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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOT. L. SHEETS
				6	ARK.			
				JOB NO.		3940	15	78
				① 5876		QUANT.	23706	

SCHEDULE OF BRIDGE QUANTITIES

BRIDGE NUMBER	CODE NUMBER	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	SP & 802	SP & 802	803	804	SP & 805*	SP & 805	812	SP & 816	SP & 816	SP 820	205	SP & 603
				ITEM	CLASS S CONCRETE	CLASS S(AE) CONCRETE	BOILED LINSEED OIL	REINFORCING STEEL (GRADE 60)	STEEL BEARING PILING (HP 12 x 53)	TEST PILES (HP 12 x 53)	BRIDGE NAME PLATE (TYPE C)	DUMPED RIPRAP	FILTER BLANKET	PILE ENCASEMENT	REMOVAL OF EXISTING BRIDGE STRUCTURES	TEMPORARY BRIDGE STRUCTURES
				UNIT	CU. YD.	CU. YD.	GAL.	LB.	LIN. FT.	LINEAR FOOT	EACH	CUBIC YARD	SQUARE YARD	LINEAR FOOT	LUMP SUM	LUMP SUM
5876	XC20	GARLAND CREEK		END BENT NOS. 1 AND 4	17.90			1916	180	25		165	330			
				INTERMEDIATE BENT NOS. 2 AND 3	15.90			1984	300	25				129		
				2-35'-0" R.C. SLAB END SPANS		195.64	7.4	30360			1					
				1-35'-0" R.C. SLAB INTERMEDIATE SPAN		97.26	3.7	15100								
				TOTAL FOR JOB NO. 3940	33.80	292.90	11.1	49360	480	50	1	165	330	129		

\* Refers to SP 807-5

DALLAS VIRE  
DESIGN SECTION SUPERVISOR

SCHEDULE OF BRIDGE QUANTITIES  
HWY. 67 - I-30  
NEVADA COUNTY  
ROUTE 19 SEC. 5  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: LDF DATE: 12-14-83  
CHECKED BY: BTK DATE: 1-31-84 SCALE: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
BRIDGE NO. 5876 DRAWING NO. 23703

*Virel Pinkerton*  
BRIDGE ENGINEER

DRAWN BY: TEB DATE: 1-25-80  
 CHECKED BY: ELX DATE: 1-27-80 SCALE: 1" = 10' - 0"  
 DESIGNED BY: DEB DATE: 1-30  
 BRIDGE NO. 5876 DRAWING NO. 23707



REVISED	DATE	BY	DATE	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.							
JOB NO.	5876	SPAN DTLS	23709					

Note: Do not show taper from 3'-8" or more to 5'-8" or back 'ce' of Concrete Parapet Rd

#### BAR LIST PER SPAN

BAR	NO REQ'D	END	INT	LENGTH	BAR DIA.	BENDING DIAGRAMS
S401	29	29		34' 8"	5/8"	
S402	50	50		22'-6"	5/8"	
S403	20	70		1'-4"	5/8"	
S404	2	-		0'-10"	5/8"	
S405	8	-		1'-10"	5/8"	
S406	44	48		6'-10"	2"	
S407	44	48		7'-9"	2"	
S408	110	110		22'-0"	5/8"	
S409	8	-		1'-0"	5/8"	
S410	54	54		6'-4"	2"	
S411	54	54		3'-2"	2"	
S501	24	24		5'-0"	5/8"	
S601	12	12		5'-8"	4/8"	
S602	12	18		11'-4"	5/8"	
S603	4	-		11'-10"	5/8"	
S604	4	-		8'-9"	3/4"	
S605	6	-		4'-9"	3/4"	
S901	81	89		34'-8"	5/8"	
S902	8	-		35'-2"	5/8"	
S606	2	-		10'-10"	5/8"	

Dimensions are out to out of Bars

#### GENERAL NOTES

- ALL CONCRETE TO BE CLASS S OR (SAE) AS SHOWN ON THE LAYOUT. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
- REINFORCING STEEL TO BE ASTM A615 OR (SAE) UNLESS OTHERWISE NOTED.
- BAR SUPPORTS FOR REINFORCING BARS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM "REINFORCING STEEL".
- ROOFING FELT, BITUMINOUS FELT, PREFORMED JOINT, STRUCTURAL STEEL, AND POURED SYNTHETIC POLYMER JOINTS SHALL BE MEASURED AND PAID FOR AS CLASS S OR (SAE) CONCRETE.
- SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1978, AND APPLICABLE SPECIAL PROVISIONS.
- DESIGN SPECIFICATIONS: AASHTO 1977 AND INTERIM.
- DESIGN LIVE LOADING: HS20
- LOAD DISTRIBUTION TO SLAB: DEAD LOAD - 283 PSF; LIVE LOAD - 0.166 WHEELS/FT. OF WIDTH PLUS 30% IMPACT
- UNIT STRESSES: COMPRESSIVE STRENGTH OF CLASS S OR (SAE) CONCRETE  $f_c = 3,500$  PSI; YIELD STRENGTH OF REINFORCEMENT  $f_y = 60,000$  PSI
- LOAD FACTOR USED FOR DESIGN OF SLAB

#### QUANTITIES (PER SPAN)

	Concrete	Reinforcing Steel	Structural Steel
End Span	97.8 cu yd	15189 Lbs	323 Lbs
Int Span	97.6 cu yd	15101 Lbs	323 Lbs

\* For information only. Structural Steel to be measured and paid for as Class S or (SAE) concrete.  
 \*\* Concrete Quantities calculated for 2'-4" Caps

DETAILS OF STANDARD  
 35'-0" R.C. SLAB SPAN  
 40' CL RWY CONCRETE PARAPET RAIL  
 ROUTE 19 SEC. 5  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.

DESIGNED BY: BJM DATE: 7-29-77  
 CHECKED BY: ARW DATE: 9-2-77  
 DESIGNED BY: JCK DATE: 6-10-78

BRIDGE NO. 5876

DRAWING NO. 23709

#### SECTION A-A

#### SECTION B-B

#### SECTION C-C

#### SECTION D-D

#### HALF PLAN

#### LONGITUDINAL SECTION AT Q BRIDGE

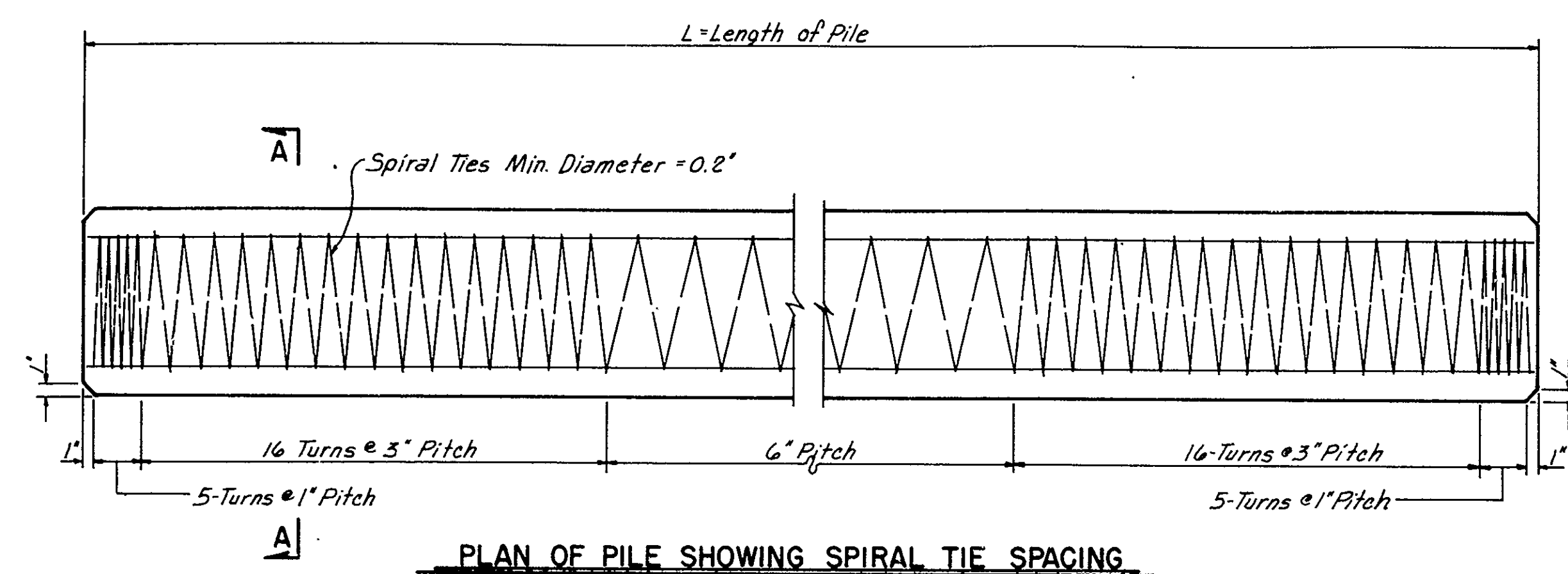
#### LONGITUDINAL SECTION AT CURB

Note: The surfaces of the 3/8" plates which will not be in contact with concrete shall receive two coats of paint in the shop. These coats shall be those specified as first shop coat and second field coat in subsection 807.59(a) and 807.59(c). Structural steel shall meet the requirements of Section 807 except as noted. The 3/8" studs shall be granular flux filled, solid fluxed, or equal, and automatically and welded to the 3/8" plate in accordance with recommendations of the manufacturer.

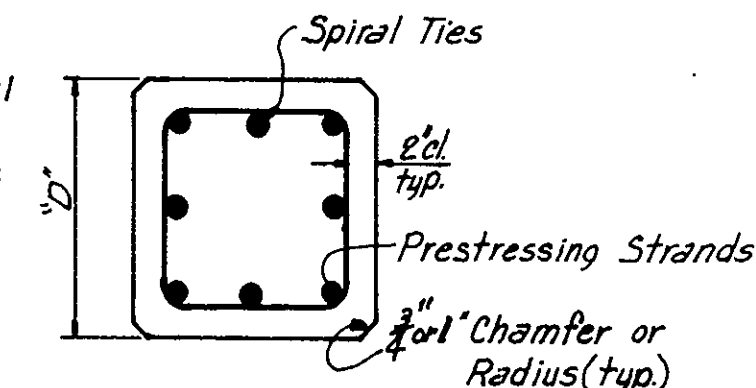




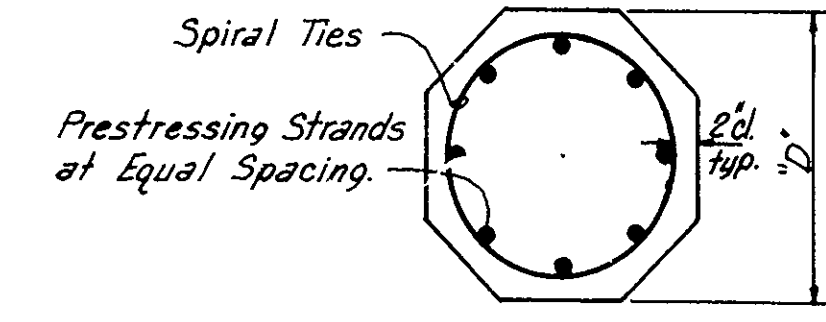




NOTE: Strand location shall be symmetrical about the Axis of the pile with no more than one strand difference between any two adjacent sides.



SECTION A-A  
SQUARE PILE



SECTION A-A  
OCTAGONAL PILE

PRESTRESSED CONCRETE PILES

GRADE	STRAND DIAMETER	*NUMBER OF STRANDS PER PILE SIZE "D"						MINIMUM ULTIMATE TENSILE STRENGTH PER STRAND (LBS)	INITIAL PRESTRESSING FORCE PER STRAND (LBS)
		16" OCT.	18" OCT.	14" SQ.	16" SQ.	18" SQ.			
250	3/8"	14	18	14	16	22		20,000	14,000
	7/16"	11	13	10	12	16		27,000	18,900
	1/2"	8	10	8	10	12		36,000	25,200
270	3/8"	12	15	12	14	18		23,000	16,100
	7/16"	9	11	8	12	14		31,000	21,700
	1/2"	7	9	6	8	10		41,300	28,900

\*Number Based on initial Prestress Force of 0.7 x Ultimate Tensile Stress, Prestress Losses, and Min. 700 psi Unit Prestress on concrete after Losses.

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1978, AND APPLICABLE SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO 1977 WITH 1978 INTERIMS

CONCRETE: CONCRETE IN THE PRECAST PRESTRESSED PILES SHALL BE CLASS (S/AE) AND SHALL HAVE A MINIMUM COMPRESSIVE CYLINDER STRENGTH (f<sub>c</sub>) OF 5000 PSI AT 28 DAYS. COMPRESSIVE CYLINDER STRENGTH AT TRANSFER OF THE PRESTRESSING FORCE SHALL BE NOT LESS THAN 4000 PSI.

CONCRETE IN BUILD-UPS SHALL HAVE A MINIMUM COMPRESSIVE CYLINDER STRENGTH (f<sub>c</sub>) OF 3500 PSI.

PRESTRESSING REINFORCEMENT: SEVEN WIRE STRESS RELIEVED STRAND SHALL CONFORM TO THE GENERAL REQUIREMENTS OF ASTM A416. BROKEN WIRES WITHIN INDIVIDUAL STRANDS WILL BE PERMITTED UP TO 2% OF THE TOTAL NUMBER OF WIRES IN EACH PILE, PROVIDING THAT THERE IS NOT MORE THAN ONE BROKEN WIRE PER STRAND. TWO OR MORE BROKEN WIRES PER STRAND WILL BE CAUSE FOR REPLACEMENT OF THE STRAND, EVEN THOUGH THE TWO BROKEN WIRES ARE WITHIN THE 2% LIMITATION.

BUILD-UPS: TO PROVIDE FOR BUILD-UPS OF PILES WHERE AUTHORIZED BY THE ENGINEER, CONCRETE SHALL BE CUT BACK TO EXPOSE THE STRANDS FOR A DISTANCE SUFFICIENT TO PROVIDE A LAP OF 40 DIAMETERS OF THE REINFORCING BARS REQUIRED FOR BUILD-UP. REINFORCING FOR BUILD-UPS SHALL HAVE A MINIMUM AREA EQUAL TO 1-1/2% OF THE GROSS SECTION OF PILE. PLACEMENT OF BARS SHALL BE IN A SYMMETRICAL PATTERN OF NOT LESS THAN FOUR BARS. SEE SECTION 805.14 OF THE STANDARD SPECIFICATIONS.

FORMS: FOR FORMING EXTERIOR OF PILES, THE USE OF STEEL FORMS ON CONCRETE FOUNDED CASTING BEDS IS REQUIRED, UNLESS OTHERWISE APPROVED BY THE ENGINEER. SIDE FORMS MAY HAVE A MAXIMUM DRAFT ON EACH SIDE NOT EXCEEDING 1/4" PER FOOT.

TOLERANCES: PILE ENDS SHALL BE PLANE SURFACES AND PERPENDICULAR TO AXIS OF PILE WITH A MAXIMUM TOLERANCE OF 1/8" PER FOOT TRANSVERSELY.

THE MAXIMUM SWEEP DEVIATION FROM STRAIGHTNESS MEASURED ALONG TWO PERPENDICULAR FACES OF THE PILE, WHILE NOT SUBJECT TO BENDING FORCES) SHALL NOT EXCEED 1/8" IN 10' OF ITS LENGTH.

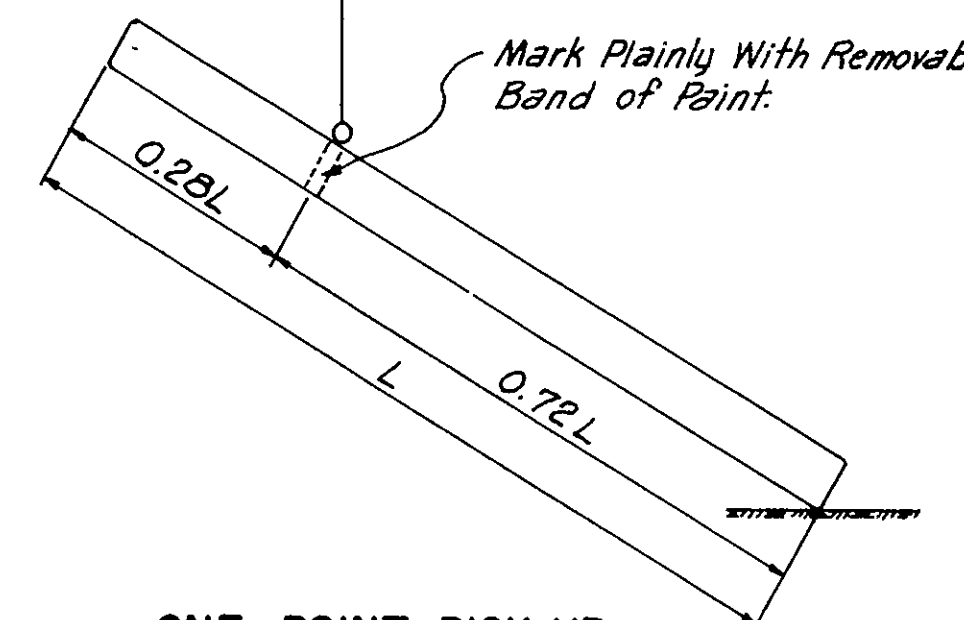
GENERAL: SHIPMENT OF PILES FROM THE PLANT SITE OR PILE DRIVING WILL NOT BE PERMITTED UNTIL THE REQUIRED MINIMUM CYLINDER STRENGTH IS REACHED, AND IN NO CASE LESS THAN 10 DAYS AFTER POURING THE CONCRETE. PILES MAY BE REMOVED FROM CASTING BED TO A NEARBY STORAGE ANY TIME AFTER TRANSFER OF STRESS.

SPIRAL REINFORCING: SPIRAL REINFORCING SHALL BE STEEL WIRE MEETING THE REQUIREMENTS OF ASTM A82 WITH A MINIMUM DIAMETER OF 0.2" OR SHALL BE PLAIN ROUND STEEL BARS MEETING THE REQUIREMENTS OF ASTM A615, WITH A MINIMUM DIAMETER OF 0.25".

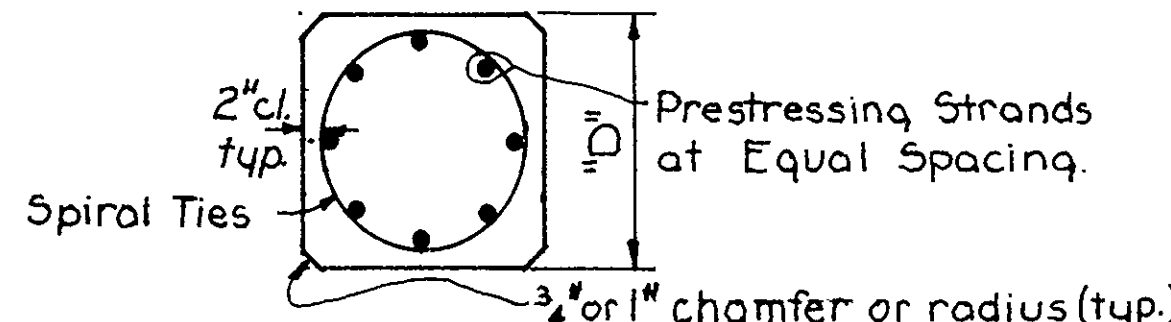
MANUFACTURE, TRANSPORTATION AND STORAGE: SEE SECTION 802 "CONCRETE FOR STRUCTURES" OF THE STANDARD SPECIFICATIONS.

INSTALLATION, MEASUREMENT AND PAYMENT: SEE SECTION 805 "BEARING PILING" OF THE STANDARD SPECIFICATIONS. PRECAST PRESTRESSED CONCRETE PILING WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT BID FOR "PRECAST CONCRETE PILING".

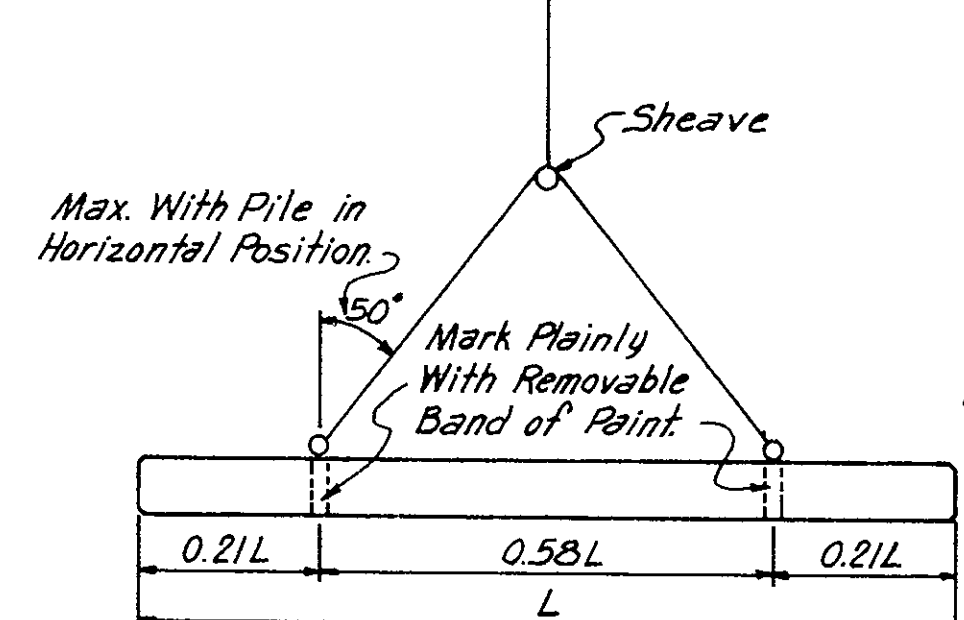
TYPE OF PICK-UP	MAXIMUM PICKUP LENGTHS L									
	PRESTRESSED 16" OCT.	PRESTRESSED 18" OCT.	PRECAST 16" or 18" OCT.	PRESTRESSED 14" SQ.	PRESTRESSED 16" SQ.	PRESTRESSED 18" SQ.	PRECAST 14" SQ.	PRECAST 16" SQ.	PRECAST 18" SQ.	
ONE-POINT	52'	55'	46'	55'	59'	63'	52'	51'	55'	
TWO-POINT	75'	80'	67'	79'	84'	90'	75'	74'	79'	
THREE-POINT	105'	112'	93'	110'	117'	126'	104'	103'	111'	



ONE POINT PICK-UP



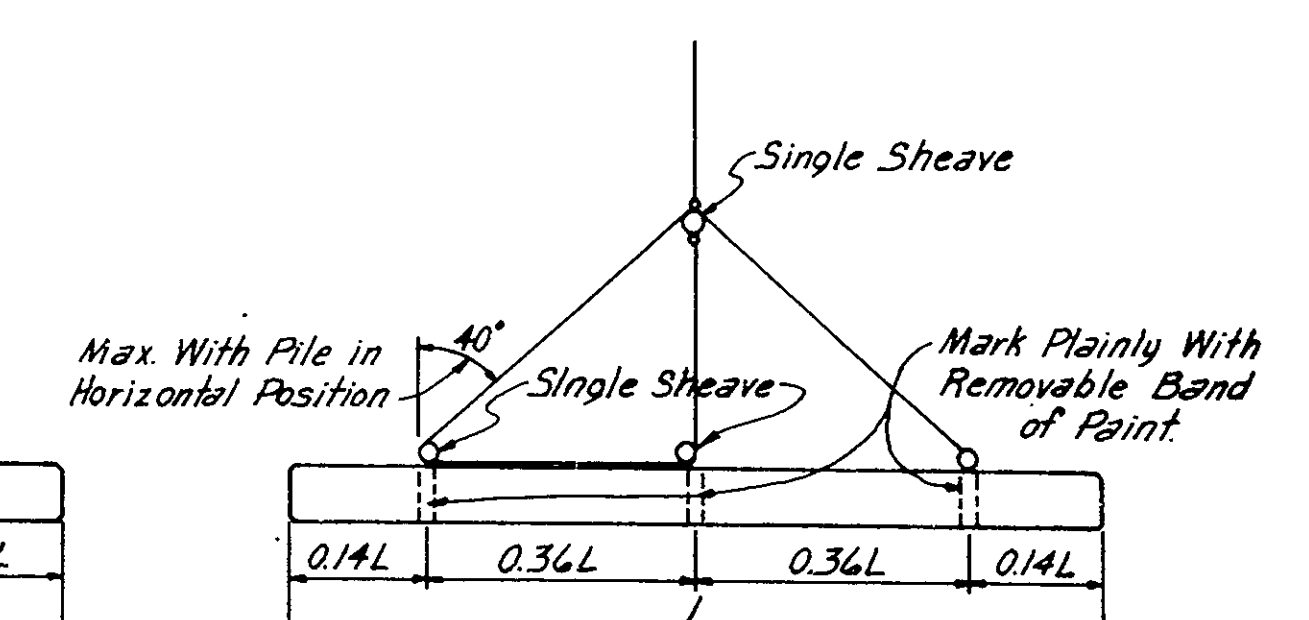
SECTION A-A  
SQUARE PILE



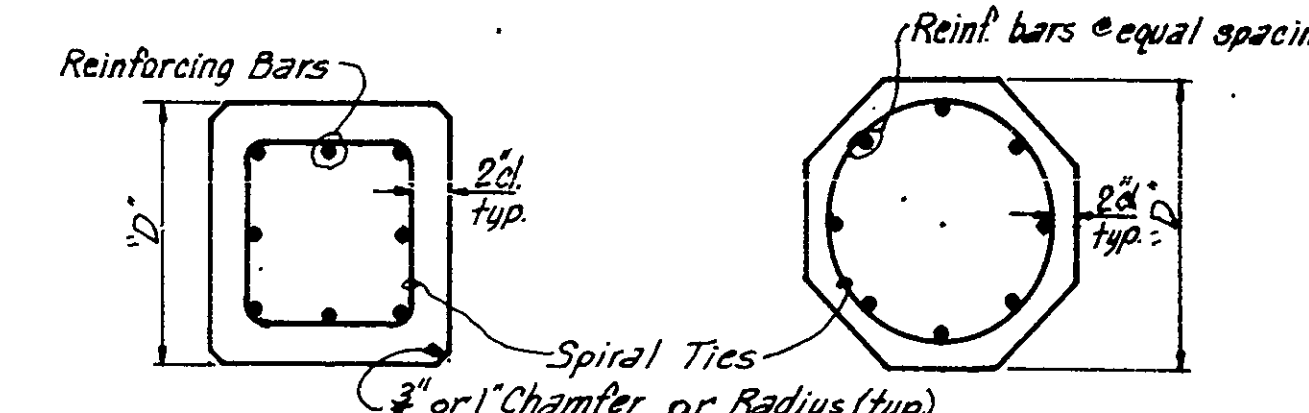
TWO POINT PICK-UP

PRECAST PILE REINFORCING

PILE SIZE	NO. REQ'D.	BAR SIZE
16" OCT.	8	#7
18" OCT.	8	#7
14" SQ.	8	#7
16" SQ.	8	#7
18" SQ.	8	#8



THREE POINT PICK-UP



SECTION A-A  
SQUARE PILE

SECTION A-A  
OCTAGONAL PILE

PRECAST CONCRETE PILES

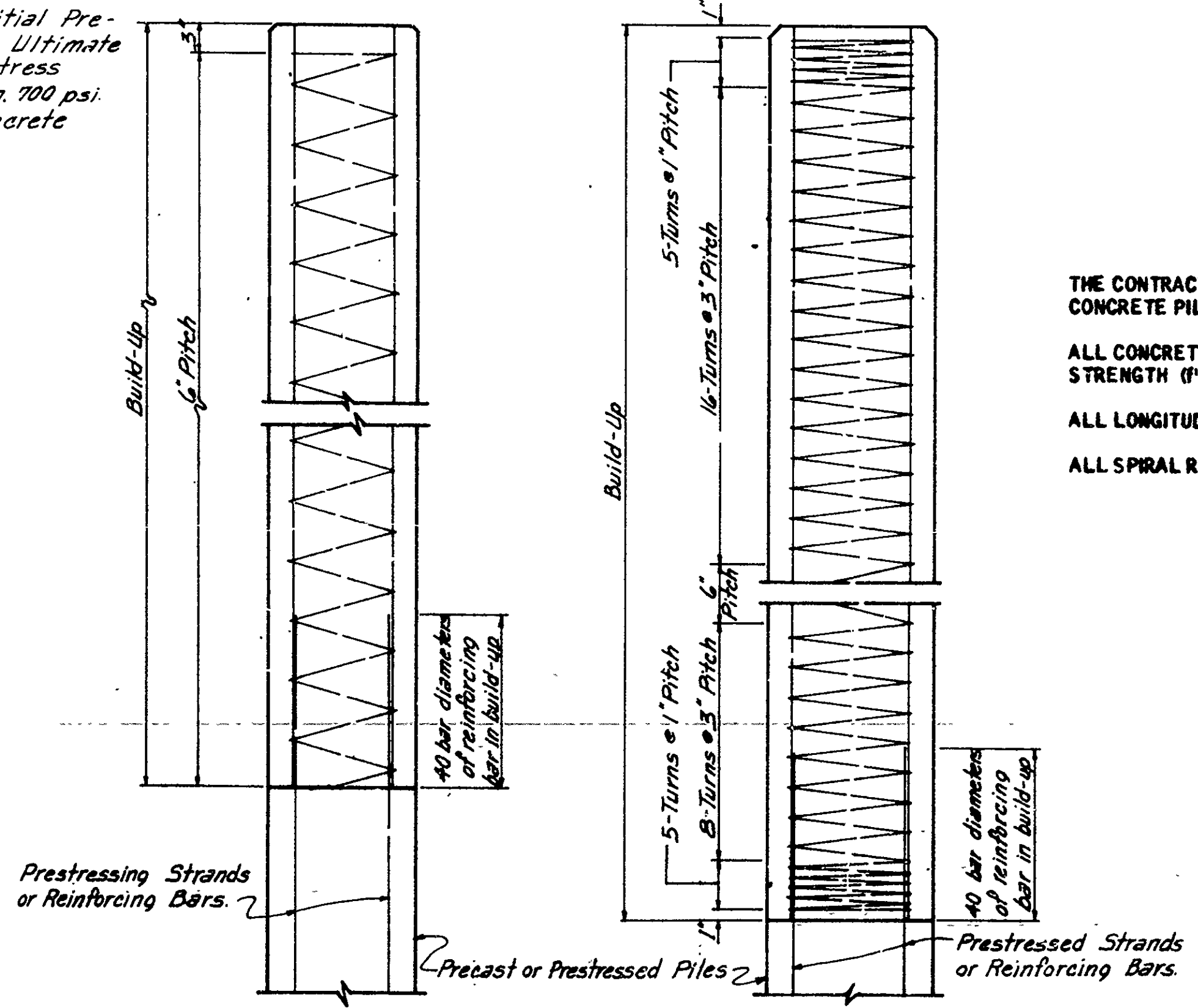
ALTERNATE PRECAST CONCRETE PILES

THE CONTRACTOR MAY ELECT TO USE A PRECAST CONCRETE PILE IN LIEU OF THE PRESTRESSED CONCRETE PILE. THE FOLLOWING NOTES APPLY TO PRECAST CONCRETE PILES.

ALL CONCRETE SHALL BE CLASS (S/AE) AND SHALL HAVE A MINIMUM COMPRESSIVE CYLINDER STRENGTH (f<sub>c</sub>) OF 3500 PSI AT 28 DAYS.

ALL LONGITUDINAL REINFORCING BARS SHALL BE DEFORMED BARS OF ASTM A615 OR A617.

ALL SPIRAL REINFORCING SHALL BE THE SAME AS THAT SHOWN FOR PRESTRESSED CONCRETE.



BUILD-UP  
WITHOUT DRIVING

BUILD-UP  
WITH DRIVING

Revised 12-2-77, Added 3/4" chamfer. Removed time before prestressing.

Revised 7-24-75, Redrawn to include Square Piles.

Revised for 1978 Specs. 9-15-78, K.D.N.

DETAILS OF STANDARD  
CONCRETE PILES  
ROUTE SEC.  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: W.W.W. DATE: 7-24-75  
CHECKED BY: J.E.L. DATE: 7-31-75  
DESIGNED BY: J.E.L. DATE: 7-24-75  
BRIDGE NO. DRAWING NO. 2383