CONSTRUCTION PLANS FOR

SWANSON PARK PEDESTRIAN BRIDGE

INDEX NO. 608273

CITY OF WICHITA, KANSAS

MICHAEL E. LINDEBAK, CITY ENGINEER

JANUARY 1991

GENERAL NOTES:

1. Swanson Park has been designated as a part of the Wichita Wild Habitat Area. This park contains naturally occurring plant and animal life and therefore all construction taking place within the park will be executed in a manner which will not disturb or destroy the habitat.

2. The Wichita Park Department will designate travel ways to be used by the construction vehicles.

3. The number of vehicles to the bridge site will be limited to construction equipment only. Crews are to be moved to and from the site in the least amount vehicular traffic as possible. The Park Department will designate a staging area to be used for extraneous vehicles. Size of vehicles entering the habitat area will be limited to two axle type vehicles except for the concrete trucks.

4. Clearing of trees or other habitat shall be completed by the City Park Department prior to construction activities by the contractor. The contractor shall not injure or destroy existing trees or shrubs without the proper authority of the City of Wichita.

5. The timber arch members have been limited to a maximum of 1,000 pounds in weight and may be placed with small equipment. Most of the remaining erection may be completed with hand labor.

6. Existing utilities and their locations, as shown on the plans, represent the best information obtainable for design. Location information has been obtained from the various utility companies and is either from company record drawings or company provided field locations. The plan locations shown are not guaranteed. Additional existing utilities not shown may also be encountered. The contractor will be required to work around existing utilities which do not conflict with proposed construction.

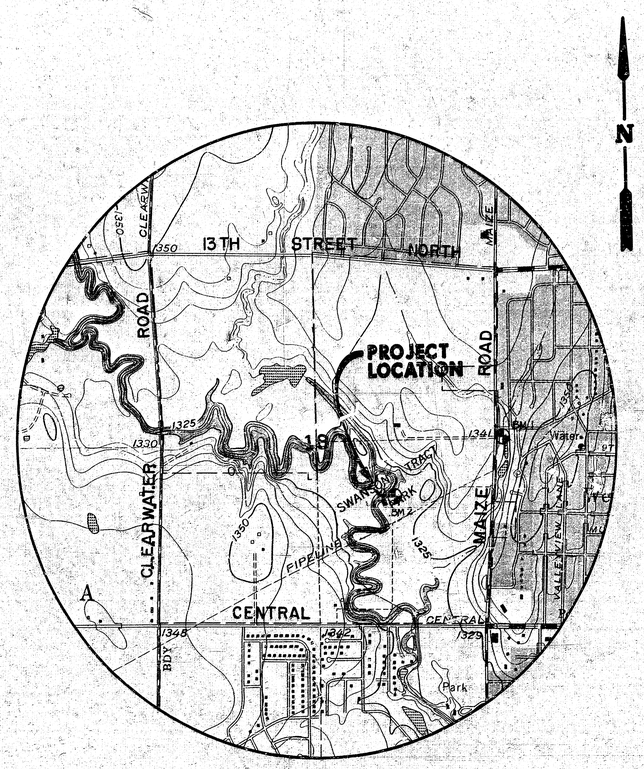
BENCH MARKS:

BM#1 City of Wichita Bench Mark Disc, 32' North & 38' East of East Quarter Corner, Sec. 18 (9TH & MAIZE RD.)
Elev. = 152.283

BM#2 Top of 6' T-Post, 2' above ground, driven in N-S Fence.
Elev. = 140.35

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	CONSTRUCTION LAYOUT
3	BRIDGE DETAILS



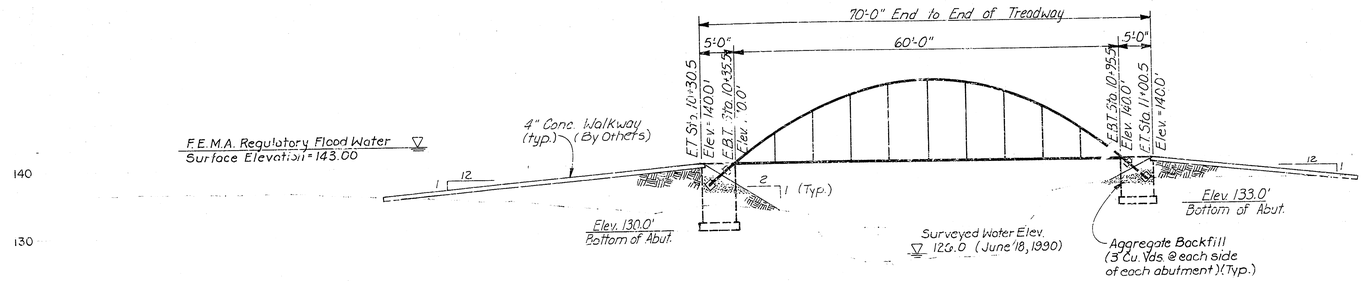
KAREL J. SVATY, JR. LICENSED 7164 KANSAS PROFESSIONAL ENGINEER

MID-KANSAS ENGINEERING CONSULTANTS PA
3500 NORTH ROCK ROAD
BUILDING #800
WICHITA, KANSAS 67226
636-5566

SWANSON PARK PEDESTRIAN BRIDGE

CONSTRUCTION PLANS

Design	KJS
Drawn by	DPR
Checked by	
Date	DEC 1990
Job no.	
Sheet	1 of 3



B.M # 3 Top of T-Post Driven Flush

Elev. = 137.59

ELEVATION

Glulam Arch Span
60' Span w/ 5'-0" Treadway

B.M # 2 Top of 6' T-Post, 2 Ft above ground, driven in N-S Fence

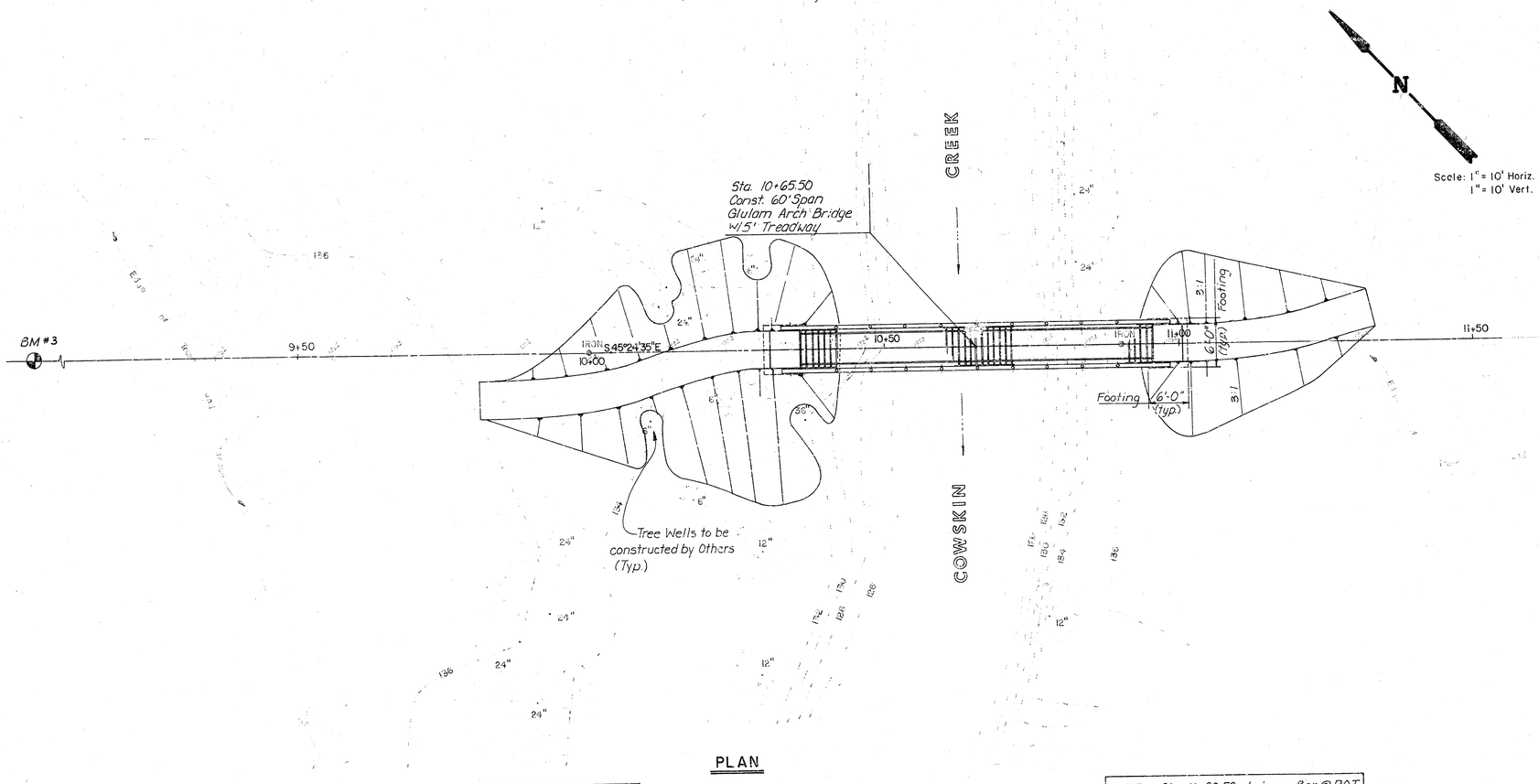
Elev. = 140.35

B.M # 2

Summary of Quantities	
Glulam Arch (6 3/4 x 8 1/4) - Four (4) Pieces - Tot. Len. = 154'	
Glulam Bottom Beam (5 x 5 1/2) - Spliced - Tot. Len. = 120'	
Deck and Railing	
4 x 4 -	116 bf
3 x 12 -	1050 bf
2 x 6 -	400 bf
2 x 4 -	190 bf
Concrete - 17 Cubic Yards	

Notes for Bridge Quantities

1. All hardware and steel items shall be subsidiary to the specific timber items that are being connected
2. The abutment excavation and backfill shall be subsidiary to concrete construction.
3. The approach ramp fills shall be subsidiary to the contract.
4. The concrete reinforcing of the abutment shall be subsidiary to the concrete construction.



PLAN

P.O.T. Sta. 10+00.00, 1. Iron Bar @ P.O.T.

P.O.T. @ Sta. 10+90.58, 1. Iron Bar @ P.O.T.

MK EC

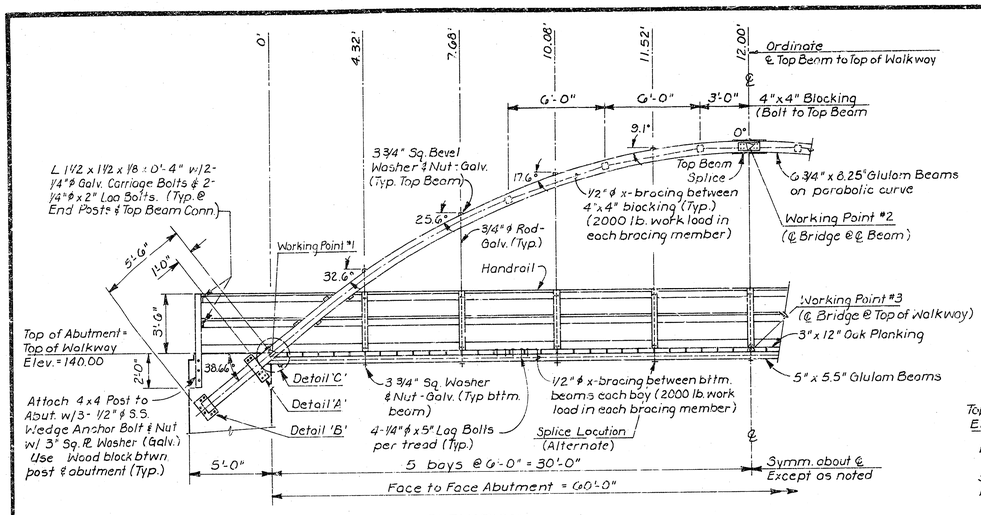
SWANSON BRIDGE

CONSTRUCTION LAYOUT

Design: K.J.S.
Drawn by: D.P.P.
Checked by:
Date: AUG. 1990
Job no.

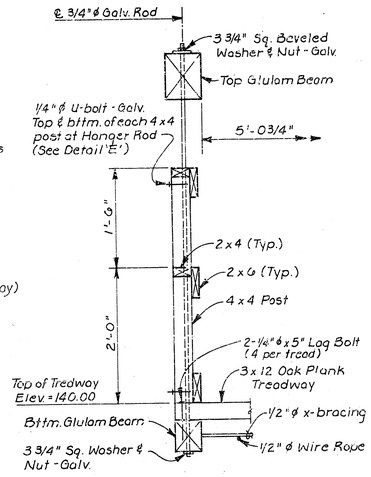
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Sheet 2 of 3

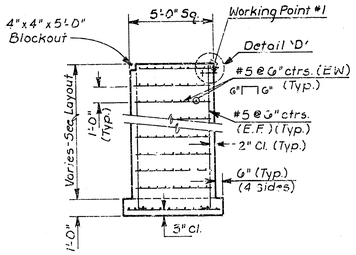


ELEVATION

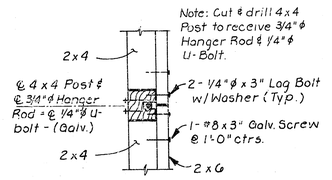
(Top beam splice must be completed prior to construction of treadway on hangers.)



PARTIAL TREADWAY SECTION



ABUTMENT SECTION



DETAIL 'E'

GENERAL NOTES

1. Loading.
   a. Pedestrian Live Load - 85 psf
   b. Wind Load - 17 psf
   c. Stream Load - 12 psf

2. Concrete. The concrete used throughout the structure shall be the concrete paving mix for the City of Wichita (fc'(min.) = 4,000 psi). The concrete shall have a minimum age of 14 days prior to additional construction on the foundations.

3. Reinforcing. The reinforcing used throughout shall conform to ASTM A615, Grade 40 or Grade 60. All bending and placing shall conform to the "Manual of Standard Practice", Concrete Reinforcing Steel Institute.

4. Structural Steel. All steel items shall conform to ASTM A36 or equivalent material. All steel items shall be galvanized in accordance with ASTM A123 or A153 requirements.

5. Glulam Material (Arch and Bottom Beam).
   a. The materials, manufacture and quality control shall be in conformance with American National Standard ANSI/AITC A190.1-1983. All members shall be marked with a quality Mark indicating conformance with ANSI/AITC A190.1-1983, "Structural Glued Laminated Timber".
   b. The following dry condition design values shall be provided:
      1. Fb = 2,400 psi
      2. Fc⊥ = 2,300 psi
      3. Fcpn = 650 psi
      4. Fv = 175 psi
      5. E = 1,700,000 psi
   c. The adhesives shall be for a wet condition of service
   d. The appearance shall be of an architectural grade
   f. The glulam members shall be pressure treated with preservative and have a retention of 0.6 lbs per cubic foot. The lower portion of the arch shall be pressure treated with preservative for ground contact.

6. Timber Deck & Railing. The deck shall be formed of 3x12 rough cut material of structural grade. The railing is formed of 4x4, 2x6 and 2x4 material S4S of structural grade. The deck and railing shall be pressure treated with preservatives.

7. Wood Stain. The entire structure shall be stained with two coats of stain to a gray appearance.

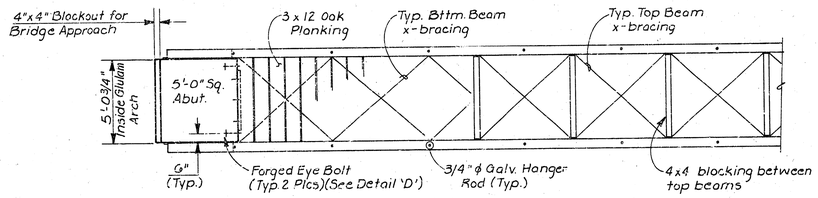
8. Aggregate Backfill. The backfill at the abutments around the arch supports shall be a BD-1 as specified by KDOT (1990). The aggregate shall be a chat or river gravel. Crushed limestone or sandstone will not be acceptable.

9. Arch Curve. The mathematical representation of the arch curve is a parabola. The formula for this is y(vertical) = x^2 (horizontal) /75.

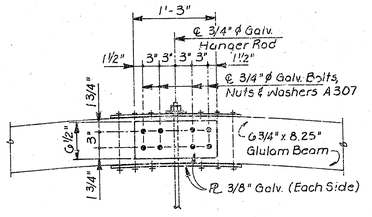
10. Erection. Due to the dead load of the glulam member, a deflection of about five (5) inches will occur when only one arch is erected as a cantilever. This will cause a horizontal offset of the unsupported end of the cantilever of about two (2) inches. To erect the second arch, an upward force at the end of the in place cantilever arch of 160 pounds is required to lift the cantilever arch to its original position.

11. Hardware. The screws and lag bolts shall be galvanized. The lag bolts will require a washer for bearing beneath the head.

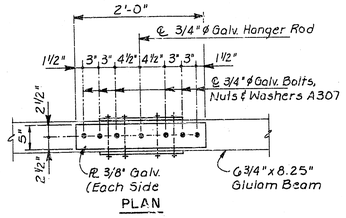
12. Shop & Erection Drawings. All drawings for the material and construction of the pedestrian bridge shall be reviewed by the Engineer prior to construction on that item.



PLAN

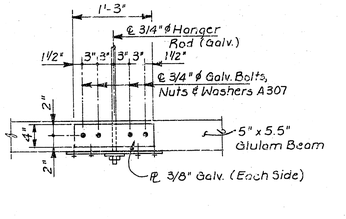


ELEVATION

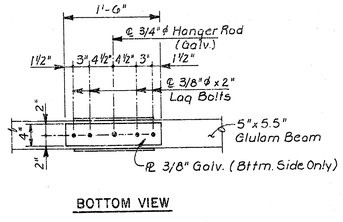


PLAN

TOP BEAM SPLICE



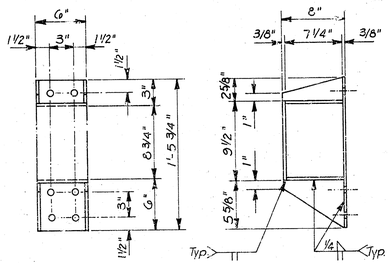
ELEVATION



BOTTOM VIEW

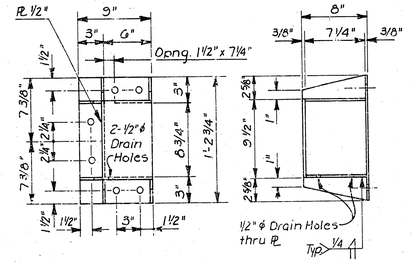
BOTTOM BEAM SPLICE

Note: Alternate beam splice location



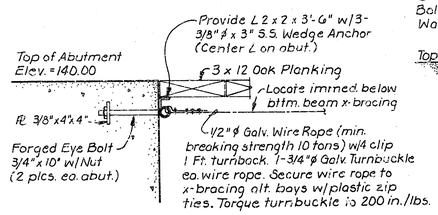
DETAIL 'A'

1. All PL 3/8" Galv.
2. 13/16" ø Holes (Typ.)
3. 3/4" ø S.S. Adhesive Anchor System (Min. Embed. Depth 10") (Typ.)
4. Provide 1/2" Galv. Shims for vert. adjustment
5. Provide 1/2" Galv. Shims for horiz. adjustment.

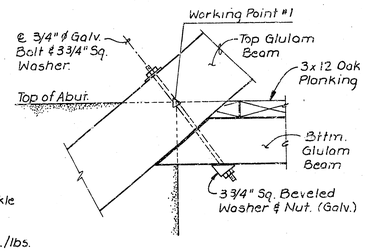


DETAIL 'B'

1. All PL 3/8" Galv. (Unless Otherwise Noted)
2. 13/16" ø Holes (Typ.)
3. 3/4"ø S.S. Adhesive Anchor System (Min. Embed. Depth 10") (Typ.)
4. Provide 1 1/2" Galv. Shims for end adjustment
5. Provide 1/2" Galv. shims ea. for vert. & horiz. adjustment.



DETAIL 'D'



DETAIL 'C'

SWANSON BRIDGE

BRIDGE DETAILS

Design: KJS
Drawn by: DPA
Checked by:
Date: DEC. 1990
Job no.
Sheet 3

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