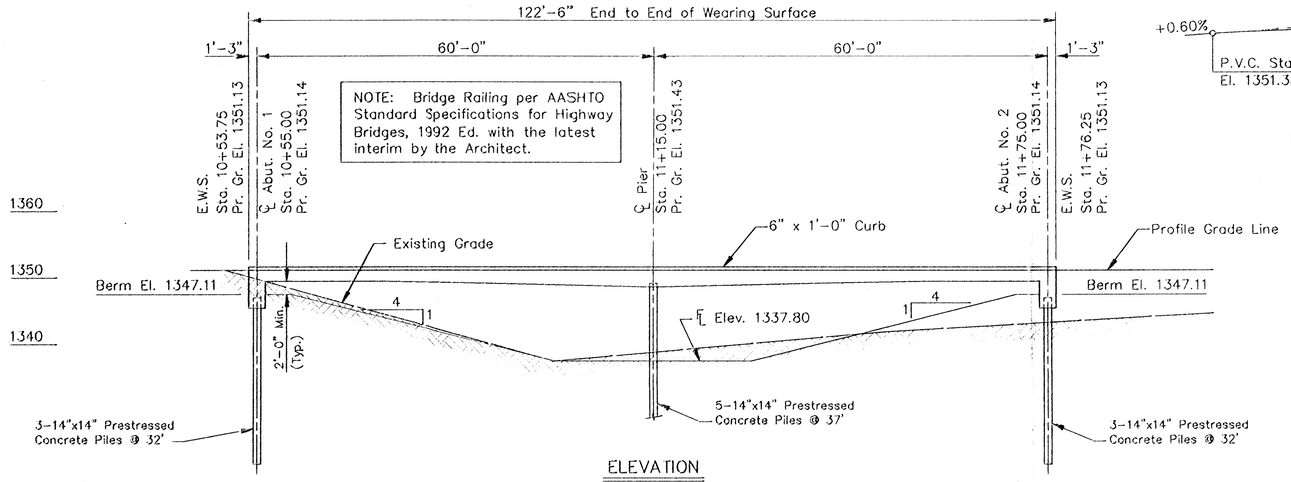
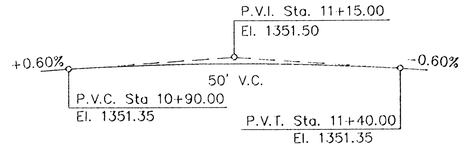
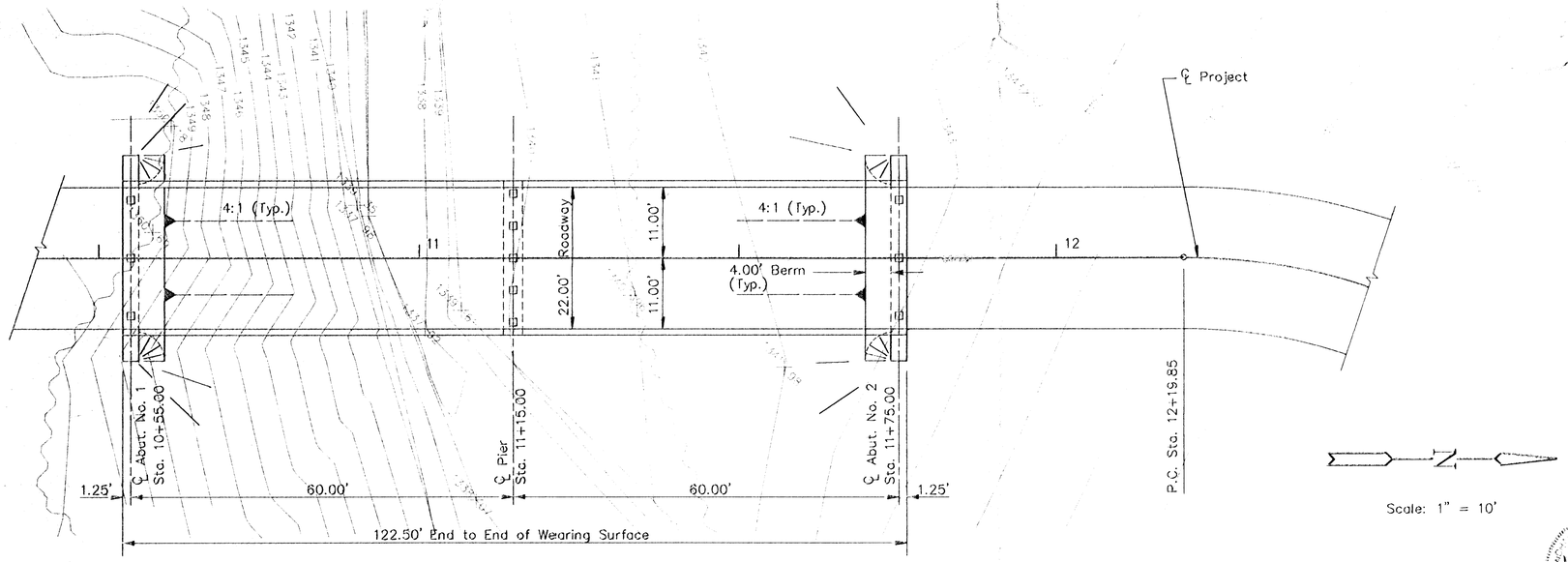


ELEVATION

60'-60" R.C. Haunched Slab Spans
22' Roadway



BRIDGE PROFILE LINE



PLAN

Scale: 1" = 10'

GENERAL NOTES:

DESIGN LOADING: HS20-44 AASHTO Specifications. 1992 Edition with the latest interim.

LOAD FACTOR DESIGN:

Concrete Class AAA (AE) f'c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

CONCRETE: Class AAA (AE) concrete shall be used throughout for all cast-in-place concrete, bevel all exposed edges with a 3/4" triangular moulding unless otherwise noted.

REINFORCING STEEL: All dimensions relative to placement of reinforcing steel are to the centerline of bars unless otherwise noted. All dimensions relative to the bending of reinforcing steel are out to out of bar unless otherwise noted. All reinforcing steel shall be epoxy coated unless otherwise noted.

CONSTRUCTION JOINTS: Constructon joints shall be made only at locations approved by the Engineer.

ABUTMENT BACKFILL: The abutments shall be backfilled from the limits of excavation to the bottom of the pavement surface and 13' each side of the ℄ with City of Wichita approved flowable fill. All work involved with this operation, including materials, labor and equipment, shall be subsidiary to the other bid items.

FALSEWORK: Falsework shall be left in place until the superstructure concrete has cured a minimum of 15 days.

CAMBER: Camber shall be provided as shown on the camber diagram. Additional camber may be required if longspan steel beams are used for falsework.

PILING: Piling shall be driven to a minimum computed bearing capacity as follows:

Abutments: 60 Tons/Pile
Pier: 72 Tons/Pile

Prestressed concrete piles shall have a minimum design strength of f'c = 5000 psi (28 days) and shall not be detensioned until the the concrete has reached a strength of at least 3000 psi.
In using the pile driving formula given below, the Engineer will not allow the Contractor to drive the pile more than 150% of the design tonnage.

HAMMER: Delmag (Diesel),

FORMULA: $$P = \frac{2\,(W)(H)(0.80)}{S + \frac{0.1(X)*}{W}}$$

* The quantity X/W shall be dropped from the formula if less than one (1).

P = safe bearing power in pounds
W = Weight, in pounds, of striking part of hammer
H = height of fall in feet
X = Weight, in pounds, of the pile plus the weight of any cap and/or anvil used on the pile during driving.

Bench Mark: Elev. 159.684 (City Datum)
City of Wichita Bench Mark Disk, 39' north and 33' east of center line intersection of Oliver & 29th St. North.

PIONEER BALLOONS

BRIDGE SITE PLAN

Design by KJS
Drawn by KLH
Checked by MDK
Date 9/94
Job no. 9362

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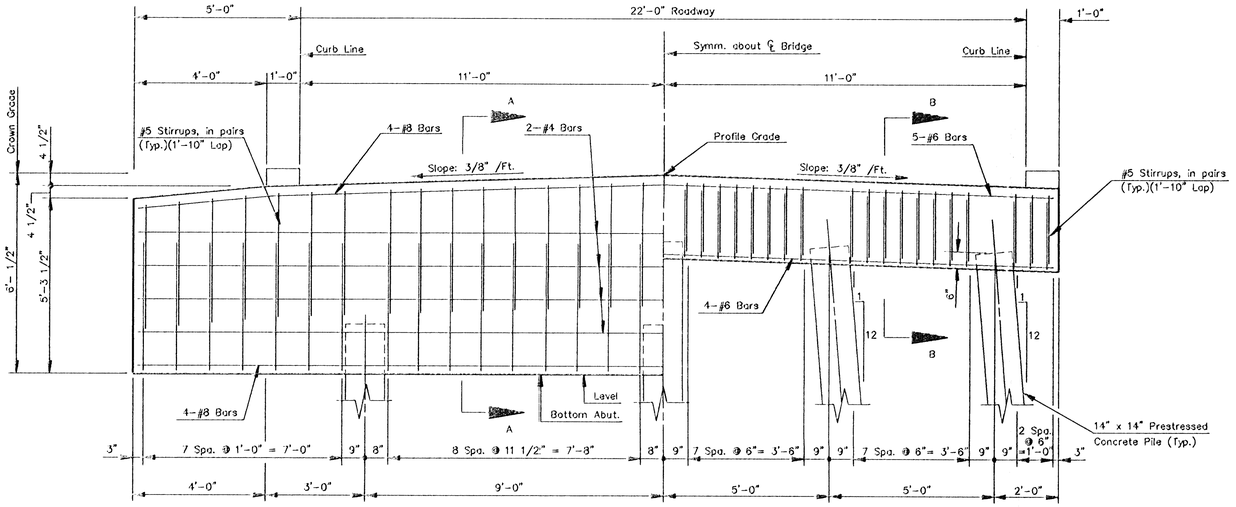
3500 NORTH ROCK ROAD
BUILDING #800
WICHITA, KANSAS 67226 (316) 636-5566

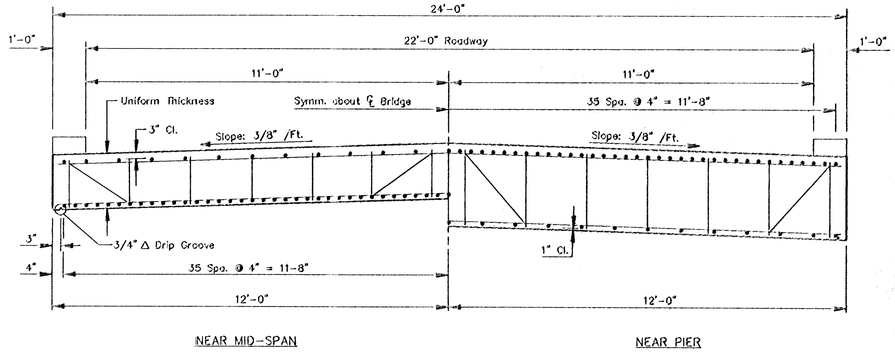
Sheet 1 of 4



SECTION THRU ABUTMENT

SECTION THRU PIER

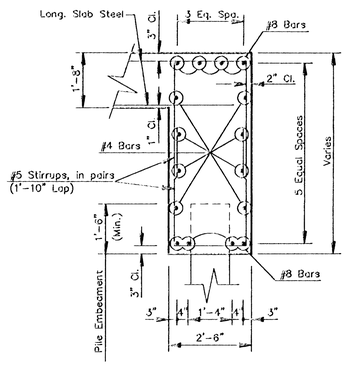
ELEVATION



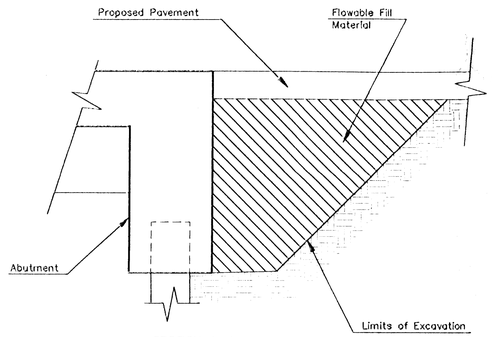
NEAR MID-SPAN

NEAR PIER

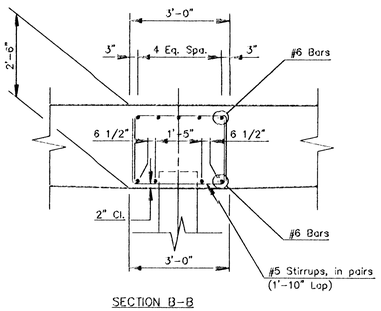
TRANSVERSE SECTION THRU SLAB



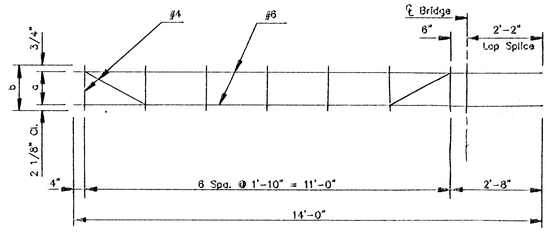
SECTION A-A
(Showing Reinforcing)



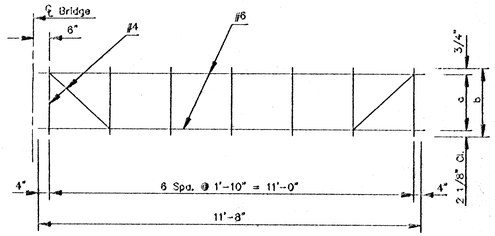
SECTION A-A
(Showing Backfill)



SECTION B-B



ME10 thru ME20



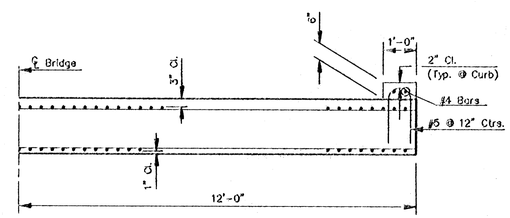
ME30 thru ME40

WELDED SPACER FRAME

NOTE: "a" dimensions are out-to-out.

TABLE OF SPACER FRAMES

MARK	DIMENSION		NO. (Each)
	a	b	
ME10 & ME30	1'-1 5/8"	1'-4 1/2"	8
ME11 & ME31	1'-1 3/4"	1'-4 5/8"	2
ME12 & ME32	1'-2"	1'-4 7/8"	2
ME13 & ME33	1'-2 1/2"	1'-5 3/8"	2
ME14 & ME34	1'-3 1/4"	1'-6 1/8"	2
ME15 & ME35	1'-4 1/8"	1'-7"	2
ME16 & ME36	1'-5 1/4"	1'-8 1/8"	2
ME17 & ME37	1'-6 1/2"	1'-9 3/8"	2
ME18 & ME38	1'-8"	1'-10 7/8"	2
ME19 & ME39	1'-9 3/4"	2'- 5/8"	2
ME20 & ME40	1'-11 3/8"	2'-2 1/4"	2



SECTION THRU CURB

DESIGN PILE LOADING

Group I
Abutments: 58.3 Tons
Pier: 71.1 Tons

PIONEER BALLOONS

TYPICAL SECTIONS

Design KJS
Drawn by KLH
Checked by MDK
Date 9/94
Job no. 8862

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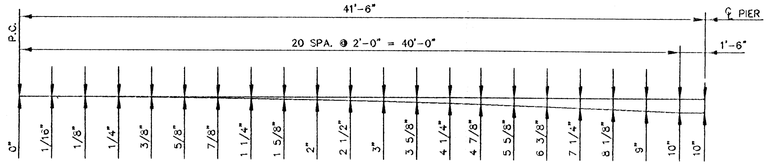
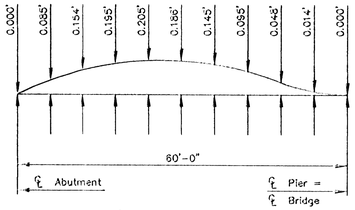
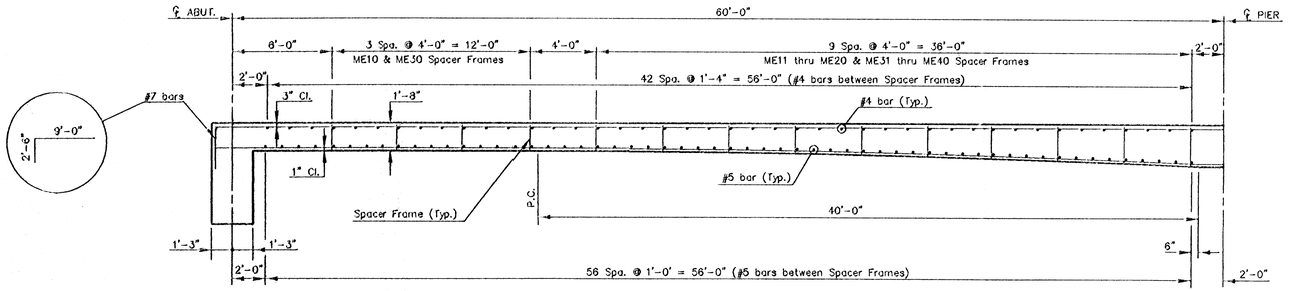


HAUNCH ORDINATES

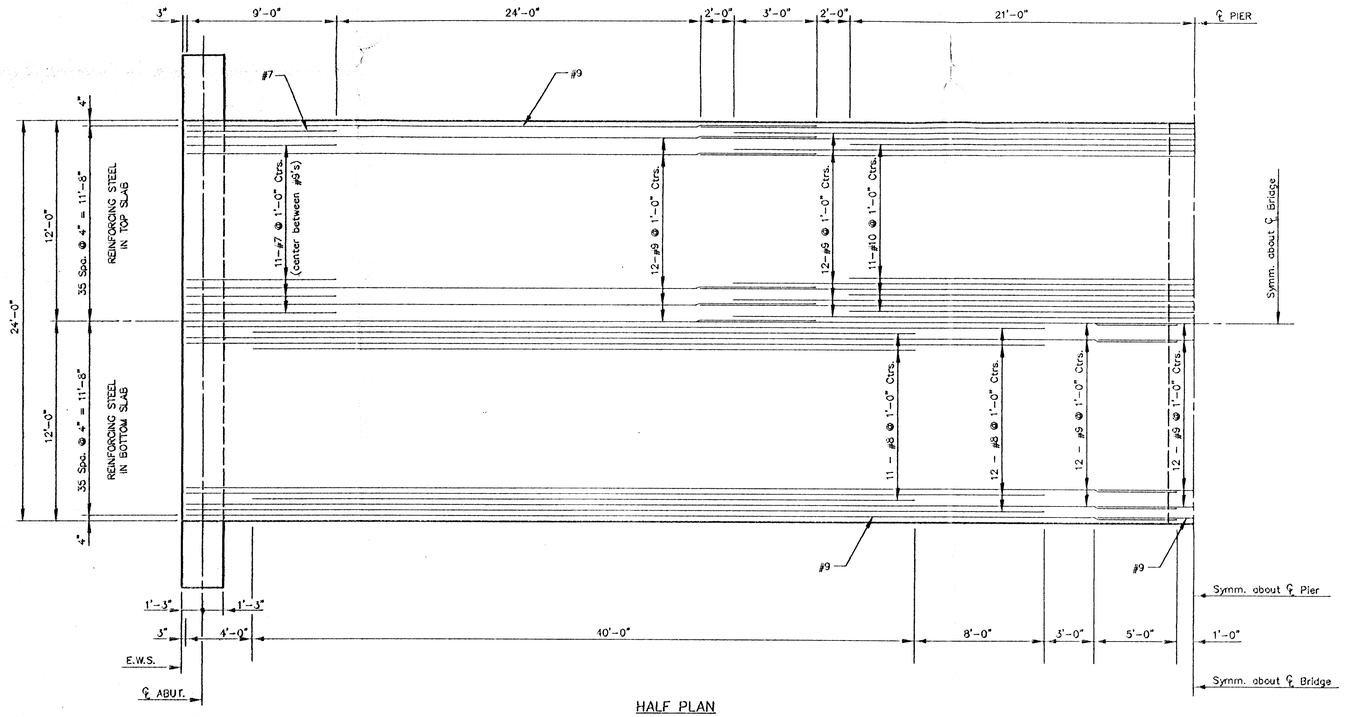


LONG TERM DEAD LOAD CAMBER DIAGRAM

⓫ Tenth Points
Long Term Deflections = Initial Deflections x 3.5
(Initial Deflections based on Ec = 3.605 x 10^6 p.s.i.)



HALF LONGITUDINAL SECTION



HALF PLAN

PIONEER BALLOONS

SUPERSTRUCTURE DETAILS

Design	KJS
Drawn by	KLH
Checked by	MDK
Date	9/94
Job no.	8862
Sheet	3
of	4

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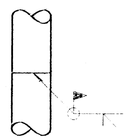
BUILDING #800
WICHITA, KANSAS 67226 (316) 636-5566

FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS		1994	1	1

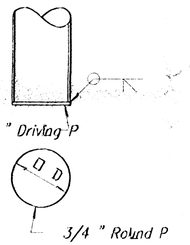
O D 10 3/4" T. = 0.25"
O D 12 3/4" T. = 0.25 Min.
O D 14" T. = 0.25 Min.

Note:
Pile shall be driven with a steel head having a projecting ring fitting inside the pipe. Clearance between ring and pipe should be 1/4".

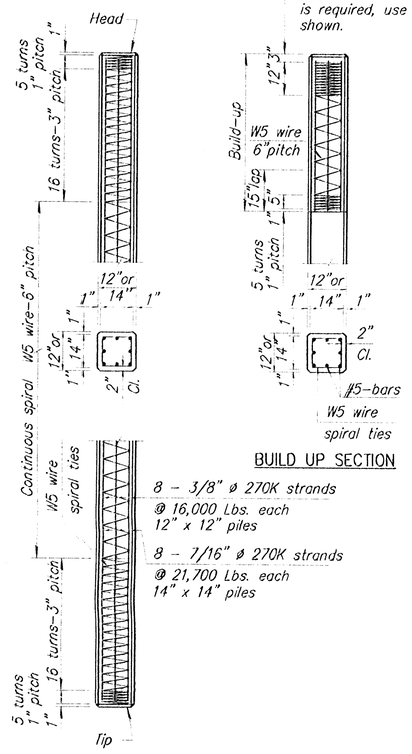


PIPE PILE
SPLICE DETAIL

Note:
Pile pipe may be spiral welded, longitudinal welded, or seamless steel pipe.



PLAIN ROUND
CAST-IN-PLACE PIPE PILE

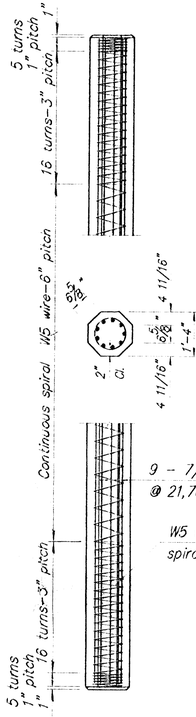


Note: If additional driving is required, use 1" pitch as shown.

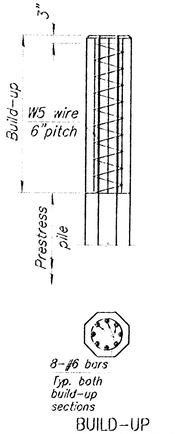
BUILD UP SECTION

8 - 3/8" ø 270K strands
@ 16,000 Lbs. each
12" x 12" piles

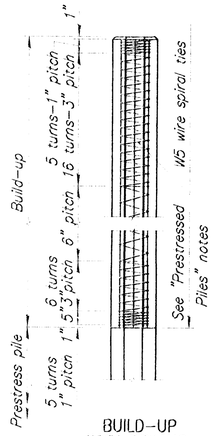
8 - 7/16" ø 270K strands
@ 21,700 Lbs. each
14" x 14" piles



9 - 7/16" ø 270K strands
@ 21,700 Lbs. each



BUILD-UP
WITHOUT DRIVING



BUILD-UP
WITH DRIVING

PRESTRESSED PILES

Method of attachment of pile to build-up may be by any of the methods" given in the notes on "Alternate Methods. If mild reinforcing steel is used for attachment, the area shall be no less than that used in the build-up.

ALTERNATE METHODS:

Method of attachment of a pile to build-up may be by any of the following methods:

1. Cut off at least 2'-0" of pile and expose a minimum of 2'-0" of strands.
2. Cast 8-#6 bars (equally spaced) into pile head. All bars shall extend into pile head and project from pile head a minimum of 2'-0".
3. Drill 8 holes in pile head (equally spaced) for installation of 8 grouted dowel bars of same size and length as in 2.
4. Provide cored holes for bars as in 3.

If a pile splice is required on pile bents, the joint shall be located at least 15' below finished ground line after driving.

No bars or strands are to extend from head of pile or build-up into footing or pile cap unless approved by the Engineer.

FOR INFORMATION ONLY EQUIVALENT POINT BEARING PILES		
STEEL PILES	CONCRETE PILES	
	Pipe	Pre-stress
HP10x42	10 3/4	
HP12x53	12 3/4	
HP14x73	14	12
HP14x102		14
HP14x117		16

SPECIFICATIONS: Standard Specifications for State Road and Bridge Construction as currently used by the Kansas Department of Transportation (Ed. 1990). The following items are covered in Division 700 of the Standard Specifications:

CONCRETE: Concrete for cast-in-place shall be f'c = 3,000 PSI. Concrete for prestressed shall be f'c = 5,000 PSI.

WELDING: All field welding shall meet the requirements of the Standard Specifications.

TEST PILES: Test piles shall be driven where called for on the bridge plans. The test piles located within the limits of the substructure will become a part of the bridge pile system.

SPLICES: Splices for steel piles and shell piling shall be in accordance with details shown on this sheet and the Standard Specifications.

Prestressed concrete pile splices shall be made in accordance with the Manufacturer's recommendations subject to the approval of the Engineer.

DRIVING FORMULA: Driving formula shall conform to the Standard Specifications.

MEASUREMENT AND PAYMENT: Measurement and payment for all piles shall comply with the Standard Specifications.

The following items are covered in Division 1000 of the Standard Specifications:

REINFORCEMENT: Reinforcing bars shall be new billet steel, ASTM A 615, Grade 40 or Grade 60. Hoops and spirals may be either plain or deformed bars.

PRESTRESSING STEEL: Prestressed strand shall be Grade 270 uncoated seven-wire stress relieved or low relaxation strand.

CAST-IN-PLACE SHELLS: Steel shells for cast-in-place piles shall conform to the requirements of the Standard Specifications.

All piles driven without a mandrel shall be of the minimum thicknesses shown. Piles driven with a mandrel shall be of sufficient strength and thickness to withstand driving without injury and to resist harmful distortion and/or buckling due to soil pressure after the mandrel is removed.

Improperly driven, broken or otherwise defective pipe pile shall be removed and replaced or otherwise corrected to the satisfaction of the Engineer, or an additional pile shall be driven at no extra cost.

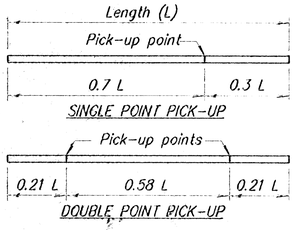
The Contractor shall maintain a light suitable for visual inspection of the pile on the job at all times prior to and during the filling of the pipe.

STEEL PILE: Steel pile shall conform to the requirements of the Standard Specifications.

PILE POINTS: Pile points shall conform to the dimensions shown and to requirements of the Standard Specifications. Pile points shall be welded to the pile.

PAINT: All paint shall comply with the Standard Specifications, or as specified on the plans.

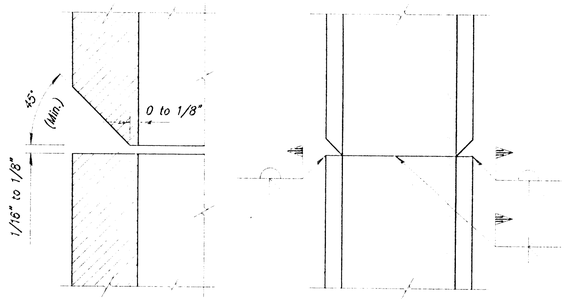
MILL TEST REPORTS: Steel piles test reports and steel shell test reports shall comply with the Standard Specifications.



PICK-UP POINTS FOR PRESTRESSED PILING

Max. length - 55' single point pick-up
Max. length - 80' double point pick-up

Note: Piles shall be marked at Pick-up points to indicate proper points for attaching handling lines.



SECTION THRU FLANGE

PILE SPLICE DETAIL
(H-PILE)

NO.	DATE	REVISIONS	BY	APP'D
1	2-14-90	Revise notes.	LRR	KFH

KANSAS DEPARTMENT OF TRANSPORTATION

STANDARD PILE DETAILS

STD. NO. 110

FHWA APPROVAL			3-28-90	APP'D	KENNETH F. HURST
DESIGNED		DETAILED	RGR	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.	KOD	QUANT.CK.	TRACE CK.

Drawn By : K. Hopkins
DGN File : STDPILE
Plotted : August 17, 1993 View=

STDPILE