

MISSOURI, KANSAS & TEXAS RAILWAY,  
BELLMEAD YARD, WARDEN LOCOMOTIVE SHOPS  
Union Pacific Milepost 842.40  
Bellmead  
McLennan County  
Texas

HAER No. TX-74-A

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

**HISTORIC AMERICAN ENGINEERING RECORD**  
**Southwest System Support Office**  
**National Park Service**  
**P.O. Box 728**  
**Santa Fe, New Mexico 87504**

## HISTORIC AMERICAN ENGINEERING RECORD

### MISSOURI, KANSAS & TEXAS RAILWAY, BELLMEAD YARD, WARDEN LOCOMOTIVE SHOPS

HAER No TX-74-A

Location: Union Pacific Milepost 842.40  
Bellmead, McLennan County, Texas

USGS Bellmead, Texas Quadrangle,  
Universal Transverse Mercator Coordinates  
14.68063.349576

Date of Construction: 1923

Present Owner: Union Pacific Railroad

Present Use: Abandoned

Statement of  
Significance:

The Bellmead Yard Locomotive Shops, constructed in a vernacular industrial style, were designed to take advantage of state-of-the-art technology of the period, including "fireproof technology." The largest portion of the immense building – the Erecting and Flue Shops – consisted of nineteen 25' bays, a length in excess of 475'-0". Other shop areas included the Machine and Electric Shops, Tank (Boiler), and Blacksmith Shops.

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A. General Statement:

1. History: The Warden Locomotive Shops were erected in 1923 and remained in continuous service until the 1950s. The facilities were altered in 1968 when the shops were converted to a bomb casing plant. Equipment was removed and sold as scrap from that year onward at indeterminate times. The building was vacant in 1997 and subject to periodic vandalism.
2. Architectural Character: The facility consists of five original buildings that were erected as attached structures. They include the Erecting and Flue Shops; the Machine, Tank (Boiler) and Electric Shops; the Worker Locker/Toilet Building; and the Storage and Shop Office Buildings. The largest building, four stories in height, contains the Erecting and Flue Shops. The Machine, Tank, and Electric Shops are located in two bays that are attached to the west side of the erecting bay. They are 2 1/2 stories in height. The remaining buildings include the Worker Toilet/Locker Building, with a time clock area that is one story in height; a one-story Storage Building, and the two-story Shop Offices. A crane runway over platform was erected on the east side of the machine shops. Erected on metal "A frame supports," the structure is 100'-0" in length and 27'-0" in height. Construction during the late 1960s produced several corrugated metal building additions that obscure the original Warden Shops' configuration (See photographic documentation HAER No. TX-74-A-01-15 and digitally scanned and printed copies of original architectural, mechanical, and some structural drawings from microfilm in aperture cards).

B. Description of the Exterior:

1. Overall Dimensions: The Erecting and Flue Shops roughly measure 475'-0" in length and when combined with the Machine, Tank and Electric Shops are 242'-5-1/2" in width. The height of the Erecting Shops is 62'-3/4"; while the Machine, Tank and Electric Shops are 44'-5/8". The height of these latter areas, including roof monitors is 58'-4". The Worker Toilet/Locker Building is 151'-1" in length and 26'-1" in width. The Storage Building is 181'-8-1/2" in length and 52'-8-1/2" in width; and the Shop Office Building is 151'-8" in length and 52'-1/2" in width. The Worker Toilet/Locker Building is 14'-9-3/4" in height; the Storage Building is 15'-2-1/2"; and the Shop Office Building is 28'-1/2" in height [1].
2. Foundations: Column footings for the Erecting, Flue, Machine, Tank (Boiler), and Electric Shops are cast-in-place concrete. They have been sunk to a depth ranging from 3'-5" to 8'-0" and vary in size from 11'-0" x 14'-0" to 13'-0" x 17'-0". The foundation walls are board-formed concrete and typically measure in thickness from 1'-1" and 2'-2" to 11'-0" [2].

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The foundations for the Storage and Office Buildings include cast-in-place concrete and board-formed concrete foundation walls. Unfortunately, no dimensions were located during the research investigations [3]. The foundations for the Worker Toilet/Locker Building are cast-in-place concrete piers on spread footings. The footings range in depth from 1'-4" to 4'-0" and are 1'-0" in thickness and 1'-6" in width. The foundation walls are 1'-1" in thickness. Pipe tunnels are located beneath Fan Room No. 1 and the Toilet Rooms. They range in depth from 2'-6" to 7'-6" and have board-formed concrete walls that are 6" in thickness [4].

3. Wall Construction: Wall construction at the west (front) and east (rear) facades of the Erecting and Flue Shops includes two masonry corner and two intermediate piers. The piers are constructed of 13" brick, which is laid in running bond above 3'-0" high concrete bases that are chamfered. The corner piers are 7'-0" in width and the intermediate piers are 5'-10" in width. The intermediate piers include a rowlock key as a first course and frame a 13'-0" entry that is fitted with a pair of steel doors with fixed steel sash, surmounted by a wall of 14" x 20" steel sash. The space between the intermediate and corner piers is infilled to a height of 2'-0" with 9" brick, laid in running above a single rowlock base course, and capped with a concrete sill. This supports 14" x 20" steel sash, which have been erected to a height of 53'-1". A precast concrete panel, 4" thick and 3'-4" in width, creates a horizontal band that spans the entire facade of the building, including both the intermediate and corner piers. Above the concrete panel is laid between the corner and intermediate piers a decorative band of rowlock courses to a height of 1'-1". The east and west facades of the Erecting and Flue Shops feature a decorative brick panel in basket weave pattern and the company's name, "MKT" and "Missouri-Kansas-Texas Lines," placed within a cast terra cotta shield beneath three corbeled dentil courses that are capped by a precast concrete pediment. The terra cotta emblem measures 5'-4" in width, is 4'-6" in height, and has 18" letters. Wall thickness at the corner and intermediate piers are 1'-1" and the wall thickness of the infill panels between piers is 18" [5].

Wall construction of the north and south (side) facades of the Erecting and Flue Shops, as well as the Machine, Tank (Boiler), and Electric Shops, include masonry corner and intermediate piers with concrete bases. The immediate piers on the south side originally framed entries that were fitted with steel entry doors and glazed with 14" x 20" steel sash. The doors were surmounted by steel window sash and have been removed. The clerestory remains and is over 47' in height. The steel sash is capped with a precast concrete cornice and gutter. Like the east and west facades, the masonry piers have precast concrete coping. Wall thicknesses at the corner and intermediate piers are also 1'-1", and the wall thickness of the infill panels between piers is 18" [6].

Wall construction for the Storage Building and the Shop Office Building consists of

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masonry load-bearing walls that are 1'-1" in thickness. The walls are detailed with corner and intermediate piers and masonry infill panels of 9" brick. The end piers are 3'-6" in width, have concrete bases, and feature a decorative key, laid as a rowlock course. The intermediate piers range in thickness from 2'-8" to 3'-0" and are similarly detailed. The infill panels are constructed in running bond above a single rowlock course, laid in 9" brick [7].

Wall construction for the Worker Toilet/Locker Building consists of masonry load-bearing walls that are 1'-1" in thickness, laid in running bond, and fenestrated with small openings for doors and windows that are spanned by steel lintels [8]. The wall thickness is reduced to 9" at the employees entrance [9].

4. Structural System, Framing: The structural system of the Erecting, Flue, Machine, Tank, and Electric Shops consists of massive steel columns that support the steel sash of the exterior walls, as well as crane girders and steel roof trusses. They frame girts vary in width from north-south and east-west. The bay widths measure 17'-9", 18'-5-1/2", and 18'-10" at entrances and 25'-0", 26'-0", and 30'-0" standard bay widths at the transverse (east-west) section. Longitudinally (north-south), the standard bay width is 25'-0". A column schedule was not located during the research investigations; however, the columns are composite members, which measure either 5'-0" x 1'-4" or 6'-5-1/2" x 2'-8" at the first floor. The columns at the upper stories are reduced to 2'-1-3/8" in depth. They have been constructed from steel stock and include flanges, angles, web plates, and stiffeners of varying dimensions. The components have been punched, milled, secured with 7/8" bolts, and coated in the Mt. Vernon Bridge Company Shops with paint that was described during the period as "red lead and oil" [10].

The columns extend 23" above the roof beams. Vertical lengths of columns C-1 through C-4 are 12'-10". Columns C-5 through C-100 are in 12'-10" and 13'-10" lengths. Columns C-100 through C-102, as well as C-97 through C-101, are in 14'-2" lengths. The drawings carried the note to "make provisions for future extensions on [the] west and south sides [of the Storage and Office Buildings]" [11].

The columns carry crane rail girders, which have been designed for dead and live loads associated with the operation of 15-, 40-, and 200-ton overhead cranes. The girders for the 15-ton units are constructed of multiple sections that include four 6" x 6" x 3/8" angles for flanges, attached to one 30" x 3/8" web plate, with 12" x 3/8" plates used as stiffeners [12]. Forty-ton crane girders are constructed of multiple sections that consist of four 6" x 6" x 3/8" flange angles, one 48" x 1/2" web plate, and one 16" plate used as a top chord stiffener [13]. The girders for the 200-ton units are constructed of multiple sections that include four 6" x 6" x 1/2" flange angles, two 16" x 3/8" steel plates, one 60" x 3/8" web plate, one 24" "C" channel used as a top flange stiffener, and 5" x 3" x 1/2" stiffeners,

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spaced at varying centers [14]. All girder and column connections include two 4" x 3" x 3/8" angles, which are used as up-braces [15]. The floor framing of the Office Building consists of 20" "I" beams laid east-west, supported by steel girders constructed of four flange angles and web plates that are located along the perimeter and at a 25'-0" centerline [16].

5. Awnings, Canopies: A red concrete tile hood (canopy) is located on the east facade. Framed with steel members, the awning provided protection for a 140-ton crane, which traveled east-west on an elevated "crane runway over platform," which was erected on the east side of the machine shops. Projecting 8'-0" from the east facade, the hood is supported by a steel frame, steel up-braces, and 10" "Channel purlins" that are oriented north-south and spaced at 4'-0" and 3'-8" centers [17]. An awning with a composition roof was located above the employee entrance to the time clock room. It projected 5'-1" from the building's facade, was fitted with copper gutters, and has been removed [18]. A red cement tile canopy with signage indicating "Offices" in white lettering on a blue background was also located at the south side of the Storage Building but has been removed. Projecting 6'-0" from the south facade, it was also 6'-0" in width and supported by steel brackets and up-braces [19].
  
6. Openings
  - a. Doorways and Doors: All doors in the Erecting and Flue Shops and the Machine, Tank (Boiler) and Electric Shops are constructed of steel and are of two types – pedestrian and vehicular. Pedestrian doors are of "tubular" steel and are glazed with nine lights each. They measure 4'-0" x 7'-0". Vehicular doors measured 13'-8" in width and 17'-0" in height at the shop sides but have been removed [20]. Vehicular doors that measure 13'-0" in width remain at the shop ends. They are 17'-0" in height. The vehicular doors in the shop sides were carried by overhead tracks and had forged hinges that were manufactured by Mt. Vernon Bridge Company. The shop end doors are hinged and have similar hardware. The hinges measure 4'-3-1/4" x 2-1/2" and are of steel. The doors bear on two 6" x 3/8" curved steel plates that have been embedded and are flush with a concrete threshold. The plates have an inside radius of 5'-6". The door manufacturer was not located during the research investigations [21]. Replacement doors are metal roll-up throughout.

The doors of the Worker Locker/Toilet Building are of two types. Both are constructed of "tubular" steel and glazed with nine or six lights each. They measure 3'-0" x 7'-0" and 2'-6" x 7'-0", respectively. The doors in the Storage and Shop Office Buildings are also constructed of "tubular" steel and glazed with nine or six lights each. Entrances on the east facade include paired 4'-0" x 8'-0" sliding steel doors with single lower panels and

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nine lights each. Entrances on the south and west facades feature doors which measure 3'-0" x 7'-0". They have a single lower panel and six lights each. The entry on the north facade includes a two light transom [22]

b. Windows: The Erecting and Flue Shops, as well as the Machine, Tank (Boiler) and Electric Shops are fenestrated with operable steel casements throughout. They typically measure 14" x 20" and are assembled in various configurations. The vertical dimensions are typically 11'-11-1/2" in height and are in a variety of widths. They include at the intermediate bays, 7'-4-1/8" (column centerline to mullion centerline), 10'-3-3/4" (mullion centerline to mullion centerline), 7'-4-1/8" mullion centerline to column centerline). At the end bays, the widths are 6'-1-7/8" (column centerline to mullion centerline), 10'-3-3/4" (mullion centerline to mullion centerline) and 6'-1-7/8" (column centerline to mullion centerline).

The steel sash are set 1'-1-5/8" inside the column centerline. Casements at the first floor are seated on top of a concrete sill that is 2'-1-5/8" above finished floor and the top of rail [23]. Intermediate steel bracing is 3" x 3" x 3/8" steel. Window verticals are 2-1/2" x 2-1/2" x 3/8" steel throughout [24].

The windows in the Worker Locker/Toilet Building are 14" x 20" steel sash and vary in dimension. They are assembled in configurations that measure 6'-3/4" x 3'-5-5/8", 3'-0" x 6'-6-3/4", and 14'-11-1/8" x 6'-6-3/4". The windows in the Storage and Office Buildings are also 14" x 20" steel sash. They are in widths of 4'-10-3/4", 9'-9-1/2", and 21'-4-3/4" and are 6'-10" in height at the first floor. On the second floor, the windows are in 21'-4-3/4" widths and are 8'-6-3/4" in height [25].

c. Monitors:

The roofs of the Machine, Tank (Boiler), and Electric Shops are broken by monitors that measure 475'-0" in length and are 14'-3-7/8" in height. They are fitted with top hung steel sash and glazed with wired glass throughout [26].

7. Roof:

a. Shape. Covering: The roofs of the Erecting and Flue Shops as well as the Machine, Tank (Boiler), and Electric Shops are canted and are built of 1-7/8" thick concrete tile. The tiles are supported on 12" steel "C"-channel purlins, which are laid east-west and bear on steel trusses. The trusses at the Erecting and Flue Shops include end and intermediate trusses. The end trusses have bottom chords that consist of two flange angles which measure 6" x 6" x 5/8", attached to a splice plate that is 8" x 1/8" and a 3" x 3" x 1/8" angle. The top chord consists of two 6" x 6" x

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3/4" flange angles that have been "punch[ed] with 13/16" dia[meter] holes at 3'-0" centers" [27]. The intermediate trusses have top and bottom chords, which are constructed of two 6" x 6" x 5/8" flange angles. Steel struts include both verticals and diagonals. Verticals consist of two flange angles, which vary in dimension by location. They include 4" x 3" x 7/16" dimension by location. They include 4" x 3" x 7/16", 3-1/2" x 2" x 3/8", and 3" x 3" x 3/8". Diagonals also vary in dimension by location and include two flange angles. They range from 3" x 3" x 7/16" at the truss ends to 2-1/2" x 2-1/2" x 1/8" at the ridge [28].

The trusses at the Machine, Tank (Boiler), and Electric Shops also include end and intermediate members. The end trusses have bottom chords that consist of two flange angles which measure 6" x 6" x 5/8" attached to a splice plate that is 8" x 1/8" and a 6" x 3-1/2" x 3" angle "for [the] windows" [29]. The top chords are 6" x 6" x 11/16" flange angles. Steel struts include both verticals and diagonals. The verticals range from 3-1/2" x 3-1/2" x 3/8" at the truss ends to 3" x 3" x 3/8" at the ridge. The diagonals also vary in dimension from 3" x 3" x 3/8" at the truss ends to 2-1/2" x 3" x 3/8" at the ridge. The intermediate trusses have top and bottom chords, which include two flange angles, which measure 6" x 6" x 1/2". The bottom chords also have 13" x 1/2" splice plates. Vertical and diagonal struts have similar dimensions to those in the end trusses. [30].

The roof of the Worker Locker/Toilet Building is sloped north-south and is framed with 15" "I" beams, oriented north-south and 8" "C"-channel purlins, oriented east-west. The roofs of the Storage Building are canted in two directions (east and west) and built of 1-7/8" concrete tile. The roof framing consists of both perimeter and center ridge girders. The center ridge girder has been located on a 25'-0" centerline and is oriented north-south. Along with the perimeter girders, it is a composite member and consists of four 6" x 4" x 3/8" flange angles attached to one 28" x 3/8" web plate. The girder supports 20" "I" beams, which are spaced at 8'-4" centers and are oriented east-west [31]. The roof of the Shop Office Building is also canted in two directions and built of 1-7/8" concrete tile. The roof framing is similar to that of the Storage Building but consists of steel members of two different sizes. They include "I" beams, which are located along the perimeter, as well as a 25'-0" centerline, which are 24" in depth. These members support 15" "I" beams that have been spaced at centers of indeterminate dimension [32].

b. Cornice: The cornices of the Erecting and Flue Shops, as well as the Machine, Tank (Boiler), and Electric Shops, vary in size and profile. At the north and south (side) facades, they are precast concrete with gutters which measure 7-1/2" in height. They are supported by 10" "C" channels, which span the length between the intermediate piers [33]. At the east (rear) and west (front) facades, the cornices are formed by 9" precast concrete coping and precast concrete pediments [34]. The cornices of the Worker Locker/Toilet Building as well as Storage and Shop Office Building are formed by

8" and 6" precast concrete coping, respectively [35].

C. Description of Interior:

1. Floor Plans:

a. First Floor: Pedestrian entry into the Erecting and Flue Shops, as well as the Machine, Tank (Boiler), and Electric Shops, was originally provided by five doors at the employees entrance. Anglo and African-American workers entered segregated locker and toilet rooms or any of the shop areas, which were open and identified by separate bays. Vehicular entry was originally through five doors, located at bays 2, 14, 16, and 18, which were in the south facade and one entry at bay 16 in the north façade – which was a through track. With the exception of bay 16, the original vehicular entries have been enclosed. The original employee access to the Bellmead Shop[s] Storage and Office Building was at the east end of the Erecting Shop. The Storage Building was originally open, except for three rooms that were located on the north end. They included two rooms that were identified on the drawings as a Timekeeper's Office and Storage, as well as a Lobby with a stairwell [36].

The entry to this building from the shop areas has been enclosed, and there was no access available during the field investigations.

b. Second Floor: The second floor of the Shop Office Building is reached by a stairwell, entered from the east end of the Erecting Shop, which also provides access to a mezzanine, which overlooks the shop floor. A second stairwell and landing is located against the interior face of the building's north wall. The second floor includes a Manufacturing Tool Room, Timekeeper and Clerks' Office, the Shop Superintendent's Office and a File Room [37]. The second floor of the Machine, Tank (Boiler), and Electric Shops, as well as the upper stories of the Erecting and Flue Shops are open. Access to the crane girders and the cabs for the crane operators was provided by steel ladders, which are adjacent to the mezzanine and at columns at alternating bays.

2. Flooring: Floor finishes vary from concrete in the Erecting, Flue, Machine, Tank (Boiler), and Electric Shops, as well as the Storage and Worker Toilet/Locker Buildings, to linoleum tile in the Shop Office Building. All pits in the shops have been filled with concrete.

3. Wall Finish: The wall finishes of the Erecting and Flue Shops, as well as the Machine, Tank (Boiler), and Electric Shops are brick and are painted. The wall finishes of the Storage and Office Buildings, as well as the Worker Toilet/Locker Building, are plastered and painted. Interior partitions are 6" clay tile throughout, covered with portland cement

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plaster. A tile wainscot is located in the lobby/stairwell of the Office Building [38].

4. Doorways and Doors: Interior doors at the Erecting and Flue Shops as well as the Machine, 11 Tank (Boiler), and Electric Shops were presumably constructed of "tubular" steel and were paneled, but have been removed. The interior doors of the Worker Toilet/Locker Building also were constructed of "tubular" steel with two lower panels and glazed with single lights [39]. Doors to the Men's Toilets were metal two-panel. All interior doors measured 3'-4" x 6'-10". Original toilet partition doors were wood and have been removed.
5. Light Fixtures: Light fixtures of the Erecting and Flue Shops as well as the Machine, Tank (Boiler), and Electric Shops are 300-watt incandescent throughout. They are placed, two fixtures per bay, and one at every column. Flood lights for the buildings' exteriors are 500-watt incandescent fixtures. Entries are provided with 100-watt fixtures above the doors. The Worker Locker/Toilet Building is lit with 50-watt fixtures throughout. The work areas in the Shop Office Building are illuminated with 100-watt fixtures, and 75-watt lights illuminate the Storage Building [40].
6. Heating: Heating ducts and fan outlets provided hot air for the Erecting and Flue Shops as well as the Machine, Tank (Boiler), and Electric Shops. Two Heat & Fan Rooms located on the north and south sides of the facility generated hot air to heat the shops. The heating ducts were of various sizes. They included 72" x 82", 36" x 36", 34" x 36", 33" x 36", 32" x 30", 30" x 33", 30" x 31", 30" x 29", 26" x 29", 24" x 34", 24" x 24", as well as 24", 16", 10" and 8" ducts [41].

Steam radiators provided heat for the Worker Toilet/Locker Building as well as the Storage and Shop Office Building. The steam was generated in the Bellmead Power House and was fed to the buildings through 6" underground supply lines, then under each building through a series of concrete-lined pipe tunnels. The return lines were 3" in diameter. The heating contractor was Hill Bros. of Waco, Texas [42].

7. Equipment: Some of the principal pieces of floor equipment that were employed for use in the Bellmead Locomotive Shops at its opening in 1923 included the following: One 2000- Cubic-Foot Air Compressor; one Open Type Feed Water Heater; two 328-Horsepower Boilers; one 40-ton "Shaw" Traveling Crane; one 180-ton "Shaw" Traveling Crane; two 15-ton "Shaw" Traveling Cranes; one Heavy Duty Armature Machine; one Armature Coil and Taping Machine; one Magnet Wire Race and Tension Device; one Armature Truck-Type "7"; two Armature Stands-Type "A"; four Upright Drills; two Double Emery Grinding Machines; one 42" Band Saw with Tilting Table; one Rip Saw with one 30" and one 28" Blade[s]; one 36" Cut Off Saw; one 36" x 6" Grind Stone; one 36" Square Shears for 16 ga[uge] plates; one 8 ft. Cornice Break for 16 ga[uge]

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plates; one Splitting Shear [with] 48" throat; one 8' Timmers Roll for 14 ga[uge] stock; one Pipe Threading Machine (2" to 4"); one Pipe Threading Machine (74" to 2"); one Double Locomotive Driving - Wheel Quartering Machine; one 100-ton Driving Box Press; one Journal Turning Lathe; one Heavy Vertical Turning and Boring Mill; one 600-ton Driving Wheel Press; one Piston Rod Grinding Machine; one 35-ton Hydraulic Press; two No. 4 Milling Machines; one Morton Spec. 32" Draw Cut Shaper, four Extra Heavy Duty Crank Shaper[s] (32"); three 4' Plan Radial Drills; two 36" Vert[ical] Turret Lathes; one 44" Vertical Boring and Turning Mill; one 44"-24" Vertical Turning Lathe; one Heavy Duty Planer; one 26" Heavy Duty Crank Drive Slotting Machine; four Double Emery Wheel Grinding Machine[s] (18"); seven 4-Double Emery Wheel Grinding Machine[s] (12"); two High Speed Hack Saws; two 36" x 36" x 16" Heavy Duty Planers; one Horizontal Boring, Drilling and Milling Machine; 1-24" Heavy Duty Crank Planer; one Double Head Bolt Cutter (2 1/2"); one Triple Head Bolt Cutter (2"); one Heavy Duty Cold Cut Off Saw; two 6 ft. Plain Radial Drills; three Baker Type High Power Drilling Machines (2"); two Baker Type High Power Drilling Machines (3"); one Locomotive Guide Bar Grinding Machine; one Duplex Locomotive Rod Boring Machine; and two Disc Grinders [43].

Additional floor equipment included: one No. 3 Milling Machine; one No. 2 Milling Machine; one Grinding Machine to take 48"; one Yankee Drill Grinder; one 16" x 8" Engine Lathe; one Tool Grinding and Shaping Machine; six Blacksmith Anvils (350"); one Electric Tool Hardening Furnace; one Electric Oil Tempering Bath; one Gas Fired Oven Furnace; one 4 Spindle Multiple Drilling Machine; one 4 Spindle Stay Bolt Threading Machine; one Plate Annealing Furnace; one Westinghouse Air Brake Testing Rack; two 20" x 4' Geared Head Engine Lathe; two 24" x 6' Geared Head Engine Lathe[s]; one 36" x 12' Geared Head Engine Lathe; two 24" x 6' Geared Head Engine Lathe; one 42" x 19' Geared Head Engine Lathe; one 36" x 10' Geared Head Engine Lathe; two 27" x 6' Geared Head Engine Lathe[s]; three 24" x 8' Geared Head Engine Lathe[s]; four 20" x 6' Geared

Head Engine Lathe[s]; two 18" x 4' Portable Geared Head Engine Lathe[s]; one 28" Upright Drill; one 10' Flange Clamp; 1-8' Flange Clamp; one Rotary Bevel Shear [for] 1/8" plate; one Double End Punch and Shear; one Set Plate Bending Rolls for 1" plate; one Set Plate Bending Rolls for 1/8" plate; four Single Operator Portable Electric Arc Weld[ing] Mach[ines]; one Case Pneumatic Flanging Machine; one Ryerson Flue Shop Equipment, one 2500 [lb.] Steam Hammer; one 1100 [lb.] Steam Hammer; one 200 [lb.] Bradley Hammer; one No. 8 Ferguson Furnace to burn oil; one No. 5 Ferguson Furnace to burn oil; one Motor Driven Bar Shear; one Bull Dozer Ajax No. 7; one 4" Motor Driven Forging Mach[ine]; one Motor Driven Forge Blower; one Motor Driven Libby Lathe; two 3" x 36" Turret Lathes; one Bolt Centering

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Machine [for] 9" stock; one Bolt Centering Machine [for] 4" stock; one Horizontal Punch; three Single Forge Pressure Blowers; one Electric Rivet Heater; three Electric Rivet Heater[s]; one Die Grinder for Bolt Cutter Dies; one Link Grinder for Loco[motive] Work; two 2" Motor Driven Fox Lathes; one Turret Lathe for Brass Work; one Clamp Press for Renewing Abrasive Sheets; one Baker No. 121 H[igh] S[peed] Drill for Tool Room; one Double 172" Punch from Denison; one 20" Slotter from Denison; [and] one 80 Loco[motive] Wh[ee]l Lathe from Denison [44].

8. Hardware: Original hardware for exterior doors such as forged hinges and steel sash operators for windows intact on the east and west facades. Other hardware has been removed along with the original doors at indeterminate dates, following the conversion of the facility by A.O. Smith in 1968 [45].

D. Site:

- 1.. General Setting: The site is relatively flat and slightly overgrown with vegetation from a lack of general maintenance. A gravel road is located on the north, south, and west sides of the building. The north road provides vehicular access through an opening in the nineteenth bay of the north facade.
2. Landscaping. Enclosures: The north facade is enclosed by a chain link fence with a gate. The site has not been landscaped.

E. Endnotes:

1. Drawing Nos. 16 and 17 of 51, "Bellmead Locomotive Shop[s], Detail of End Wall[s]." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
2. Drawing Nos. 0 [sic], 2A, & 20 of 51, "Bellmead Locomotive Shop[s], Plan and Elevation[s] of Column Footings; Details of Foundation Walls; Section Thru North & South Walls." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
3. Drawing No. 24 of 51, "Bellmead Locomotive Shop[s], Shop Office First [and] Second Floor Plans, Elevations, [and] Section." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
4. Drawing No. 27 of 51, "Bellmead Locomotive Shop[s], Plan, Elevations, Sections, [and] Details of Building for Toilets, Lockers & Fan Room No. 1." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.

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5. Drawings Nos. 16 & 17 of 51, "Bellmead Locomotive Shop[s], Detail of End Wall[s]." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
6. Drawing Nos. 16, 17, & 20 of 51, "Bellmead Locomotive Shop[s], Detail of End Wall[s]; Section[s] Thru North [and] South Walls." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
7. Drawing Nos. 24, 24A, & 26 of 51, "Bellmead Locomotive Shop[s], Elevations, First Floor Plan, [and] Section[s]; Second Floor Plan, Elevation[s], Section; Store Room Beam Details, Elevation, Plan [and] Section Thru Door-way [sic]". Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
8. Drawing No. 27 of 51, "Bellmead Locomotive Shop[s], Plan, Elevations, [and] Sections of Building for Toilets, Lockers & Fan Room No. 1." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
9. Drawing No. 36 of 51, "Bellmead Locomotive Shop[s], Time Clock Room, Plan, Section[s], [and] Awning Detail." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
10. Drawing No. E5, "End Elevations, Framing & Girts." Mt Vernon Bridge Company, Mt Vernon, Ohio. Drawing No. 5 of 51, "Bellmead Locomotive Shop[s], [Building Section,] Plan[s] of Typical Column Base[s]". Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
11. Drawing No. 3A of 51, "Bellmead Locomotive Shop[s], Column Location Plan, Present Roof [and] Extension Roof Plan." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923. Drawing No. E5, "End Elevations, Framing & Girts." Mt. Vernon Bridge Company, Mt. Vernon, Ohio. 1922.
12. Drawing No. 5 of 51, "Bellmead Locomotive Shop[s], [Building Section,] Plan[s] of Typical Column Base[s]". Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
13. Drawing No. 6 of 51, "Bellmead Locomotive Shop[s], [Building Section,] Plan[s] of Base[s] - Cols. #64483; Cols. #88496". Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
14. Drawing No. 5 of 51, "Bellmead Locomotive Shop[s], [Building Section,] Plan[s] of

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- Typical Column Base[s]". Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
15. Drawing No. 6 of 51, "Bellmead Locomotive Shop[s], [Building Section,] Plan[s] of Base[s] -Cols. #64483; Cols. #88496". Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
  16. Drawing No. 24 of 51, "Bellmead Locomotive Shop[s], Shop Office First [and] Second Floor Plans, Elevations, [and] Section." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
  17. Drawing Nos. 10 & 28 of 51, "Bellmead Locomotive Shop[s], Hood Over Portal; Section 'N-N' [and] Elevation." Office of the Chief Engineer, MK&T Railway of Texas, St. Louis, Missouri. Drawn 1922, revised 1923.
  18. Drawing No. 36 of 51, "Bellmead Locomotive Shop[s], Time Clock Room - Awning Detail." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
  19. Drawing No. 25 of 51, "Bellmead Locomotive Shop[s], Detail of Canopy at Office Entrance." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
  20. Drawing No. 3A of 51. "Bellmead Locomotive Shop[s], Elevation of Sliding Door." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
  21. Drawing Nos. 20, 21, & 22 of 51. "Bellmead Locomotive Shop[s], Elevation of Steel Doors; Elevation of Doors, Sections [and] Details; [Door] Elevation, Sections, Detail[s]; Detail of Forged Hinges." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
  22. Drawing No. 24 of 51, "Bellmead Locomotive Shop[s], Shop Office First [and] Second Floor Plans, Elevations, [and] Section." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
  23. Drawing No. 13 of 51, "Bellmead Locomotive Shop[s], South Side Elevation." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
  24. Ibid.

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25. Drawing No. 24 of 51, "Bellmead Locomotive Shop[s], Shop Office First [and] Second Floor Plans, Elevations, [and] Section." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
26. Drawing No. 11 of 51, "Bel[mead Locomotive Shop[s], Elevation of Top Hung Sash on North Side of 80'-0" Bay. Over 71 Foot Machine Bay." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
27. Drawing No. 5 of 51, "Bellmead Locomotive Shop[s], [Sections and Details]. Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
28. Ibid.
29. Drawing No. 6 of 51, "Bellmead Locomotive Shop[s], [Sections and Details]." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
30. Ibid.
31. Drawing No. 3 of 51, uBellmead Locomotive Shop[s], Plan Showing 15 & 40 Ton Crane Girders [and] Store Room Roof. Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
32. Ibid.
33. Drawing No. 20 of 51, "Bellmead Locomotive Shop[s], Section[s] Thru North [and] South wall[s]." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
34. Drawing No. 16 of 51, "Bellmead Locomotive Shop[s], Detail of End Wall." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
35. Drawing Nos. 26 & 27 of 51, "Bellmead Locomotive Shop[s], Elevation [and] Section Thru Doorway; Elevations [and] Trans-verse Section of Building for Toilets, Lockers & Fan Room No. 1." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
36. Drawing Nos. 29 & 30 of 51, uBellmead Locomotive Shop[s], Heating [and] Details of

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Fan Outlet; [Radiators -] Store Room - First Floor Plan." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.

37. Drawing No. 30 of 51, "Bellmead Locomotive Shop[s], [Radiators -] Store Room - First [and] Second Floor Plan[s]." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
38. Drawing No. 25 of 51, "Bellmead Locomotive Shop[s], Detail of Office Stairs [and Interior] Elevation." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
39. Drawing No. 27 of 51, "Bellmead Locomotive Shop[s], Elevation of Interior Wall of Fan Room From Shop". Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
40. Drawing No. 13 of 51, "Bellmead Locomotive Shop[s], Oxweld and Lighting Plan." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
41. Drawing No. 29 of 51, "Bellmead Locomotive Shop[s], [Heating and] Details of Fan Outlet." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
42. Drawing No. 30 of 51, "Bellmead Locomotive Shop[s], Store Room, Shop Offices & Shop, Toilet & Locker Room Building, Engine House & Emergency Hospital [Heating]." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.
43. "Equipment Schedules." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Prepared 1922, revised 1923.
44. Ibid.
45. Drawing Nos. 21 & 22 of 51, "Bellmead Locomotive Shop[s], Hinge Detail[s], and] Latch, Block & Keeper[s]; Detail of Forged Hinges." Office of the Chief Engineer, MK&T Railway of Texas. St. Louis, Missouri. Drawn 1922, revised 1923.