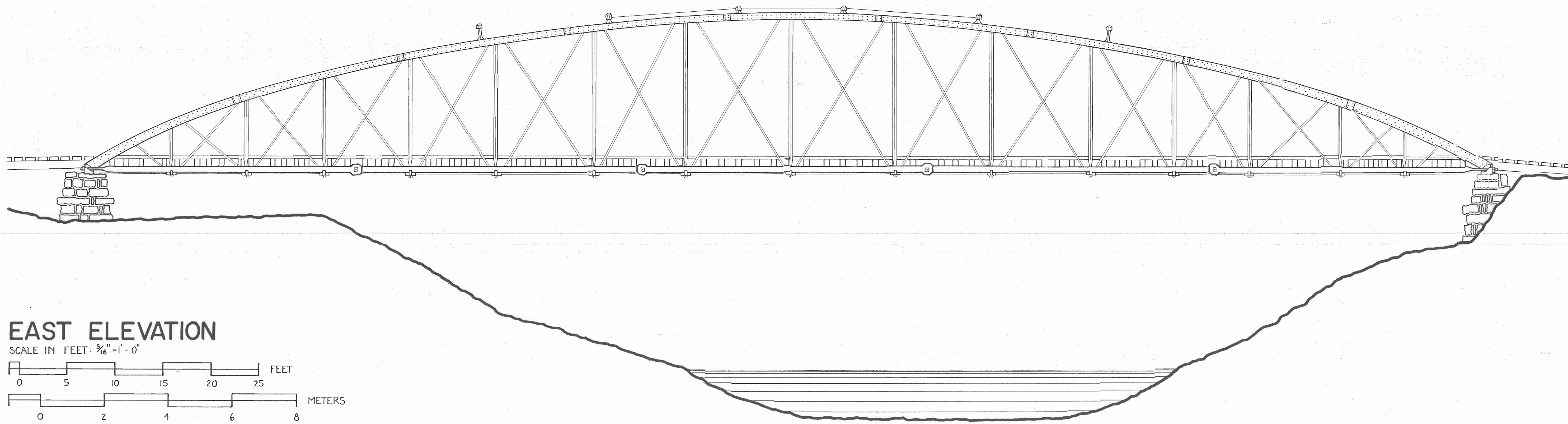


SPRINGFIELD - DES ARC BRIDGE

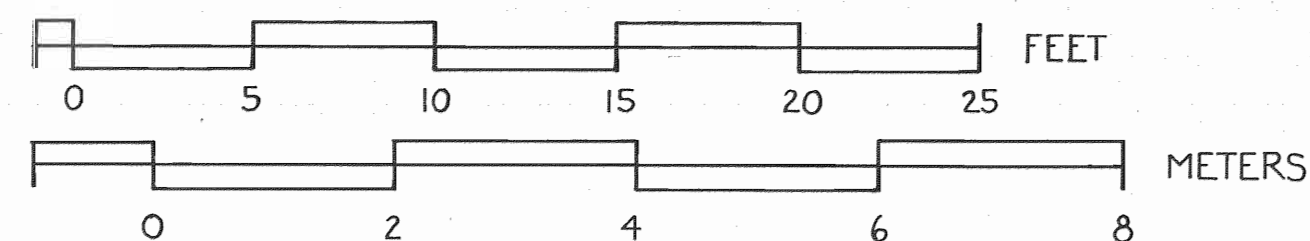
1871 - 1874

SPRINGFIELD, ARKANSAS



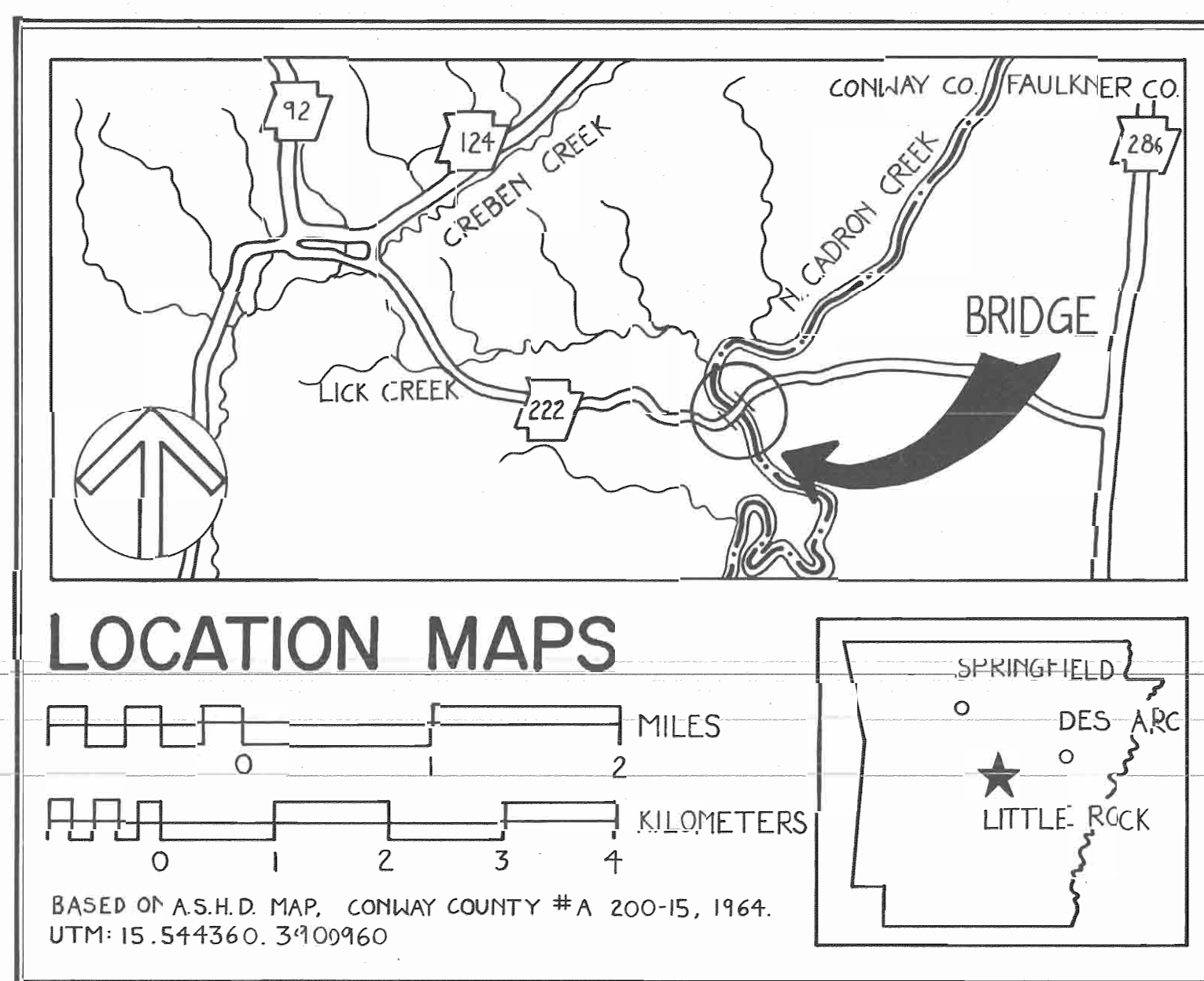
EAST ELEVATION

SCALE IN FEET: 3/16" = 1'-0"



THE SPRINGFIELD-DES ARC BRIDGE SPANNING NORTH CADRON CREEK, IS THE OLDEST REMAINING IRON BOWSTRING ARCH BRIDGE IN THE STATE. THE BRIDGE WAS BUILT ON THE ROAD LINKING SPRINGFIELD, THE CONWAY COUNTY SEAT FROM 1850-1873, WITH DES ARC, AN IMPORTANT STEAMBOAT LANDING ON THE WHITE RIVER. THE BRIDGE, COMPLETED IN 1874, IS AN UNALTERED EXAMPLE OF AN IRON TUBULAR ARCH DESIGN PATENTED BY ZENAS KING IN 1861 AND 1866. KING IS A SIGNIFICANT NINETEENTH-CENTURY BRIDGE BUILDER, CREDITED WITH BEING THE FIRST TO DEVELOP A PRACTICAL SYSTEM FOR MASS-PRODUCING BOWSTRING ARCH BRIDGES. BY 1884, HIS OHIO-BASED BRIDGE COMPANY WAS THE LARGEST HIGHWAY BRIDGEWORKS IN THE UNITED STATES.

THE SPRINGFIELD-DES ARC BRIDGE WAS ONE OF A VERY FEW KNOWN BRIDGES MANUFACTURED BY THE KING IRON BRIDGE MANUFACTORY AND IRON WORKS OF IOLA, KANSAS, A SHORT-LIVED BRANCH OF THE OHIO FIRM. THE SPRINGFIELD-DES ARC BRIDGE IS ONE OF ONLY TWO KNOWN REMAINING, NINETEENTH-CENTURY BRIDGES IN ARKANSAS, AND IS AN EXCELLENT EXAMPLE OF ZENAS KING'S CONTRIBUTION TO BRIDGE ENGINEERING IN THE UNITED STATES.

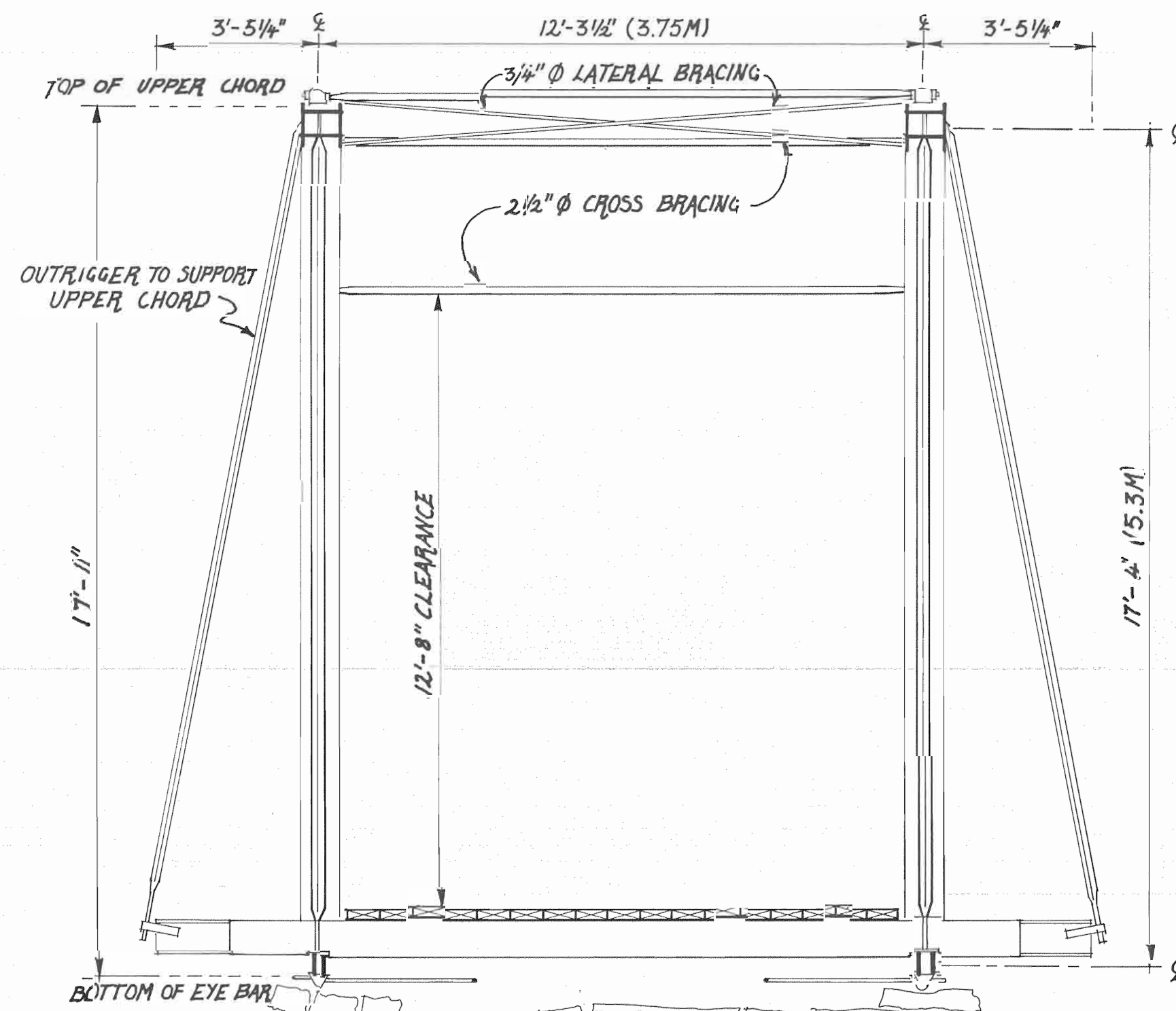
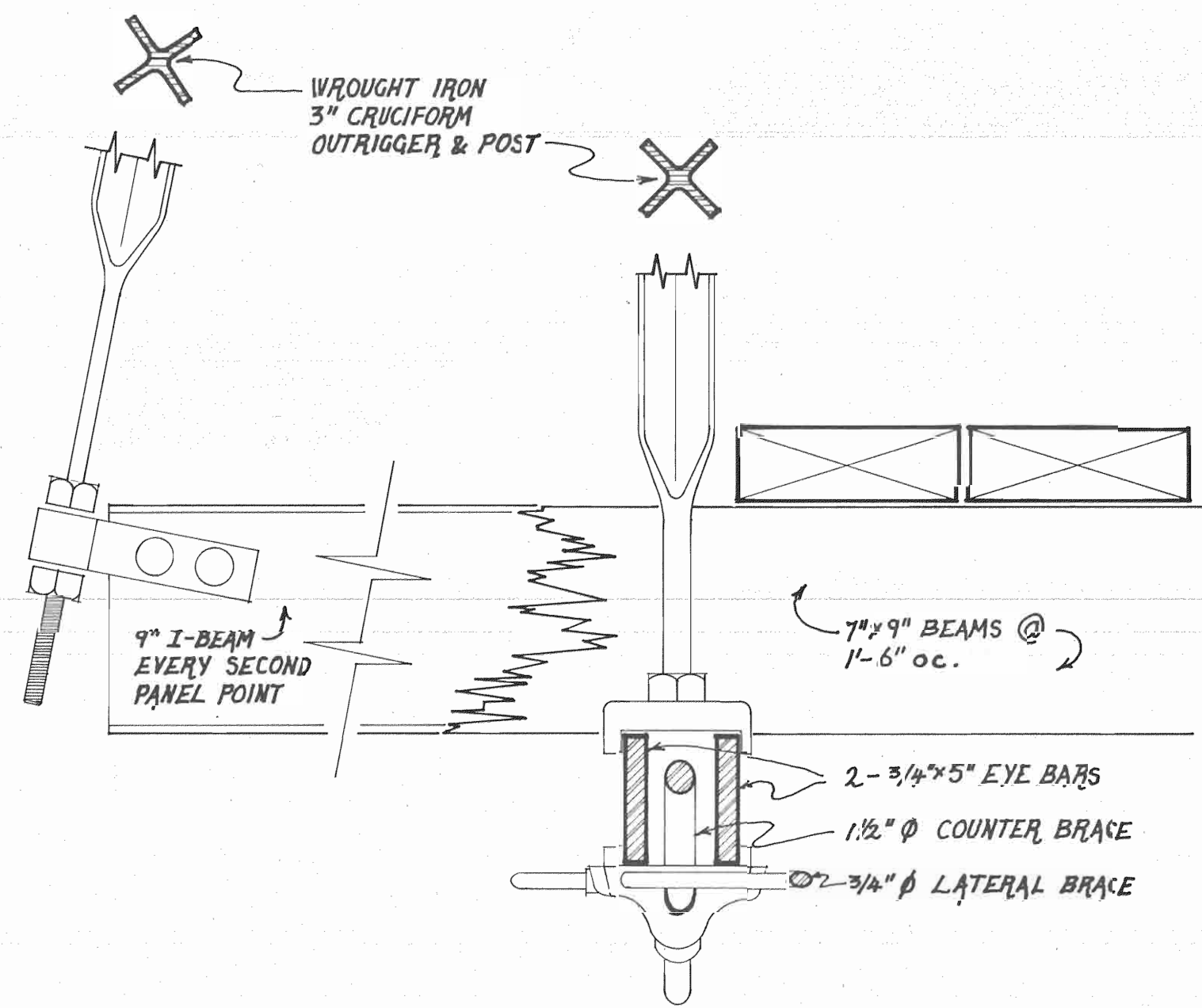
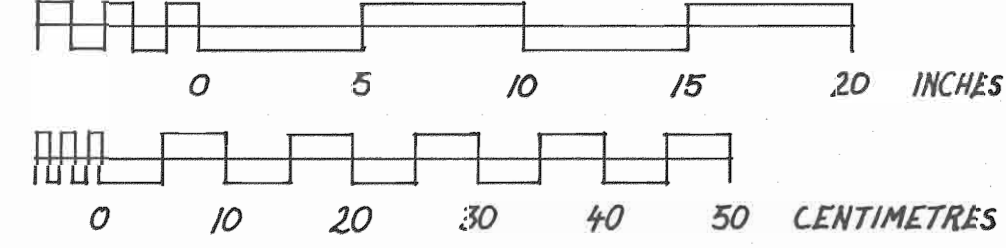


THE SPRINGFIELD-DES ARC BRIDGE WAS DOCUMENTED DURING THE SUMMER OF 1988, AS PART OF THE ARKANSAS HISTORIC BRIDGE RECORDING PROJECT BY THE HISTORIC AMERICAN ENGINEERING RECORD (HAER), A LONG-RANGE PROGRAM OF THE NATIONAL PARK SERVICE TO DOCUMENT HISTORICALLY SIGNIFICANT ENGINEERING AND INDUSTRIAL STRUCTURES IN THE UNITED STATES. THE ARKANSAS HISTORIC BRIDGE RECORDING PROJECT WAS CO-SPONSORED BY THE ARKANSAS HISTORIC PRESERVATION PROGRAM AND THE ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT. THE FIELD WORK, MEASURED DRAWINGS, HISTORICAL REPORTS, AND PHOTOGRAPHS WERE PREPARED UNDER THE DIRECTION OF ROBERT J. MAPSCH, CHIEF, HISTORIC AMERICAN ENGINEERING RECORD, AND ERIC M. DeLOWY, CHIEF OF HAER. MICHAEL SWANDA, SURVEY COORDINATOR, ARKANSAS HISTORIC PRESERVATION PROGRAM AND BURNEY B. McCLURKAN, ARCHAEOLOGIST-HISTORIAN, ENVIRONMENTAL DIVISION, ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT SERVED AS PROJECT ADVISORS. THE RECORDING TEAM CONSISTED OF: LOLA BENNETT (UNIVERSITY OF VERMONT), PROJECT HISTORIAN; KATHRYN STEEN (LUTHER COLLEGE), AND SEAN O'REILLY (THE IRISH ARCHITECTURAL ARCHIVE, DUBLIN, IRELAND), HISTORIANS; ROBERT ARZOLA (TEXAS TECH UNIVERSITY) AND FINBAR GARVEY (UNIVERSITY COLLEGE DUBLIN, IRELAND), ARCHITECTURAL DELINEATORS; CORINNE SMITH (CORNELL UNIVERSITY), ENGINEER; AND LOUISE TAFT (LOUISIANA TECH UNIVERSITY), PHOTOGRAPHER.

DELINEATED BY: ROBERT R. ARZOLA, 1988
 ARKANSAS HISTORIC BRIDGE RECORDING TEAM
 HISTORIC AMERICAN ENGINEERING RECORD
 UNITED STATES DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE

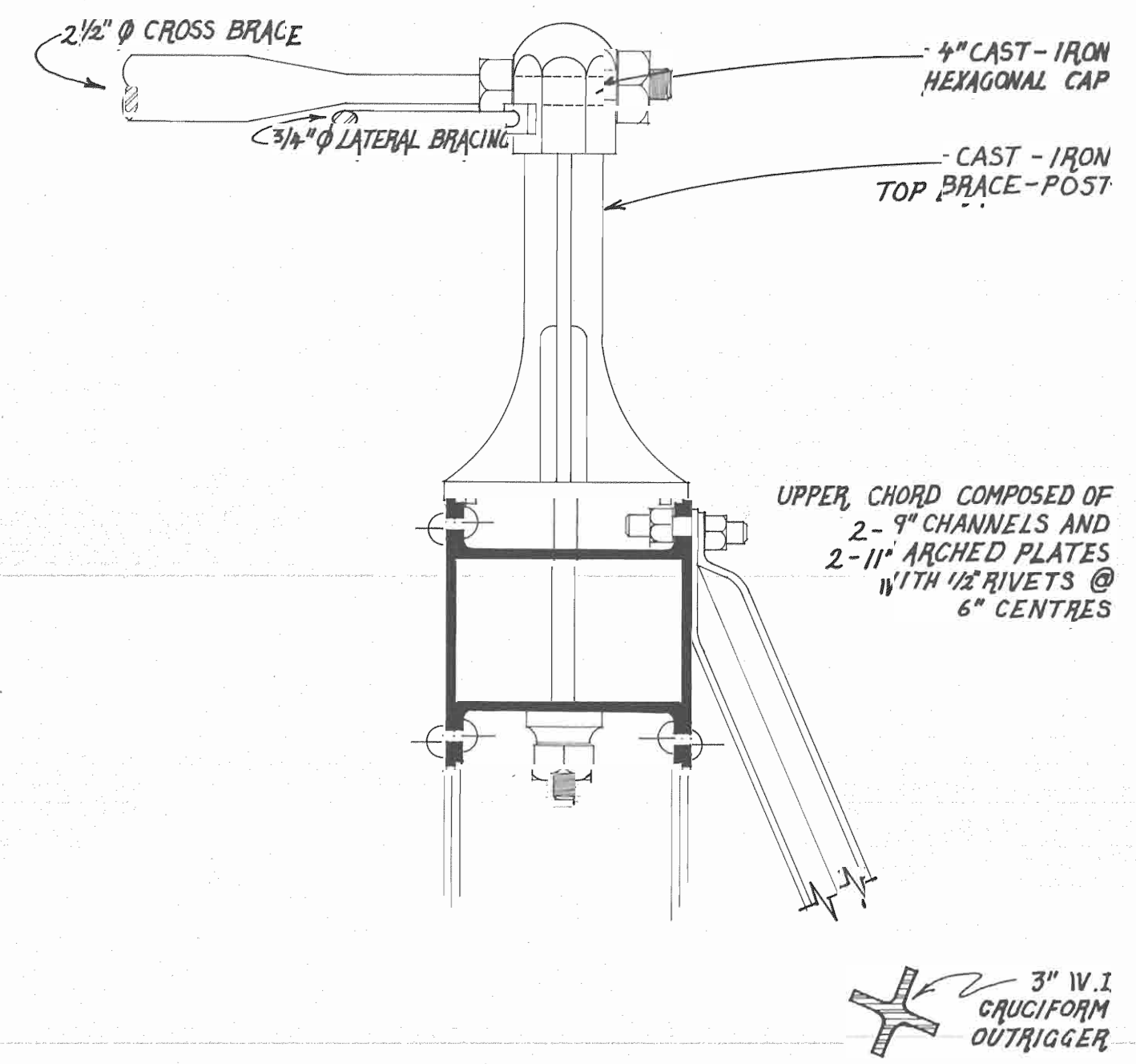
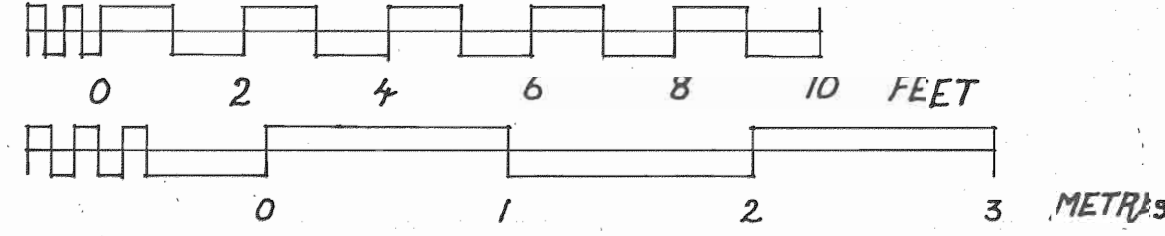
DETAIL OF LOWER CHORD

SCALE 2" = 1 FOOT



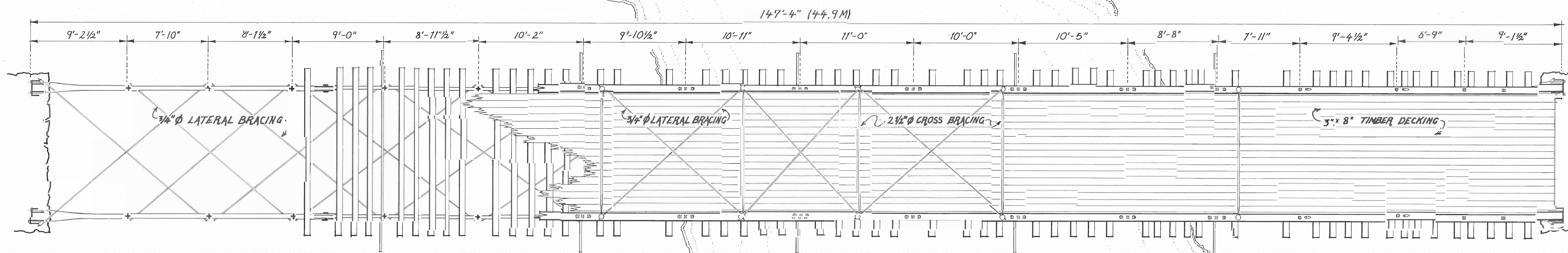
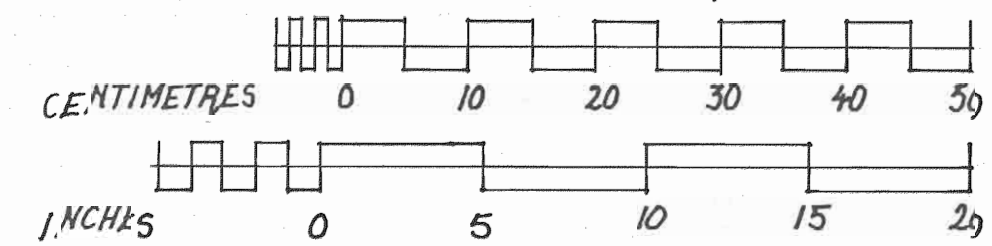
SECTION

SCALE 3/8" = 1'-0"



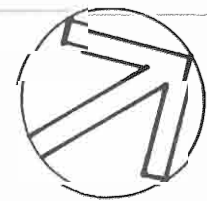
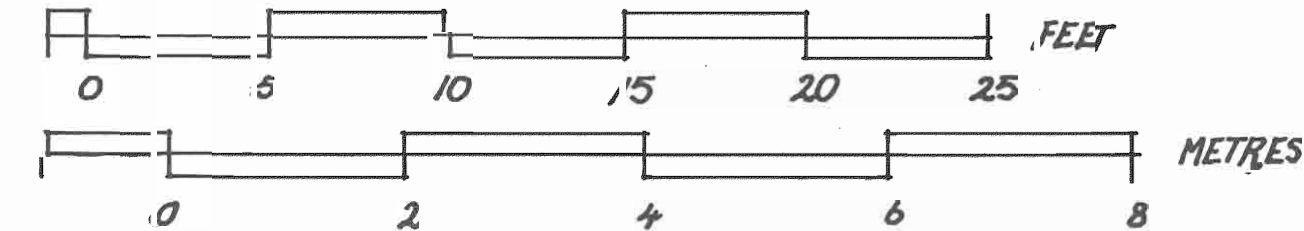
DETAIL OF UPPER CHORD

SCALE 2" = 1 FOOT

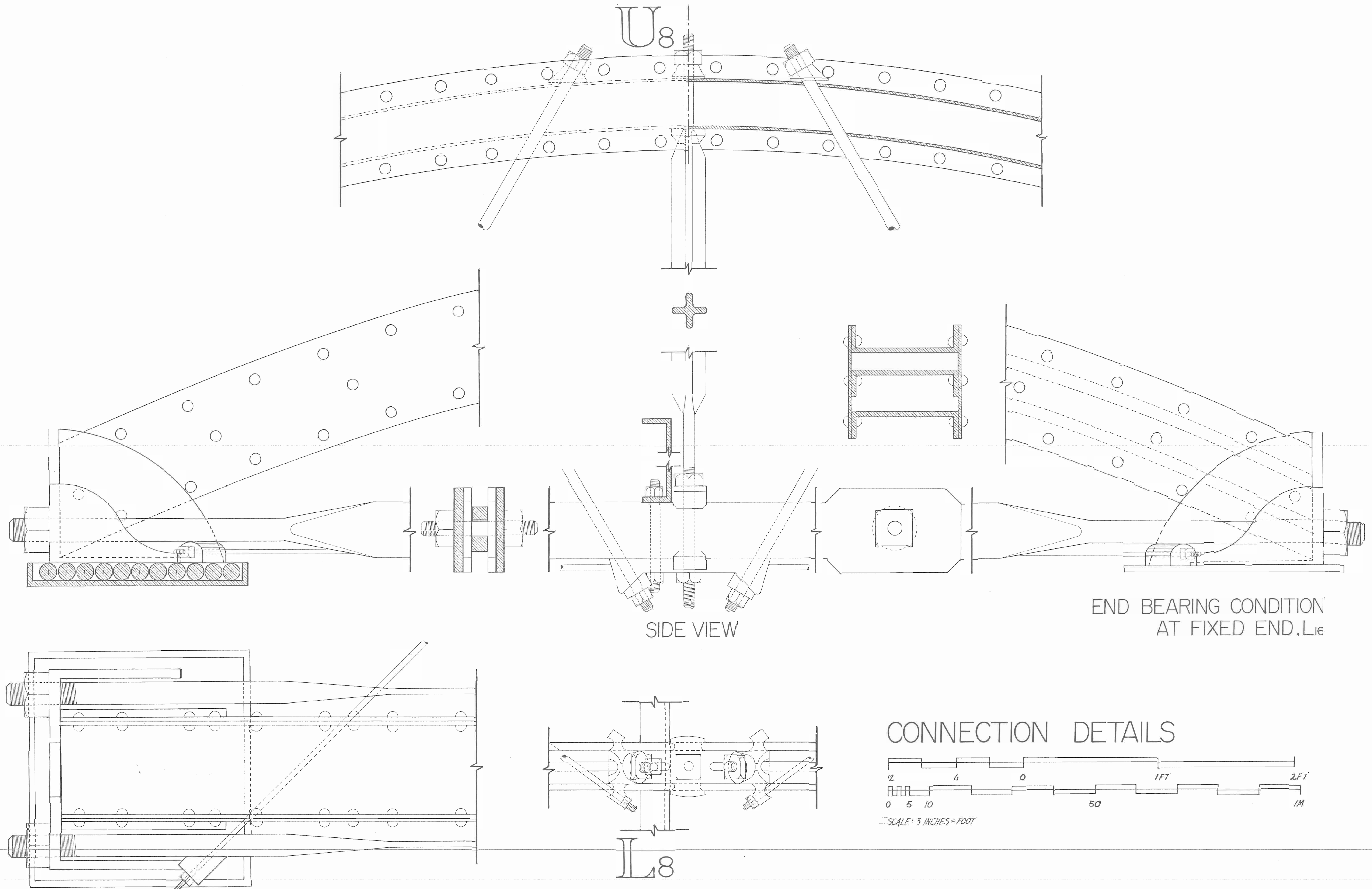


PLAN

SCALE 3/4" = 1 FOOT



TRIM LINE

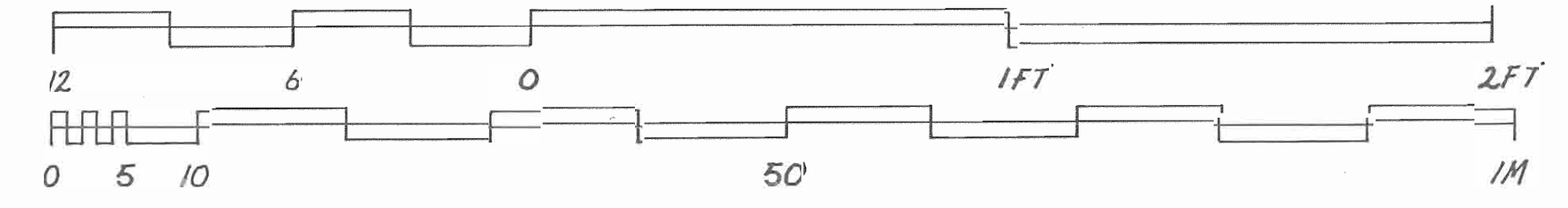


TOP VIEW OF BEARING CONDITION AT MOVABLE END, L₆

BOTTOM VIEW

END BEARING CONDITION AT FIXED END, L₁₆

CONNECTION DETAILS



SCALE: 3 INCHES = FOOT

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 ARKANSAS HISTORIC BRIDGE RECORDING TEAM
 HISTORIC AMERICAN ENGINEERING RECORD
 UNITED STATES DEPARTMENT OF THE INTERIOR

SPRINGFIELD
 SPRINGFIELD - DES ARC BRIDGE - 1871 - 1874
 COUNTY ROAD 222, SPANNING THE NORTH BRANCH OF CADRON CREEK.
 CONWAY / FAULKNER COUNTY LINE
 ARKANSAS

SHEET
 3 of 3

HISTORIC AMERICAN
 ENGINEERING RECORD
 AR-32

IF REPRODUCED, PLEASE CREDIT: HISTORIC AMERICAN ENGINEERING RECORD, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF THE DRAWING

TRIM LINE