cars. Externally it appeared to be a complex of four to six cylindrical bins constructed of 6 to 7 inch thick, reinforced concrete, with each bin 125 feet high and 18 feet in diameter and capable of storing 25,000 bushels of wheat. The bins were capped with a flat roof, also of concrete, on top of which was a rectangular headhouse, "Texas" or cupola with a flat concrete roof. Its verticality on an otherwise flat landscape made the main house visually striking.[28]

Concrete elevators seldom stood alone. Attached or adjacent to the bins or "tanks," operators often built a rectangular, single story office/retail facility, with either a flat or gable roof line. Scales to weigh trucks were usually connected to this building. If the elevator was a part of a cooperative or retail establishment, the property usually contained a single story warehouse with a loading dock where sack-feed was stored and dispensed. Put differently, the concrete elevator was a part of a vital commercial center.[29]

The country elevator was one, albeit the most numerous, of three different classes of grain elevators in western Oklahoma. Another was the terminal elevator. With towering concrete bins arranged in long, parallel lines (like soldiers in close-order drill), these facilities had enormous storage capacity--often for several millions of bushels of wheat. Rather than directly from producers, they received grain primarily from small country elevators. Terminal operators were then able to dispatch hugh shipments of wheat to market centers outside the state. For various reasons--rail connections, production center, site of the board of trade--Enid was home for most of Oklahoma's terminal elevators. These ranged from the earliest, Enid Terminal Elevator, to General Mills Terminal Elevator, Continental Grain Co. Elevator, to Union Equity Coop Exchange Elevators A and B.

In addition to country and terminal elevators, there were also processing elevators. This class received grain locally or regionally and then milled it into flour for distribution and sale to nearby and distant markets. In 1898 there were 22 flouring mills with a daily capacity of 3,000 barrels. Three years later the number had increased to 50 mills with a milling capacity of 7,000 barrels.[30] By 1937 there were 45 mills with a daily capacity of 23,000 barrels of flour. Milling constituted Oklahoma's third largest manufacturing industry.[31] Eighty percent of its

production was sold to bakeries. Some of the better known of these western Oklahoma mills were located at Okeene, Yukon, El Reno, Altus, Hennessey, Jefferson, Blackwell and Kingfisher. Today (1990) only four flour mills continue to operate in Oklahoma--at Enid, Okeene, Blackwell and Shawnee.

The three classes of grain elevators that were typical in western Oklahoma operated under three different types of ownership: independent, "line," and farmers.[32] Probably the majority were independents, that is owned by individuals or families who lived in the local community. For profit they stored, bought, and sold grain produced in the immediate hinterland. Owners often retailed feed and implements in conjunction with elevator activity. Typical of this type of ownership was the Cassidy elevator at Frederick, the McNeil elevator at Thomas, the Wheeler Bros. elevator at Watonga, the Opitz elevator at Binger, and the McGready elevator at Yewed.

On the basis of volume of wheat received, so-called "line" elevators were particularly important. This type of facility was not owned by a railroad company but was one of several elevators situated along one or more rail lines that were owned by a single entity, that also operated a terminal elevator and was a member of the grain and feed dealers association. Wheat, therefore, moved from the line elevator that might operate only during harvest to the terminal facility. Some of the more notable firms that operated as

line elevators included the Feuquay Grain Co. in Enid, the Kimbell Milling Co. in Fort Worth, Texas, the W. B. Johnston Grain Co. in Enid, and the Yukon Mill & Grain Co. in Yukon.

To competitors as well as grain growers, the line operators, or syndicates, took "unfair" advantage of their strong economic position. Most, they believed, were in league with the railroad company whose right-of-way they leased and upon which they built their elevators, citing as an example, for instance, the operating arrangement between Kimbell Mills Co. and the MK&T railroad. Presumably competing elevators had difficulty getting rail service, while line elevators cheated the producer systematically by buying his wheat at a low grade and then selling the same wheat at a higher grade. On the whole, especially with the price of wheat plummeting from $1.52 per bushel in 1866 to .49 cents in 1894, improving during World War I but dropping again below $1.00 per bushel during the 1920s and 1930s, farmers and independent elevators saw the line elevators as the incarnation of evil, the embodiment of the fabled "Robber Baron" of the Gilded Age.[33]

This view of conditions within the grain elevator industry, among other things, helped produce the famous Populist Revolt in the 1880s and 1890s. Rural discontent spawned vigorous political activity and an agenda of social and economic reform. A part of the latter was a movement for farmers to organize and operate country elevators

cooperatively. That movement found a receptive audience in early Oklahoma.

Co-ops, of course, were not new. Since the mid-1870s, farmers had utilized the Rochdale cooperative idea to enhance their purchasing power. Specifically, they established consumer cooperatives that sold retail goods at standard prices to all customers. Membership in the organization was open to all interested parties, with each member entitled only to one vote. Whatever profits were generated by the retail operation were then divided annually among the membership.[34]

The co-operative idea applied to country elevators, however, was new. Tried initially in Rockwell, Iowa, in 1889, the scheme bore little fruit until after the turn of the century.[35] The first farmer's co-operative elevator in Oklahoma, the Roger Mills County Co-op, was organized in Elk City in 1905. There were 36 in 1913. A statewide organization formed the next year, and the number of associations increased dramatically between 1916 and 1922. By 1937 there were a total of 91 in the Sooner State with a combined membership of 13,500. Less than 20 percent of the total number of country elevators but with a storage capacity of 10,000,000 bushels of wheat, the farmer's co-ops handled 36 percent of the annual harvest. Most of that was then sent to market through a cooperative terminal elevator in Enid, the Union Equity Exchange.[36]

The Oklahoma Wheat Pool also embodied the cooperative principle, but with a slight twist. Organized in 1921, its 5,500 members signed contracts pledging to deliver all of their wheat to the association. The pool then hired a marketing expert to sell the crop, the cost of which was deducted from the gross proceeds and the remainder then divided equally according to quality and quantity of wheat delivered. It was essentially an effort to eliminate the middleman from the market equation. In 1928 a subsidiary of the pool organized an elevator corporation and bought or leased elevators (usually farmer built) in 52 different locations in western Oklahoma. Among its elevators were the tile structures at Carmargo, Cherokee, and Ingersoll, as well as the wood house at Hooker. The Wheat Pool elevators operated with a measure of success until 1936, when most were re-sold to farmers coops.[37]

Ironically, in the late 1930s in the depths of economic depression, Oklahoma's coops were surprisingly healthy. Their organizations were the first to construct a significant number of cylindrical, concrete country elevators. Strong support by the membership accounted for some of this prosperity, but most of it came from the preferential treatment the coops received from federal-government sponsored programs. United States Department of Agriculture loans, especially, financed much of the elevator construction in western Oklahoma during the depression and

after World War II.

The cooperative movement was but one response to farmer concerns about conditions in the grain elevator industry. Another was to demand laws that would assure that elevator operators treated the grower fairly. As early as 1899 the Oklahoma territorial legislature passed a public warehouse act that placed grain elevators with a capacity of 25,000 or more bushels under territorial regulation. The purpose of the law was to assure that wheat was properly graded and that when a farmer deposited grain he would be honestly receipted. The legislators created an independent board to carry out the law.[38]

Under pressure from the Farmer's Union organization and the influential Oklahoma Farmer-Stockman, in 1923 Oklahoma's law makers acted to improve the original warehouse law. The new act brought elevators under greater public scrutiny, established the office of State Warehouse Superintendent, and made the State Board of Agriculture responsible for administering the law. The measure also authorized an appropriation of $1.25 million to invest in farmer's co-ops. This statute remained operative until 1951 when the legislature replaced it with a law that instituted a system of state and federal licensing.[39]

If nothing else, state warehouse laws as well as the cooperative movement itself reflected the vital importance of grain elevators to economic survival in western Oklahoma.

Whatever the type (country, terminal or processing) or class (independent, line or farmers), in them wheat growers encountered the hard facts of real life--the fickleness of the market place, debits and credits and profits and losses. Cooperative elevators, wheat pools, government programs and regulatory laws were culminations of efforts by the grower to eliminate some of his risks, to turn the odds more in his favor. These realities notwithstanding, the grain elevator was more than a mere, albeit important economic institution. It also spoke, and speaks, to man's understanding of himself.

As already noted, Le Corbusier and other European interpreters saw American grain elevators, especially those in Buffalo, New York, as "touchstones of modernity." They were much impressed with the rock bottom simplicity and enormous scale of the elevator. Walter Gropius thought that they were "'almost worthy of comparison with the works of the Ancient Egyptians,'" and that their large form was '"natural'" and "'in harmony with universal order.'" Moreover, that form was dictated by a function that was "'overwhelmingly clear to the passer-by.'" And since functionalism was a cardinal tenant of the modernist school, American grain elevators were labeled as the first fruits of the Modern, or International Style of architecture.[40]

Historian Peter Banham has argued, on the other hand, that grain elevators as "romantic symbols of an industrial

promised land to the West," i. e., "a concrete Atlantis," is nonsense. The elevator was not a monument but a process. The Fathers of Modernism apparently never even saw the functional side of an elevator. They were unaware that what gave it distinctiveness was not its row of cylindrical concrete bins but its mechanical installations that moved grain to the top of the bins, then from bin to bin, and finally into rail cars, barges, ships, or trucks. This apparatus, moreover, often occupied what appeared to be a central cylinder but was in fact only an interstitial. Put differently, form did not follow function. Also, the cylindrical concrete tanks prevailed in elevator work not because it bore comparison with the works of the Ancient Egyptians or reminded one of the columniation of Greek temples, "but because it was cheaper." The elevator was an expression of classic Americanism, Banham concluded, rather than "'the ultimate metaphysic of form.'"[41]

If Banham is correct, the Fathers of Modernism may well have attributed too much to the concrete grain elevator, especially those like the country elevators in western Oklahoma that "shine encouragingly in the sun as they bulk-handle their grain vertically...." Yet these Cathedrals of the Prairies do constitute powerful examples of "architectural-engineering sculpture" at a giant's scale. And they do embody a high degree of functionalism--both material and economic.[42] Or, as Le Corbusier had said,

grain elevators were engineering solutions to a unique set of problems, "and they were almost invariably left unadorned."[43] Within these parameters, they have considerable architectural significance.

The grain elevators of western Oklahoma also dominate the visual landscape. This is due in part to their simplicity of form and their verticality in relatively flat terrain. It is also because of their regular spacing. "Always in sight," architect Robert Riley has written about midwestern and Canadian elevators, "they measure the traveler's passage with a near hypnotic rhythm, marking achievement of distance and beckoning on, a slower, dramatic counter point to the quick rhythm and small scale of the telephone poles." That spacing is rationally determined. The grower wanted the elevator close to him; the railroads wanted elevators as far apart as possible. The compromise was the spacing of elevators from about six to eight miles apart, a spacing clearly reflected in Grant County along the Santa Fe Railroad in the location of Manchester, Gibbon, Wakita, Clyde, Medford, Numa and Deer Creek.[44]

In western Oklahoma the modern traveler will see only two basic visual types of elevators. One, the oldest in point of time, is the wood framed, "iron clad" structure "with shed or gabled roofs capping a potpourri of rectilinear, ad-hoc looking volumes." It is a classic example of a truly vernacular architecture. Another type,

more recent in date, is the familiar concrete landmark with its cylindrical bins and rectilinear headhouse. To the transient and the resident both profoundly bespeak "settlement" across the miles of plains. Sadly, the mammoth corrugated steel bins which today are often connected to the wood or concrete main houses with a maze of belts, pipes and wires seem more abstract and less humanized, like ships passing silently in the night.[45]

Whatever the message that is communicated, grain elevators in the study area are symbols of significance. They are hardly Le Corbusier's "first fruits of a New Age" of architecture, but they are indeed what Robert Riley has called "honest expression[s] of material and function." On a different level, they also symbolize a regional landscape, culture and history. They are, put succinctly, "a part and essence of a place," without which western Oklahoma would loose much of its visual distinctiveness.[46]

ENDNOTES

1. Robert B. Riley, "Grain Elevators: Symbols of Time, Place and Honest Building," AIA Journal 66 (Nov. 1977): 50.

2. Quoted in Peter Banham, A Concrete Atlantis: U.S. Industrial Building and Modern Architecture, 1900-1925 (Cambridge, 1986), 7.

3. Ibid., 3 and 7.

4. "Transportation of Grain in the United States," Scientific American 66 (Oct. 24, 1891): 258.

5. Donald E. Green, "Beginnings of Wheat Culture in Oklahoma," Rural Oklahoma, ed. by Donald E. Green (Oklahoma City, c. 1977), 56, 59; Oklahoma Agricultural Experiment Station, A Statistical Handbook of Oklahoma Agriculture, Agriculture Experiment Station Misc. Pub. #??-14 (Stillwater, 1949), 15.

6. Statistical Abstract of Oklahoma (Norman: College of Business, University of Oklahoma, 1956), 120.

7. "Handling and Storage of Our Huge Grain Crop," Scientific American 101 (Dec. 11, 1909): 444.

8. Riley, "Grain Elevators," 50. See also Harry D. Fornari, "Recent Developments in the American Grain Storage Industry," Agriculture History 56 (Jan. 1982): 265.

9. Harold Smith Patton, Grain Growers Cooperation in Western Canada (Cambridge, 1928), 14.

10. Joseph Dart, "The Grain Elevators of Buffalo," in Buffalo Historical Society Publications, 1 (Buffalo, 1979), 17-24. See also John T. Schlebecker, Thereby We Thrive: A History of American Farming, 1607-1972 (Ames, 1975), 132.

11. "Handling and Storage of our Huge Grain Crop," 444.

12. Riley, "Grain Elevators," 51.

13. Ibid.; "Wood-Frame Elevators in the Panhandle," National Register Nomination File, State Historic Preservation Office, Oklahoma Historical Society, Oklahoma City. The Armour Elevator in Chicago, constructed in 1887-88, contained 8,000,000 board feet of wood and 4000 kegs of nails. See "Transportation of Grain in the United States," 258.

14. United States, Dept. of Interior, Annual Report of the [Territorial] Governor of Oklahoma, 1901 (Washington, D.C., 1902), 74.

15. "Wood-Frame Elevators in the Panhandle," National Register Nomination File, State Historic Preservation Office, Oklahoma Historical Society, Oklahoma City.

16. "Fireproof Steel and Brick Grain Elevators at Buffalo," Scientific American 77 (Dec. 25, 1897): 401; Steel Storage and Elevator Construction Co., Fireproof Elevators That Pay For Themselves (Buffalo, [1900]), 5.

17. Banham, A Concrete Atlantis, 124-132.

18. Ibid., 133-37; Milo Smith Ketchum, The Design of Walls, Bins, and Grain Elevators (New York, 1919), 385; "Modern Grain Elevators," Scientific American 85 (Aug. 24, 1901): 117.

19. "Tile Elevators in Northwestern Oklahoma," National Register Nomination File, State Historic Preservation Office, Oklahoma Historical Society, Oklahoma City.

20. Banham, A Concrete Atlantis, 137-141.

21. Portland Cement Association, Concrete Grain Bins and Elevators (Chicago, [1917]), 10; Riley, "Grain Elevators," 52. The insurance rates assumed that the concrete elevators were virtually fireproof. Unfortunately, from time to time they did explode because of grain dust ignition. See Proceedings of a Conference of Men Engaged in Grain Dust Explosion and Fire Prevention Campaign (New York, 1920), 11, 92; and Keith E. Jackson, Grain Elevator Dust Explosions (Springfield, Ill., 1979), i.

22. A Statistical Handbook of Oklahoma Agriculture, 15; K. D. Blood & Marjorie Lee Hill, Wheat Production in Oklahoma, 1894-1938, Agricultural Experiment Station Circular #92 (Stillwater, 1941), 5.

23.John Shorthill, Management of Country Elevators (Chicago, 1922), 20. In terms of storage capacity, Oklahoma ranked 20th nationally. Illinois was first with 148 million bushels; Kansas was fifth with 58 million bushels. Kansas also had 1,800 elevators.

24. Oklahoma Farmer-Stockman, July 7 and 25, 1920.

25. Green, "Beginnings of Wheat Culture in Oklahoma," 70. Green is mistaken when he argues that the elevator at Imo was the first concrete cylindrical elevator in Oklahoma. Despite a story to the contrary in the Oklahoma Farmer-Stockman, Jan. 25, 1921, that structure was fashioned from clay tile. It is still in use today (1990).

26. Thomas E. Hall, New County Elevator, Farmers Cooperative Service Circular #10 (Washington, D. C., 1955), 1.

27. Company compilation contained in a letter from Norma Branson to David Baird, March 2, 1990, Hutchinson, Kansas.

28. Heber D. Bourland, Locating, Designing, and Building Country Grain Elevators, Agriculture Information Bulletin #310 (Washington, D. C., 1966), 2-13; Ketchum, The Design of Walls, Bins, and Grain Elevators, 362; Heber D. Bourland and Lloyd L. Smith, A Small Country Elevator for Merchandising Grain, USDA Marketing Research Report #387 (Washington, D. C., 1960), 12.

29. Bourland, Locating, Designing, and Building Country Grain Elevators, 3-10.

30. United States, Dept. of Interior, Annual Report of the [Territorial] Governor of Oklahoma, 1898, 53; ibid., 1901, 112-13.

31. Frederic T. Dines, "Quality of Wheat Varieties Grown in Oklahoma in 1938," Agriculture Experiment Station Circular No. 85 (Stillwater, 1939), p. 5; American Miller, 68 (Feb. 1940): 81-82.

32. O. N. Refsell, "Farmer's Elevator Movement, I," Journal of Political Economy, 22 (Nov. 1914): 872.

33. Refsell, "Farmer's Elevator Movement, I," 875-880; Gilbert Fite, Farm to Factory: A History of the Consumer Cooperative Association (Columbia, 1965), 3-4. See also Joseph B. Kenkel, The Cooperative Elevator Movement: A Study in Grain Marketing at Country Points in the North Central States (Washington, D. C., 1922), 15-21.

34. Fite, Farm to Factory, 6.

35. Refsell, "Farmer's Elevator Movement, I, 890; ibid., "Farmer's Elevator Movement, II," Journal of Political Economy 22 (Dec. 1914), 969.

36. Harold Hedges, Operations of Cooperative Grain Elevators in Kansas and Oklahoma in Bulletin No. 30 (Washington, D. C: Farm Credit Association, 1939), p. 1-7. By way of comparison, there were 271 associations in Kansas with 38,000 members. Their elevators had a storage capacity of 28,500,000 bushels and handled 24 percent of the 1936 wheat crop. See also Yearbook of the United States Department of Agriculture, 1913 (Washington, D. C., 1914), 249.

37. The Oklahoma Farmer-Stockman, June 10, 1921, and Sept. 15, 1929.

38. United States, Dept. of Interior, Annual Report of the [Territorial] Governor of Oklahoma, 1901, 73.

39. Statutes of Oklahoma, March 10, 1899 and March 26, 1923; Oklahoma State Board of Agriculture, Annual Report for 1951 (Oklahoma City, 1952), 7-8.

40. Peter Banham, "Catacombs of the Modern Movement," Archtype 1 (Winter, 1980): 43, 47.

41. Ibid., 44, 45, 47.

42. G. E. Kidder Smith, The Architecture of the United States, 3 (Garden City, N. Y., 1981): 337, 354, 473-74.

43. Riley, "Grain Elevators," 54.

44. Ibid, 53.

45. Ibid., 54.

46. Ibid., 55.

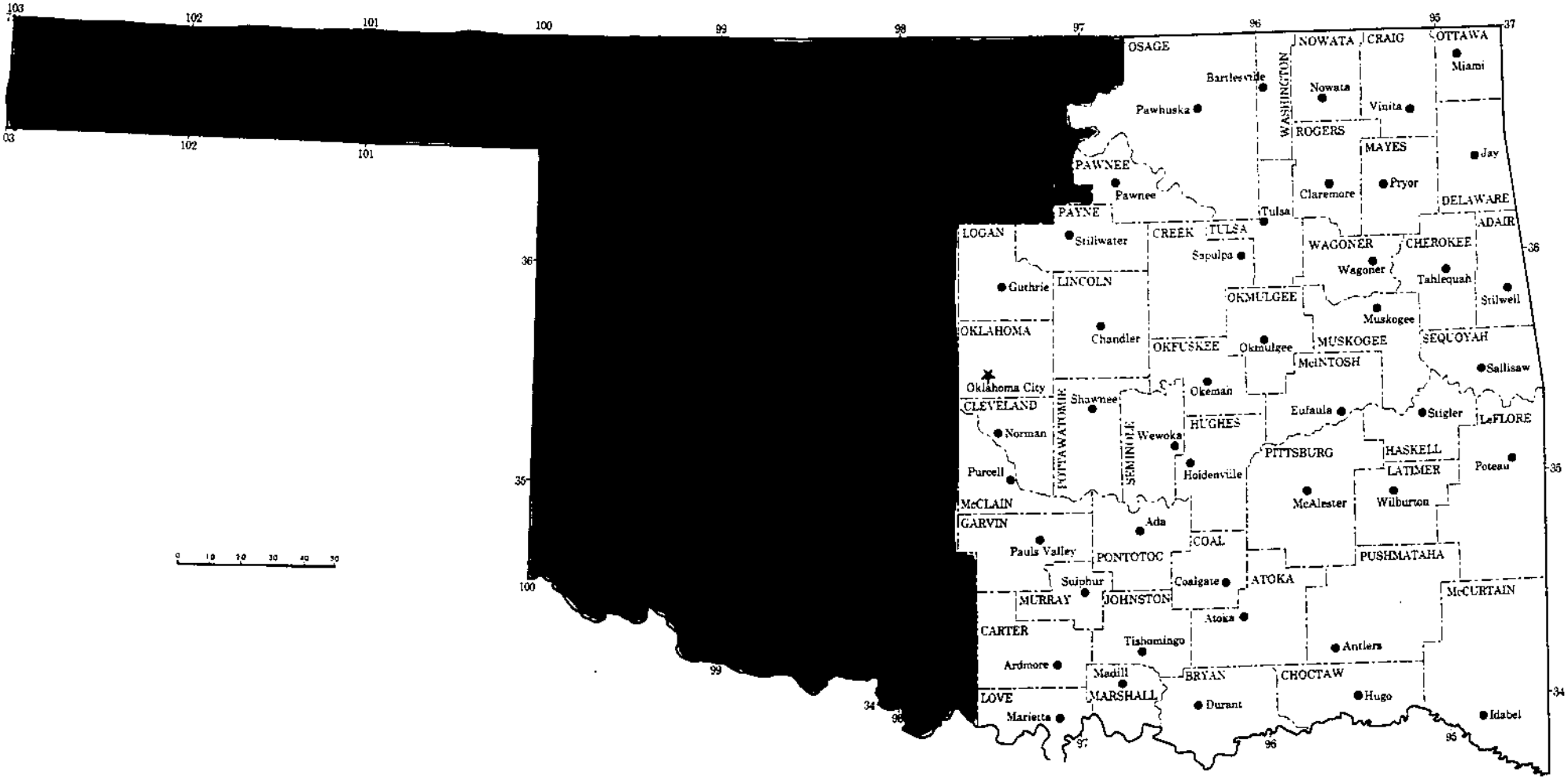
III. PROJECT OBJECTIVES

The fundamental objective of the Western Oklahoma Grain Elevator Survey was to identify those individual properties and potential districts in the 32 study area which, because of construction before 1950 and retention of historic integrity, warrant additional study to determine eligibility for listing in the National Register of Historic Places. A secondary objective was to identify and characterize those portions of the survey area which because the grain elevators lack sufficient age or integrity warrant no additional consideration for inclusion on the register. Finally, to enable completion of National Register nominations of properties and districts, the project sought to provide an historical and architectural context for the grain elevator theme as well as to identify and annotate all reference material relevant to the topic.

IV. AREA SURVEYED

The Western Oklahoma Grain Elevator Survey encompassed Management Regions 1, 2 and 7. Thirty counties comprised those three regions, namely Alfalfa, Beckham, Blaine, Beaver, Caddo, Cimmaron, Comanche, Cotton, Custer, Dewey, Ellis, Grady, Garfield, Greer, Grant, Harper, Jefferson, Jackson, Kay, Kiowa, Major, Noble, Roger Mills, Stephens, Tillman, Texas, Washita, Woodward, and Woods. For purposes of completeness, however, two additional counties were included: Canadian and Kingfisher. Both of the latter were on the same rail systems that serviced the rest of western Oklahoma, contained important terminal elevators, and were major centers of flour milling.

As Map A will illustrate, the modified study area included almost one-half of the total area of Oklahoma. Topographically, it encompassed from east to west the Red Bed Plains, the Gypsum Hills, and the High Plains. Included too were the Wichita Mountains. Mixed grasses were the principal ground cover, although post and blackjack oaks flourished in the valleys of the Washita and two Canadian rivers. On the eastern edge of the study area rainfall measured some 32 inches per year, while in the panhandle on the west it amounted to less than 20 inches per year. Throughout the area winter wheat was one of the principal crops, especially in the north along the Kansas border. In the south cotton vied for importance.



MAP A

WESTERN OKLAHOMA GRAIN ELEVATOR SURVEY AREA

V. RESEARCH DESIGN

The research design of the project was rooted firmly in the discipline of history. With the father of modern "scientific" history, Leopold von Ranke, it assumed that one can hardly reconstruct the past without documentary evidence. In this case the "primary sources" necessarily included archival resources, e. g. corporate records, contemporary newspaper and periodical accounts, fire insurance maps, and government documents. "Secondary sources," of course, put the primary sources into the proper historical frame of reference.

The research design of the project also drew somewhat upon the disciplines of anthropology and archaeology. It assumed that truth was not just the province of the library or archive. Instead, it acted on the premise that documents and other source material must be supplemented with work in the field, e. g. site visits, if reality is to be ascertained. Put differently, the research design employed in the Western Oklahoma Grain Elevator survey was "scientific history" supplemented by field work.

VI. METHODOLOGY

The methodology implementing the research design, as already suggested, followed professional historical standards. Initially, the PI built a bibliography on the subject of grain elevators both in general and in the special context of Oklahoma. He undertook that activity at the Library of Congress in Washington, D. C., the Huntington Library in San Marino, California, the UCLA Library in Los Angeles, California, at the Art/Architecture Library of the University of California, Santa Barbara, in Santa Barbara, California, and at the Edmon Low Library at Oklahoma State University, Stillwater, Oklahoma.

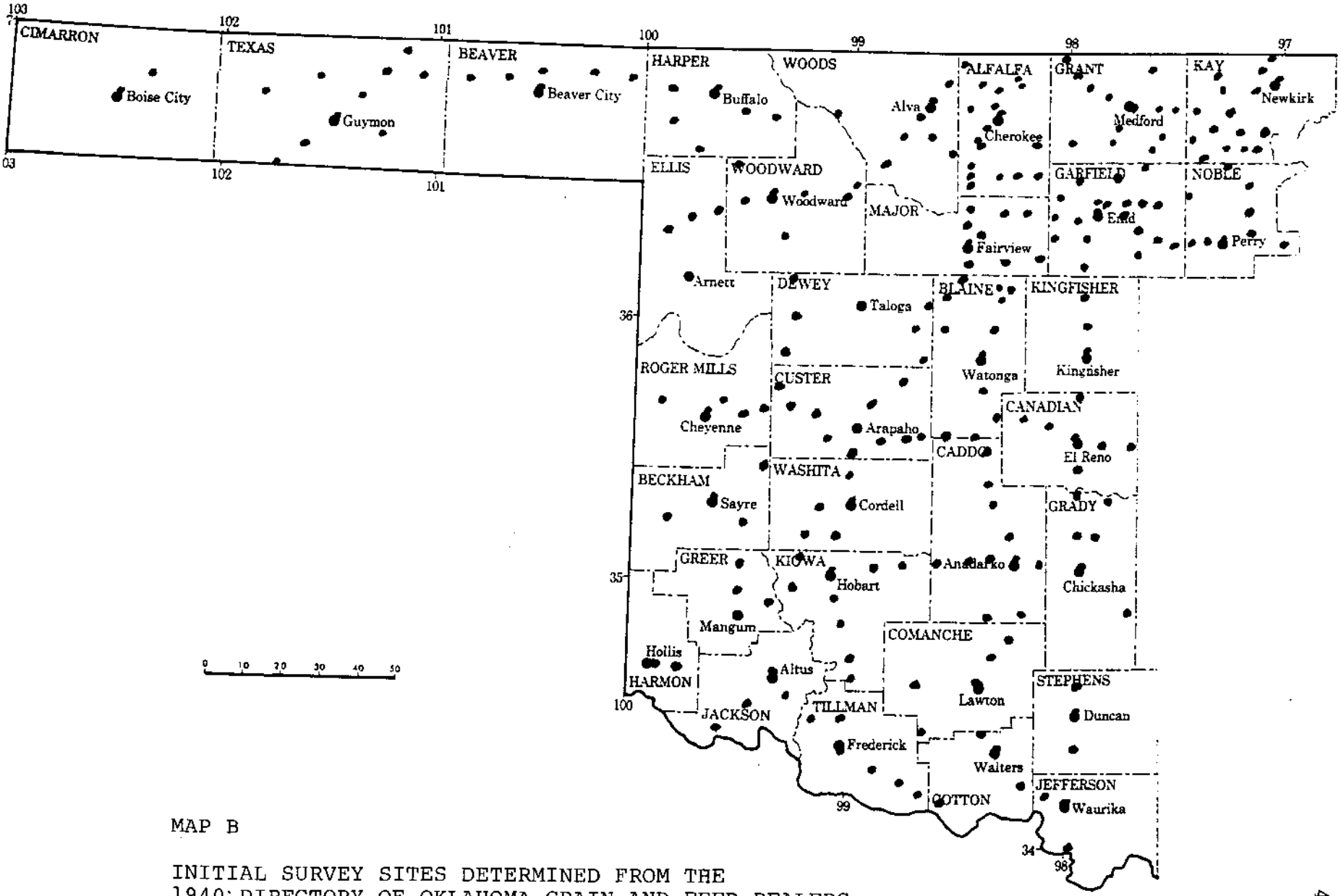
Once a bibliography had been compiled, the PI read extensively in both primary and secondary materials. This exercise lent considerable insight into the significance of elevator architecture, the function of grain elevators and to the historical context of elevators in the wheat producing areas of the High Plains, especially western Oklahoma. On the basis of this reading the PI prepared an essay examining the architectural significance and historical development of grain elevators in the study area.

To determine the actual location of elevators in Western Oklahoma that would meet the criteria of historical significance of National Register nominations, the PI turned to the records of the Oklahoma Grain and Feed Association in Enid, Oklahoma. That association published an annual

directory of all grain and feed dealers in Oklahoma, a listing that would incorporate virtually all, if not all elevator operators in the state. The directories of members for 1927, 1940, and 1989 were carefully examined and compared, with the membership list of 1940 keyed into a database. It was determined by this method that in the 32 county study area there were at least 490 sites where a surveyor was likely to find a grain elevator. Not surprisingly, all were along one railroad line or another.

This master list was refined and enhanced by reference to other sources. Of particular help were the files of the Oklahoma State Office of Historic Preservation, one of which was a thematic nomination of wood elevators in Oklahoma's panhandle and another related to elevators constructed of glazed tile blocks. Also of major assistance was a list supplied by the firm of Chalmers and Borton, Inc. (now Borton, Inc.), Hutchinson, Kansas, of concrete elevators it had constructed in Oklahoma prior to 1940. Once in hand, all of this data was plotted on a map (see Map B) so that field work could be systematically organized.

Visitation of sites began in mid-May and continued without interruption for three full weeks, seven days a week. At each site the surveyor determined whether the "historic elevator," i.e. that listed in the Directory of Oklahoma Grain and Feed Dealers in 1940 and which would meet the 50 year criteria of the National Register, was still



MAP B

INITIAL SURVEY SITES DETERMINED FROM THE
1940 DIRECTORY OF OKLAHOMA GRAIN AND FEED DEALERS

extant. If it were, the surveyor made field notes (including a sketch) and took elevation photographs.

Often the referenced elevator no longer existed, having been replaced by another structure. If it was determined that the "new" elevator was constructed prior to 1950, the surveyor took field notes, made sketches and took elevation photographs. Only a single, "file" photograph was taken of most resources determined to have been constructed between 1942 and 1950, the assumption being that they did not meet the fifty year criteria of the National Register and thus were not "historic." For all but 18 properties, most in southwestern Oklahoma, that mistake was later corrected when the PI made another trip (in early August) through the study area to obtain the second elevation photo.

Elevators that were constructed after 1950 were not considered historic by the surveyor. For the records of the survey, their existence was noted, date of construction determined (usually from the depreciation schedule of the operator), and contractor established, but no survey form was completed nor elevation photograph taken. Reference to many of these do appear in the files, as do images of them, but only because they were a part of a complex of elevators that featured structures that met the historic criteria.

Finding elevator sites proved easy. Grain elevators were always constructed along rail lines on specific trackage, i.e. sidings, set aside by railroad corporations

for that purpose. So-called "trackage rights," therefore, were generally geographically specific, being centered in one place. They did not change over time, primarily because railroads seldom relocated sidings. Find the site of the current grain elevator in any one community and you are at the site of the historic one, in this case the one listed in the fifty year old (1940) Directory of the Oklahoma Grain and Feed Dealers.

Ease of locating pre-1950 elevators was only one advantage of traditional placement. Since grain elevators were built within five to ten feet of a railroad siding, it followed that most were initially constructed on railroad right of way. Put differently, these structures often set on land that their owners leased from the rail corporation. This meant that legal descriptions were not lot, block and plat as much as they were section, range and township. So frequently was this the case that the surveyor ceased to check legal descriptions in the different county courthouses, assuming that the elevator in question was situated on current or old railroad right of way. Given the large number of properties involved and the difficulty of timing visits to 32 different court houses, it was a prudent decision and logical assumption.

Subsequent analysis of Sanborn Fire Insurance Maps suggest, however, that it was not an altogether correct one. Sometimes railroads built new or expanded old track through

communities or neighborhoods that had pre-existed the coming of the line. In those cases, grain elevators were likely to be constructed on property with a lot and block legal description. Some survey forms prepared by the PI reflect this exception, but doubtless not all of those where it would have been appropriate to have done so, do.

Day light hours of the field work were always devoted to site visits, making sketches, taking notes, and shooting photographs. During the evening and night hours, the surveyor keyed relevant data into the database designed earlier in the offices of the SHPO. The input was based upon observation, corporate records or reports of a particular elevator, and other field notes. That information is the substance of the 242 survey forms (plus two additional forms on properties in Oklahoma County) included as a part of the final product of the Western Oklahoma Grain Elevator Survey.

Once field work was completed, the surveyor then spent two full weeks confirming data obtained previously. He did that by consulting the microfilm copy of the Sanborn Fire Insurance Maps for Oklahoma housed at the Library of Congress. That film is at Oklahoma State University and enabled the surveyor to determine more precisely dates of construction of elevators in particular communities. He also read extensively in the pre-1940 files of the American Miller and the Oklahoma Farmer-Stockman. Both of these

sources contributed to a fuller understanding of the historical context of the grain elevators in Western Oklahoma.

At the conclusion of field and library work, the photographs and other data were shared with architectural historian David Gebhard. His written assessment is included in Section IX, or "Results," of this report.

VII. KINDS OF PROPERTIES SOUGHT

The Western Oklahoma Grain Elevator Survey sought to identify all independent and coop grain elevators constructed prior to 1950. Strictly speaking, an "elevator" is an apparatus that lifts grain from a sub-surface "dump" and then redistributes it from above into bins of various types of construction. The elevator and the bins are usually contained in a single "house." Grain storage outside of this house constitutes an "annex" and thus is technically not part of an elevator. This project made no such distinction, however. Annexes and storage units were considered integral parts of an elevator, and occasionally of historical significance themselves.

The survey sought different kinds of elevators in terms of functions. Targeted especially were the so-called country elevators, to which farmers brought their harvested wheat initially. Equally important were terminal elevators, facilities that collected grain from country elevators prior to being marketed in bulk elsewhere. Also in the study area the surveyor expected to find elevators associated with local flour mills.

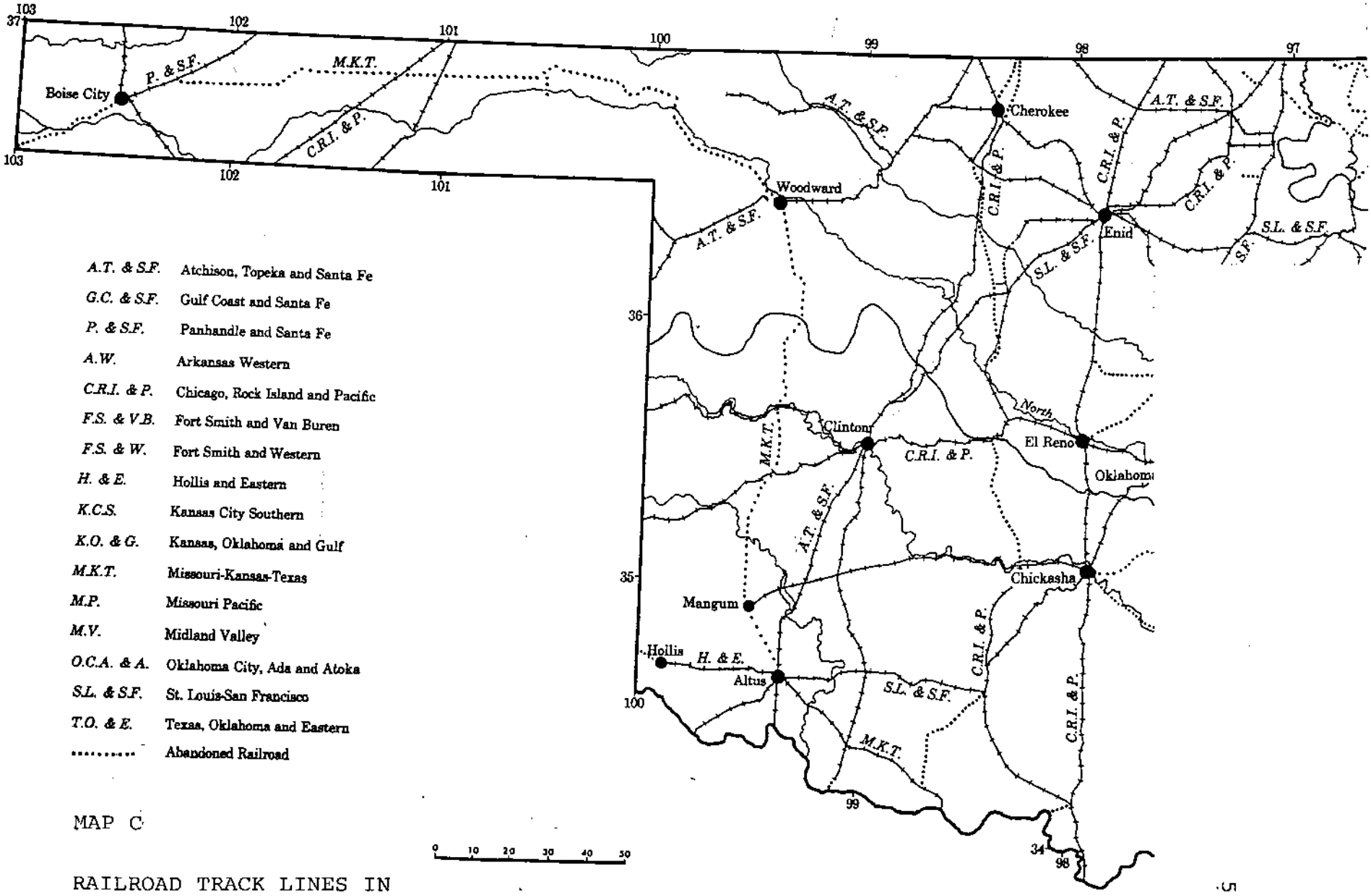
It was anticipated that elevators would be constructed of different materials. The surveyor, therefore, was prepared to find wood elevators, others whose storage bins were constructed of steel, elevators that were built of glazed tile blocks, and, primarily, those that were

fashioned from poured concrete. Presumably the latter would be ubiquitous, especially those with cylindrical architecture and that were constructed with slip forms.

Of course, the survey was primarily interested in elevators that were historic in terms of age and retained their architectural integrity.

VIII. BOUNDARIES OF SURVEYED AREA

As already suggested and as indicated on Map A, the Western Oklahoma Grain Elevator Survey included 32 counties and virtually one-half of the land mass of the state. In actual fact, the survey extended into every one of the 32 counties. Not every corner of every county was covered, however. For all intents and purposes the survey followed different railroad lines that existed in western Oklahoma prior to 1950. Map C indicates the route of the tracks and suggests more specifically the boundaries of the surveyed area.



A.T. & S.F.	Atchison, Topeka and Santa Fe
G.C. & S.F.	Gulf Coast and Santa Fe
P. & S.F.	Panhandle and Santa Fe
A.W.	Arkansas Western
C.R.I. & P.	Chicago, Rock Island and Pacific
F.S. & V.B.	Fort Smith and Van Buren
F.S. & W.	Fort Smith and Western
H. & E.	Hollis and Eastern
K.C.S.	Kansas City Southern
K.O. & G.	Kansas, Oklahoma and Gulf
M.K.T.	Missouri-Kansas-Texas
M.P.	Missouri Pacific
M.V.	Midland Valley
O.C.A. & A.	Oklahoma City, Ada and Atoka
S.L. & S.F.	St. Louis-San Francisco
T.O. & E.	Texas, Oklahoma and Eastern
.....	Abandoned Railroad

MAP C

0 10 20 30 40 50

RAILROAD TRACK LINES IN
WESTERN OKLAHOMA AS OF 1940

IX. RESULTS

In almost every way, the Western Oklahoma Grain Elevator Survey was fruitful. It identified 242 properties (plus two additional in Oklahoma County) that were constructed prior to 1950, of which number 116 (plus two from Oklahoma County) were determined to have National Register potential currently, i.e. were built in 1941 or before, have historical significance, and retain architectural integrity. SHPO survey forms and elevation photographs were prepared for all 242 properties (plus two more from Oklahoma County). Additionally, survey form data was encoded into a dBase III-Plus database compatible with that maintained in the office of the SHPO. A copy of that database has been supplied on a 5 1/4 inch floppy disk.

Working from the 1940 Directory of Oklahoma Grain and Feed Dealers, the survey identified 490 elevators operators with properties in the study area of potential importance. On-site investigation proved that many of those no longer existed. Some had been replaced by more modern structures; others simply had been destroyed. Altogether some 308 sites were visited where the resource was no longer extant (see Section XII below). These sites obviously warrant no further consideration for inclusion on the National Register of Historic Places.

Many results of the Western Oklahoma Grain Elevator Survey, however, are not so quantifiable. This was true

architecturally as well as historically. The surveyor, for example, was surprised at the number of metal-covered wood elevators extant in the study area, many of which remained in use. In the Trail community just south of Carmargo in Dewey County, a new one was constructed as late as 1956! Furthermore, there was a distinct geographical concentration of those wood elevators, specifically in the Panhandle, the far western counties, and in the southwest.

The extensive utilization of grain storage bins constructed of plate steel was also surprising, as was its geographical distribution. In the southwest and western counties, elevator operators accommodated the larger harvests and demands for storage capacity during the 1930s and 1940s by building steel bins that were then fed by the elevator leg in the old "wood house." In the northern counties, on the other hand, the greater yields were accommodated first by cylindrical elevators constructed of glazed tile and then "main houses" fashioned of poured concrete.

The survey also demonstrated unexpectedly that flour milling played a major role in Oklahoma's pre-World War II economy. It was the third largest industrial employer in the state. Flour millers, moreover, first introduced the cylindrical, concrete elevator to Oklahoma, for example Chickasha Milling Co. in 1915, Yukon's Best Flour Mill and Elevator and Blackwell Mill and Elevator in 1916, and El

Reno Mill and Elevator and Perry Mill and Elevator in 1917. Earlier they were among the first to utilize steel bins: Leger Mill of Altus in 1900, Apache Mills by 1907, and Alva Roller Mills shortly thereafter.

As an operational type, the survey revealed the importance of line elevators. This was best demonstrated along the rail line (leased by the MK&T in 1914) that snaked its way through western Oklahoma from north to south just prior to 1912. At locations such as Moorewood in Custer County, Carmargo in Dewey County, May in Woodward, and Rosston in Harper County, Kimbell Mills of Forth Worth, Texas, established distinctive wood elevators covered by sheet metal that were operated by commission agents during harvest. Kimbell controlled these strategic spots in part because of a favored position it held with the MK&T railroad, whose management serviced other elevators reluctantly if at all. Although not operational, most of these "iron clads" still exist.

The survey provided evidence as to how local farmers dealt with monopolistic-like line operators. Most answered with cooperative elevators, facilities that would buy the producer's wheat and provided storage for growers who wished to hold their grain until prices went up. Some of these elevators were constructed of wood where the bins were "cribbed," i.e. built with 2" x 6" planks laid flat and spiked together with nails. This was particularly the case

in the Panhandle along the BM&E railroad. Others were constructed of glazed tile blocks which were laid along a circular line to form cylindrical bins. Although there were earlier structures, the most impressive tile elevator was at Imo just west of Enid in Garfield County. The advantage of cribbed wood and tile elevators was that they could be built with unskilled labor, the type offered by wheat farmers who sought a better market for their grain than that offered by line elevators.

Country elevators constructed from concrete appeared early. The Opitz elevator in Binger, for example, dates from 1907, the Spencer elevator at Ponca City from 1913, and the Light Grain elevator in Hooker from 1920. But all of these structures were rectangular in shape and resembled in style the traditional iron clad. The survey revealed that country elevators with cylindrical architecture seldom occurred prior to 1930, and most of those that were constructed thereafter were built by coops. How could it happen that in the midst of the depression presumably impoverished farmers had the resources to build expensive concrete elevators? In cooperation there is strength to be sure, but it also helps if you get government assistance. Most of the depression-era federal aid to farmers, beginning with the Hoover administration, was available to or administered through coop organizations. That fact alone, rather than larger harvests presumed by the surveyor

initially, accounted for the appearance of concrete elevators on Oklahoma's prairies.

Farm assistance programs during the 1940s apparently explained also why the co-ops were able to continue their construction program.

The survey also affirmed the architectural significance of grain elevators in general and concrete, cylindrical elevators in specific. On the basis of the analysis of field data and a review of the historical context (Section II), Professor David Gebhard of the University of California, Santa Barbara, confirms this conclusion. He writes, under the title "The Grain Elevators in the Midwest," the following:

"With the exception of those Midwestern cities which faced onto one of the Great Lakes, the large scale grain elevators which have emerged as hallmark of the region, were generally located adjacent to one or another of the railroad lines. While some 'commercial' grain elevators were erected as early as the 1850s in Ohio, Indiana, and Illinois, most were built from the 1860s and later. In the rich farming state of Iowa, for example, the first of the larger elevators were constructed in the years immediately after the Civil War. These early elevators were built by individual capitalists or small groups of capitalists, and in some instances by the railroads themselves. With the emergence of a strong populism in the post Civil War years,

groups of farmers began to organize and build their own grain elevators. A case in point would be the Midwestern Grange, which built its first elevator in Iowa in 1869 (Nourse, 1923: 236-37). The high point of this first phase of direct co-operative farmer participation were the years 1973 and 1874. During the remaining decades of the century, and on into the opening years of the twentieth century, various farmers co-operatives were organized and they built grain elevators. Most, though of the larger single or groups of elevators, were constructed by the railroads, their subsidiaries, or by private capital.

"Late nineteenth and twentieth century American buildings constructed for the storage of grain divide themselves into two categories: those utilized on an individual farm; and those which stored the grain which came from a number of neighboring farms. Examples of the smaller, individual grain storage buildings located on a single farm, were built in the Midwest from 1830s on; larger, commercial, regional structures were erected approximately a decade later. The typical commercial grain elevators of these years were tall wood frame buildings usually sheated in wood lap or shiplap siding. Their roofs were almost always gabled, and generally exhibited a steep pitch. By the late 1860s even larger wood grain elevators were built; the most characteristic form being a tall narrow structure surmounted by a high monitor, which was usually

carried from side wall to side wall. Lower secondary structures were attached to these taller units, forming something approaching a small village.

"While wood grain elevators continued to be constructed well into the mid twentieth century, the new forms after 1900 were constructed of hollow terracotta tile bricks, reinforced concrete, and of steel. These new twentieth century materials were employed from the early 1900s on, for a wide variety of agricultural buildings, especially for barns and silos (Soike, 1983). By the mid teens the familiar tall cylindrical 'sentinels of the Prairie' of reinforced concrete or hollow tile were being erected all across the Midwest. Even with the depressed agricultural markets during the twenties and on into the depression years of the 1930s, construction of commercial elevators continued. Though we generally think of these twentieth century elevators in terms of cylindrical concrete objects, many quite traditional gable roofed elevators with high monitors were built of steel frame and cladding during these decades (from a distance, these buildings are difficult to distinguished from the earlier wood elevators) (Grain and Feed Journal, 1942).

"In the 1960s these traditional concrete and hollow terracotta block elevators were joined by an even stronger image of the machine. These were the brilliantly colored (usually blue) porcelainized cylindrical elevators, usually

connected to other elevator and buildings by a grid of pipes and other mechanical devices. If one thinks in terms of the high-tech imagery of architecture and sculpture of the 1970s and 1980s, these new elevator complexes strongly succeed in expressing a similar imagery. Thus, the most recently constructed grain elevators continue to strongly convey a sense of the machine, of technology and of twentieth century modernity on the Prairie.

"The tall groupings of concrete elevators has long excited the high art world of painting, photography, and architecture. Art photos of grain elevators appeared in various issues of Alfred Stieglitz' post 1900 magazine CAMERA WORK; and it was a frequent subject of the 1920s paintings of Charles R. Sheeler and Charles Demuth; and in the thirties these 'stationary machines of the Prairie' occur in many of the paintings of the Midwest regionalists of the day: Grant Wood, Thomas H. Benton and others.

"Though one most often tends to associate the admiration of the concrete grain elevators of North America with the European Modernists of the 1920s: especially with the writings of Le Corbusier (his 1923 VERS UNE ARCHITECTURE), and Walter Gropius; the grain elevator as a symbol of modernity; had been discovered by American Modernist architects a decade or more before. An example of this admiration can be sensed in the writings of the Midwest Prairie architects, William Gray Purcell and George Grant

Elmslie. In an article they wrote for THE CRAFTSMAN magazine in 1912, they concluded by observing, 'the wonderhouse of new forms, American minted; the harvester, the automobile, the color press, the aeroplane, the skeleton-construction, grain elevators, railroad trains, and mile-long shops...,' (Purcell and Elmslie, 1912: 435).

"The American and European Modernist's appreciation of these concrete and hollow tile elevators had to do with their strong, singular geometric form, their modes of construction, and of their function. These Modernist responded to the simple, direct shapes of these groups of tall white cylinders set in the rural landscape; equally they admired the use of concrete, one of the materials indicative of the new age; and finally, they felt that these complexes of the grain elevator provided an example of the machine, and the way in which it was encompassing all aspects of life, including the traditional rural world of agriculture."

NOTES

Grain and Feed Journal. Grain Elevators of North America. Chicago, 1942.

Le Corbusier, Vers Une Architecture (Towards a New Architecture). First published in Paris in 1923; published in English in London in 1927. London, 1946.

Nourse, E. G. "Fifty Years of Farm Elevators in Iowa," Bulletin No. 211. Agriculture and Home Economics, Iowa State University, Ames: 235-271.

Purcell, William Gray, and George Grant Elmslie, "American Renaissance?." The Craftsman 21 (Jan.

1912): 430-35.

Soike, Lowell J. Without Right Angles: The Round Barns of Iowa. Iowa City, 1983.

X. KINDS OF HISTORIC PROPERTIES PRESENT

The Western Oklahoma Grain Elevator Survey identified several different kinds of historic properties. They fall best into architectural categories:

A. Wood Elevators

Wood elevators are rectangular, have a headhouse, a stepped, or modified-stepped gable roof and have side grain dumps covered with sheds or internal dumps with over-head bins. Their walls are either cribbed (2 x 6 wood planks laid flat and spiked with nails) or of lapped wood siding reinforced with steel tie rods. Externally, wood elevators are covered with pressed tin or corrugated iron sheets. They have full or partial headhouses, internal or side grain dumps, full and overhead bins. Not all, but most "iron clads" have been altered, generally by increasing the height of the headhouse to accommodate modern elevator equipment.

B. Tile Elevators

Tile elevators are constructed from glazed tile blocks approximately twelve inches square. They employ a cylindrical architectural style, their headhouses ranging from rectangular in design with gable roofs to circular with conical roofs. In size they generally range from two to six bins. Grain dumps are always situated to the side of the circular bins and generally

covered with a shed roof.

C. Steel Grain Tanks

Steel tanks are circular and constructed from 1/2 inch steel plates bolted together. They sit on concrete bases. During the late 1940s, some operators put together all-metal elevators, one excellent example being the facility now owned by Producers Grain, Inc. at Cordell. Whether bins only or a combination of bins and an elevator, determining the date of construction of steel properties is very difficult.

D. Concrete Country Elevators

Concrete country elevators evolved from rectangular to cylindrical, from one or two circular bins to no less than four and usually many, many more. The classic concrete country elevator consisted of four cylindrical bins set at the corners of a square, connected in straight lines along the outer edges. The bins rise approximately 100 feet and are capped by a flat roof. Above is a rectangular headhouse, also with a flat roof. Most contained an internal grain dump, or "boot," reached by a central drive-through, although some had side dumps covered with flat roofs. Later model elevators, particularly those constructed after World War II, had six to eight cylindrical bins and two

internal grain dumps. When more storage was desired, it was generally obtained by building an annex of cylindrical bins placed in a single column or in columns of twos or threes.

E. Terminal Concrete Elevators

Terminal Elevators are noted more for their immense storage capacity than for their ability to lift and distribute grain. They, therefore, are constructed of concrete and usually consist of one or two free standing elevator legs that appear as a rectangular head house which extends to the ground and is unattached to circular bins. Arranged on one or both sides are columns of cylindrical bins which receive grain from the headhouse distributed via an enclosed belt system along the flat roofs of the bins. Most terminal elevators are located in Enid, where the first was built in 1926 by the Enid Terminal Elevator Company and had a capacity of more than one million bushels of grain. Today Enid has a storage capacity of 67 million bushels of wheat. Other much smaller centers are in Alva, Woodward and El Reno.

F. Flour Mill Elevators

Every flour mill in Oklahoma had an elevator of some kind. They were little different from those structures

described above, ranging in construction materials and type from wood to steel to concrete and in size from relatively small to terminal-like proportions. These facilities raised and stored grain that was ultimately milled into flour. As mentioned above, they were among the first wood, steel and concrete elevators in Oklahoma.

XI. SPECIFIC PROPERTIES IDENTIFIED

During the course of the Western Oklahoma Grain Elevator Survey, some 242 properties were identified that were constructed in 1950 or before. Those properties, along with two others found in Oklahoma County, are listed below.

Alfalfa

Farmers Coop Elevator (Wood House)	Aline
Burlington Coop Elevator (North House)	Burlington
Burlington Coop Elevator (South House)	Burlington
Farmers Coop Elevator (North House)	Carmen
Farmers Coop Elevator (Wood House)	Carmen
Farmers Coop Tile Elevator	Cherokee
Farmers Coop Elevator (North House)	Cherokee
Old Cherokee Mills Concrete Elevator	Cherokee
Old Cherokee Mills Wood Elevator	Cherokee
Old Hill Grain Company Elevator	Cherokee
Farmers Exchange Elevator (Tile House)	Goltry
Farmers Exchange Elevator (East House)	Goltry
Farmers Coop Elevator (West House)	Helena
Farmers Coop Elevator (East House)	Helena
Alva Roller Mills Elevator	Ingersoll
Farmers Coop Elevator (Wheat Pool)	Ingersoll
Farmers Coop Exchange (East Elevator)	Jet
J. H. McGrady Grain Elevator of Yewed	Cherokee vic.
Farmers Coop Elevator of Ashley	Capron vic.
Old Driftwood Concrete Elevator	Burlington vic.

Beaver

Perryton Equity Exch. Elevator	Beaver
Gate Coop Assn. Wood Elevator	Gate
Equity Exchange "Iron Clad" Elevator	Knowles
Old Feuquay Grain Co. Wood Elevator	Knowles
Light Grain Co. Wood Elevator	Turpin

Beckham

Carter Coop Wood Elevator	Carter
Roger Mills County Coop Elevator	Elk City
Old Ben Martin Grain Elevator	Elk City
Turner Grain Co. Wood Elevator	Erick
Old Ewton Grain Elevator (Wood House)	Sayre
Sayre Grain Co. Wood Elevator (East)	Sayre

Specific Properties Identified--continued

Blaine

Wheeler Grain Co. Wood Elevator	Canton
Geary Mill & Elevator Co. Steel Tanks	Geary
Zobisch Grain Co. Wood Elevator (North)	Geary
Zobisch Grain Co. Wood Elevator (South)	Geary
Sooner Coop Elevator of Homestead	Homestead
Sooner Coop Assn. Elevator (West)	Okeene
Okeene Milling Wood Houses	Okeene
Sooner Coop Elevator (East House)	Okeene
Okeene Milling Co. Concrete Storage Bins	Okeene
Okeene Milling Company Elevator	Okeene
Old Blaine County Milling Elevator	Watonga
Wheeler Bros. Grain Elevator (South)	Watonga
Darrow Wood Elevator	Okeene vic.

Caddo

Vollmer Elevator	Anadarko
Apache Milling Co. Elevator	Apache
Opitz Grain Company Concrete Elevator	Binger
Chickasha Milling Co. Elevator	Carnegie
North Caddo Coop Elevator	Hinton
Hydro Seed and Grain Elevator	Hydro
Hydro Coop Elevator (East House)	Hydro

Canadian

Canadian Mill and Elevator	El Reno
El Reno Mill and Elevator	El Reno
Schroeder Grain Co. Wood Elevator	El Reno
El Reno Terminal Grain Co. Elevator	El Reno
Dow Grain Company Elevator	Okarche
Farmers Coop Elevator (B House)	Okarche
Dobry Elevator and Mill	Yukon
Yukon Mill and Elevator	Yukon
Banner Coop Elevator (East House)	El Reno vic.
Banner Coop Elevator (West House)	El Reno vic.

Cimmaron

Bartlett Grain Company Elevator	Boise City
Boise City Grain Co. Elevator	Boise City
Wells Old Security Grain) Elevator	Boise City
Old Texhoma Grain Elevator (AT&SF)	Keyes
Security Grain Co. Elevator (BM&E)	Keyes

Specific Properties Identified--continued

Comanche

Kimbell Milling Company Elevator	Indiahoma

Cotton

Walters Coop Elevator	Walters

Custer

Paul Zobisch Grain Co. Scale House	Butler
Farmers Union Coop Elevator (North)	Clinton
Clinton Grain Company Elevator	Clinton
Farmers Coop Elevator (North House)	Custer City
McNeil Grain Co. Elevator (East House)	Thomas
McNeil Grain Elevator (Old Annex, East)	Thomas
McNeil Grain Co. Elevator (West House)	Thomas
McNeil Grain Elevator (Old Annex, West)	Thomas
Farmers Coop Elevator	Weatherford
Old Stafford Grain Elevator	Clinton vic.
Kimbell Mills Elevator at Moorewood	Hammon vic.

Dewey

Carmargo Tile Elevator (Wheat Pool)	Carmargo
Kimbell Mills Elevator	Carmargo
McNeill Grain Co. Elevator	Fay
Farmers Coop Elevator (East House)	Vici
Farmers Coop Elevator (West House)	Vici

Ellis

Farmers Coop Elevator (A House)	Fargo
R. A. Ford and Son Elevator	Gage
Ingle Brothers Elevator	Shattuck
W. B. Johnston Grain Elevator	Shattuck

Garfield

Farmers Coop Elevator (South House)	Bison
Farmers Coop Elevator (North House)	Bison
Old Star Mill Elevator	Bison
Carrier Mill & Elevator Co. (Wood House)	Carrier
Carrier Mill & Elevator Co. (East House)	Carrier

Specific Properties Identified--continued

Garfield--cont.

Old Champlain Elevator	Carrier
Johnston's Grain Co. Wood Elevator	Covington
Farmers Coop Elevator (North House)	Douglas
Farmers Coop Elevator (East House)	Drummond
Farmers Coop Elevator (West House)	Drummond
Pillsbury Flour Mill and Elevator	Enid
W. B. Johnston Grain Co. Elevator	Enid
Palecek Mill and Elevator	Enid
Old Enid Mill and Elevator Company	Enid
Enid Terminal Elevator	Enid
Feuquay Grain Terminal Elevator	Enid
General Mills Terminal Elevator	Enid
Union Equity Coop Exchange, Elevator A	Enid
Continental Grain Company Elevator	Enid
Farmers Coop Elevator (Wood House)	Fairmont
Farmers Coop Elevator (West House)	Garber
Coop Exchange Elevator (North House)	Hillsdale
Messenger's Elevator Co. (Wood House)	Hillsdale
Thompson-Wilson-Thompson (East House)	Hunter
Thompson-Wilson-Thompson (Wood House)	Hunter
Farmers Grain Company Elevator (West)	Kremlin
Farmers Coop Elevator (East House)	Kremlin
Zaloudek Grain Co. Elevator	Kremlin
Farmers Coop Assn. Wood Elevator	Waukomis
Farmers Coop Elevator (West House)	Waukomis
Farmers Coop of Imo (Tile House)	Enid vic.
Farmers Coop of Imo (Concrete House)	Enid vic.
Feuquay Grain Co. Elevator at Cropper	Garber vic.

Grady

Chickasha Milling Co. Elevator (Poag)	Chickasha
Miller Grain Company Wood Elevator	Minco

Grant

Clyde Coop of Lamont	Lamont
State Line Grain Co. Elevator (South House)	Manchester
Clyde Coop Elevator (North House)	Medford
Clyde Coop Elevator (South House)	Medford
Enid Terminal Elevator	Medford
Equity Exchange (SE Elevator & Annex)	Nash
Equity Exchange Elev. (North House)	Nash
Farmers Grain Co. Elev. (South House)	Pond Creek

Specific Properties Identified--continued

Grant--cont.

Farmers Grain Co. Elev. (NW House)	Pond Creek
Farmers Grain Co. Elevator (NE House)	Pond Creek
Hacker Mills Elevator	Pond Creek
Clyde Coop of Salt Fork	Salt Fork
Farmers Coop Elevator and Annex (East)	Wakita
Hacker Flour Mill at Jefferson (Tile)	Medford vic.
Hacker Mill & Elevator at Jefferson	Medford vic.
Hacker Flour Mill at Jefferson (N House)	Medford vic.
Clyde Coop Assn. Elevator at Clyde	Medford vic.
Deer Creek Elevator at Numa	Medford vic.
Clyde Coop of Renfrow	Medford vic.
Johnston Grain Co.'s Renfrow Elevator	Medford vic.

Greer

Old Kouri Wood Elevator	Granite
Brinkman Grain Elevator	Willow

Harmon

Old Kimbell Mills Wood Elevator	Hollis
Old Uhlman Wood Elevator	Hollis

Harper

Farmers Coop Tile Elevator	Buffalo
Farmers Coop Elevator (South House)	Buffalo
Feuquay Grain Co. Tile Elevator	Buffalo
Kimbell Mills Elevator	May
Buffalo Coop Elevator at Selman	Selman
Kimbell Mills Elevator of Rosston	Gate vic.

Jackson

Leger Mill and Elevator	Altus

Jefferson

Waurika Mill & Grain Company Elevator	Waurika

Specific Properties Identified--continued

Kay

Deer Creek Elevator	Blackwell
Blackwell Mill and Elevator	Blackwell
Blackwell Coop Elevator (East House)	Blackwell
Kildare Farmer's Coop Elevator	Kildare
Clyde Coop of Nardin	Nardin
Farmers Coop Elevator (South House)	Newkirk
Blackwell Coop Wood Elevator	Peckham
D. E. Spencer Grain Co. Elevator	Ponca City
Ponca City Milling Co. Elevator	Ponca City
Old Adair-Morton Grain Co. Elevator	Ponca City
Farmers Coop Elevator (North House)	Tonkawa
Middleton Grain Elevator	Newkirk vic.

Kingfisher

Crescent Coop Elevator of Cashion	Cashion
Farmers Coop Elevator	Dover
Farmers Coop Elevator (East House)	Hennessey
Farmers Coop Elevator and Annex (West)	Hennessey
Star Mills and Elevator (West)	Hennessey
Star Mills Elevator (East)	Hennessey
Burrus Mills and Elevator (Wood House)	Kingfisher
Burrus Flour Mill and Elevator (NE)	Kingfisher
Burrus Flour Mill and Elevator (SE)	Kingfisher
Farmers Coop Elevator (South House)	Kingfisher

Kiowa

Farmers Coop Assn. Elevator (Wood House)	Hobart
Farmers Coop Elevator (South House)	Hobart
Planters Coop Tile Elevator (East)	Lone Wolf
Planters Coop Tile Elevator (West)	Lone Wolf
Mountain View Grain Co. Elevator	Mountain View
Farmers Coop Elevator and Annex	Mountain View
Farmers Coop Wood Elevator	Roosevelt
Farmers Coop Wood Elevator	Snyder

Major

Farmers Co-Op Elevator (South House)	Ames
Orienta Coop Elevator (South House)	Fairview

Specific Properties Identified--continued

Noble

Old Feuquay Elevator	Billings
Hayton Elevator and Mill	Billings
Farmers Coop Elevator	Morrison
Stillwater Milling Company Elevator	Perry
Perry Farmers Coop	Red Rock
Old Gansel Coop Grain Elevator	Lucien vic.

Oklahoma

Rodkey's Flour Mill Elevator	Edmond
Garrison Milling Co. Elevator (South House)	Oklahoma City

Roger Mills

Farmers Coop Wood Elevator	Cheyenne
Kimbell/Chickasha Mills Elevator	Reydon

Stephens

Old Briscoe Brothers Elevator	Marlow

Texas

Old Tex-co (Adams) Grain Elevator	Adams
Riffe Brothers Elevator	Baker
Riffe Brothers Grain Elevator	Goodwell
Light Grain Company Elevator	Guymon
Rogers Grain Co. Elevator	Guymon
Old Knutson Grain Elevator	Guymon
Light Grain Company Elevator	Hooker
Hooker Elevator Co. (Wood House)	Hooker
Riffe Brothers Elevator and Annex	Texhoma
Light Grain Elevator at Eva	Guymon vic.
Riffe Bros. Elevator at Mouser (East)	Hooker vic.
Riffe Bros. Elevator at Mouser (West)	Hooker vic.

Tillman

Farmers Coop Elevator Steel Tanks	Frederick
Farmers Coop Elevator (Hex House)	Frederick
Cassidy Grain Co. Elevator (NE House)	Frederick
R. S. Helton Grain Elevator	Grandfield
Farmers Coop Wood Elevator	Grandfield

Specific Properties Identified--continued

Tillman--cont.

R. S. Helton Grain Elevator of Loveland	Grandfield vic.
Manitou Grain Elevator	Frederick vic.

Washita

Farmers Coop Exchange Wood Elevator	Bessie
Farmers Coop Elevator (East House)	Bessie
Producers Grain Co. Steel Elevator	Cordell
Cordell Milling Company Concrete Tanks	Cordell
Dill City Grain Company Elevator	Dill City
Farmers Coop Wood Elevator	Rocky
Old Reiter Grain Co. Wood Elevator	Sentinel

Woods

Farmers Coop Assn. Elevator (East House)	Alva
Farmers Coop Terminal Elevator	Alva
Old W. B. Johnston Grain Co. Elevator	Alva
Alva Roller Mills and Elevator	Alva
Farmers Coop Elevator (East House)	Avard
Farmers Coop Elevator (South House)	Capron
Farmers Coop Assn. Elevator (North House)	Dacoma
Farmers Coop Elevator (North House)	Freedom
Walker Grain Wood Elevator	Freedom
Farmers Coop of Alva (West House)	Hopeton
Farmers Coop Elevator (South House)	Waynoka
Farmers Coop Elevator of Noel	Alva vic.

Woodward

Farmers Coop Elevator	Fort Supply
Farmers Coop Elevator	Mooreland
Zahn Grain Company Elevator	Sharon
Old Fisher Grain Terminal Elevator	Woodward
Farmers Coop Elevator	Woodward
Quinland Coop Wood Elevator	Mooreland vic.

XII. PLACES EXAMINED WHERE HISTORIC PROPERTIES NO LONGER EXIST

The Directory of Oklahoma Grain and Feed Dealers for 1940 listed 490 operators of an elevator business in the 32 western counties comprising the study area of the Western Oklahoma Grain Elevator survey. Since those 490 names met the 50 year criteria of the National Register, they became the principal "pool" of properties with potential historical significance. One of the main tasks of the survey was to visit each town or community to see whether the elevators identified were still extant. In many instances they were not. Those 308 properties that were on the 1940 list that were determined after a site visit to no longer exist are listed below by county. Along with properties that have deteriorated or are already on the register, they obviously warrant no further consideration for inclusion on the National Register.

Alfalfa

Enid Elevator Corp.	Aline
Wellington Terminal Elevator Co.	Aline
Amorita Milling Co.	Amorita
Glasgow Grain Co.	Augusta
Wellington Terminal Elevator Co.	Augusta
The Burlington Grain Co.	Burlington 73722
Enid Elevator Corp.	Burlington 73722
Alexander Grain Co.	Byron
Alfalfa Elevator Co.	Byron
Byron Grain Co.	Byron
Mr. J. M. Degrange	Byron
Enid Elevator Corp	Carmen 73726
Alva Roller Mills	Cherokee 73728
Enid Elevator Corporation	Cherokee 73728
Wellington Terminal Elevator	Cherokee 73728
Farmers Co-Operative Assn.	Daley

Places Examined Where Historic Properties No Longer Exist--continued

Alfalfa--cont.

Elmer Estill	Goltry 73739
Feuquay Grain Co.	Helena 73741
Helena Mill Co.	Helena 73741
Salina Terminal Elevator Co.	Jet 73749
Robinson Grain Co.	Lambert
The Alva Roller Mills Elevator	Loder
W.B. Johnston Grain Co.	McWillie (v. Helena)
Robinson Grain Co.	Yewed (Cherokee)
Wellington Terminal Elev. Co.	Yewed (Cherokee)

Beaver

Feuquay Grain Co.	Beaver 73932
Kimbell Milling Co.	Beaver 73932
Light Grain & Milling Co.	Beaver 73932
Texhoma Grain Co.	Beaver 73932
Kimbell Milling Co.	Floris
Light Grain & Milling Co.	Floris
Texhoma Grain Co.	Floris
Feuquay Grain Co.	Forgan
Forgan Co-Op Elevator Assn.	Forgan
Kimbell Milling Co.	Forgan
Feuquay Grain Co.	Gate 73844
Kimbell Milling Co.	Turpin 73950

Beckham

Shepherd & Son	Sayre 73662
E. C. Simmons & Son	Sayre 73662

Blaine

General Grain Co.	Canton 73724
Larabee Flour Mills Co.	Canton 73724
Reay Grain Co.	Canton 73724
Evans Grain Co.	Eagle City 73724
Wheeler Grain Co.	Eagle City 73742
Farmers Grain & Supply Co.	Greenfield 73043
Feuquay Grain Co.	Greenfield 73043
Adair-Morton Grain Co.	Hitchcock 73744
Geary Mill & Elevator Co.	Hitchcock 73744
Kingfisher Mill & Elevator Co.	Hitchcock 73744
Palecek Mills	Hitchcock 73744

Places Examined Where Historic Properties No Longer Exist--continued

Blaine--cont.

W.B. Johnston Grain Co.	Longdale 73755
Feuquay Grain Co.	Okeene 73763
Kansas Mill and Elevator Co.	Darrow (Okeene vic.)

Caddo

Chickasha Milling Co.	Apache 73006
Binger Elevator Co.	Binger 73009
Kingfisher Mill & Elevator Co.	Bridgeport 73012
A. R. Hacker Grain Co.	Carnegie 73015
Kimbell Milling Co.	Cyril
Fort Cobb Elevator Co.	Fort Cobb
C. O. Downing	Gracemont 73042
Snyder Grain Co.	Hinton 73040
General Grain Co.	Hydro 73048
McNeill Grain Co.	Hydro 73048
W.B. Johnston Grain Co.Inc.	Lookeba
El Reno Mill & Elev. Co.	McCool
Kingfisher Mill & Elev. Co.	Washita

Comanche

Farmers Co-Operative Elev. Ass.	Chattanooga 73528
Kimbell Milling Co.	Chattanooga 73528
Elgin Grain Co.	Elgin
Kimbell Milling Co.	Elgin
Kline Elevator Co.	Fletcher
Chickasha Milling Co.	Junction
Chickasha Milling Co.	Lawton 73502
Farmers Union Co-Op. Exchange	Lawton 73502
Tillman Co-Op. Assn.	Tillman (v. Chattanooga)

Canadian

Yukon Mill and Grain Co.	Banner
Karns Spur Grain Co.	Karns Spur
Dow Grain Co.	Okarche 73762
Farmers Co-Operative Assn.	Okarche 73762
Harry Hunter	Okarche 73762
Farmers Grain Co.	Union City 73090