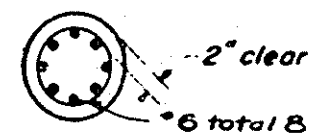
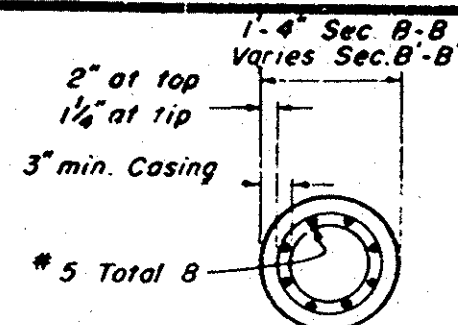


Pile shell minimum diameter = 12" I.D.



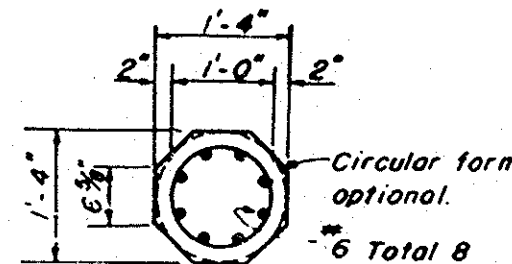
PLAN
Scale: 3/4" = 1'-0"



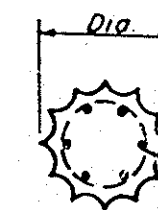
SECTION B-B
Scale: 3/4" = 1'-0"

Section B-B similar except as noted.

As an alternative to the reinforcement shown, Alternative "W" longitudinal reinforcement may consist of steel strands prestressed to have a total remaining force after losses of not less than 67,000 lbs. At no time shall the stress in the steel exceed 0.8 of its ultimate value.



SECTION C-C
Scale: 3/4" = 1'-0"



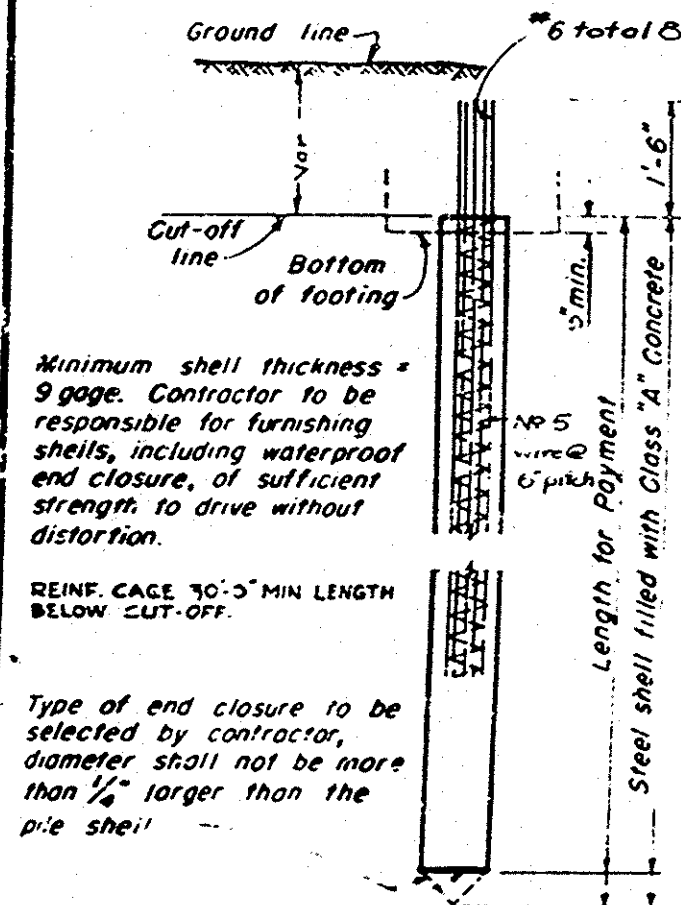
SECTION D-D
Scale: 3/4" = 1'-0"

APPROVED: *[Signature]*
COUNTY ROAD COMMISSIONER
CIVIL ENGINEER NO. 7872

APPROVED: *[Signature]*
BRIDGE ENGINEER 5385
DATE: September 10, 1957



SECTION E-E
Scale: 3/4" = 1'-0"



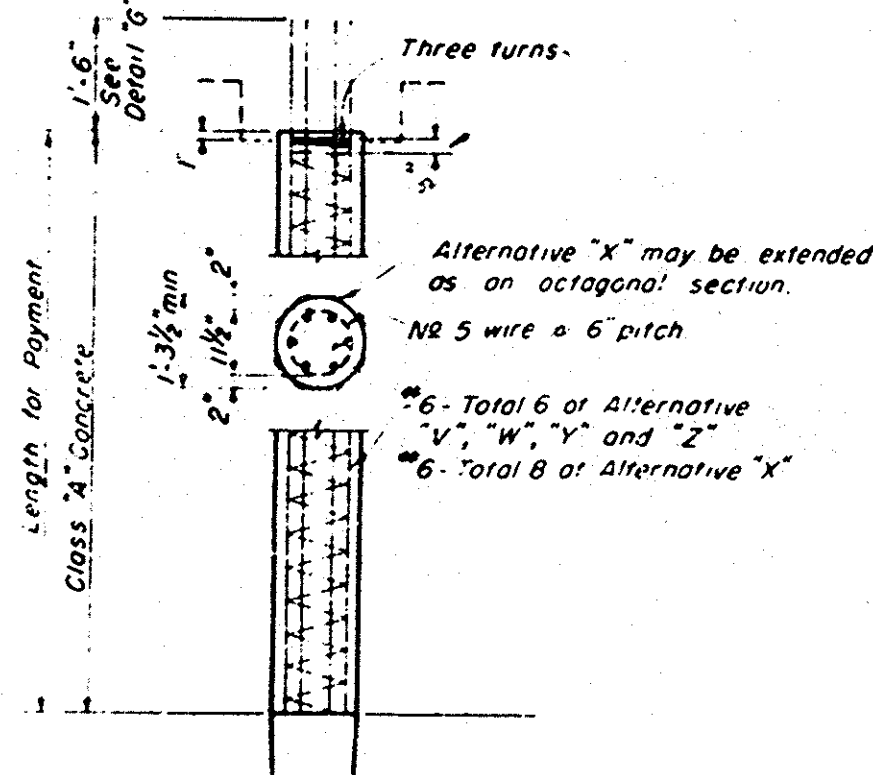
Minimum shell thickness = 9 gage. Contractor to be responsible for furnishing shells, including waterproof end closure, of sufficient strength to drive without distortion.

REINF. CAGE 10'-3" MIN LENGTH BELOW CUT-OFF.

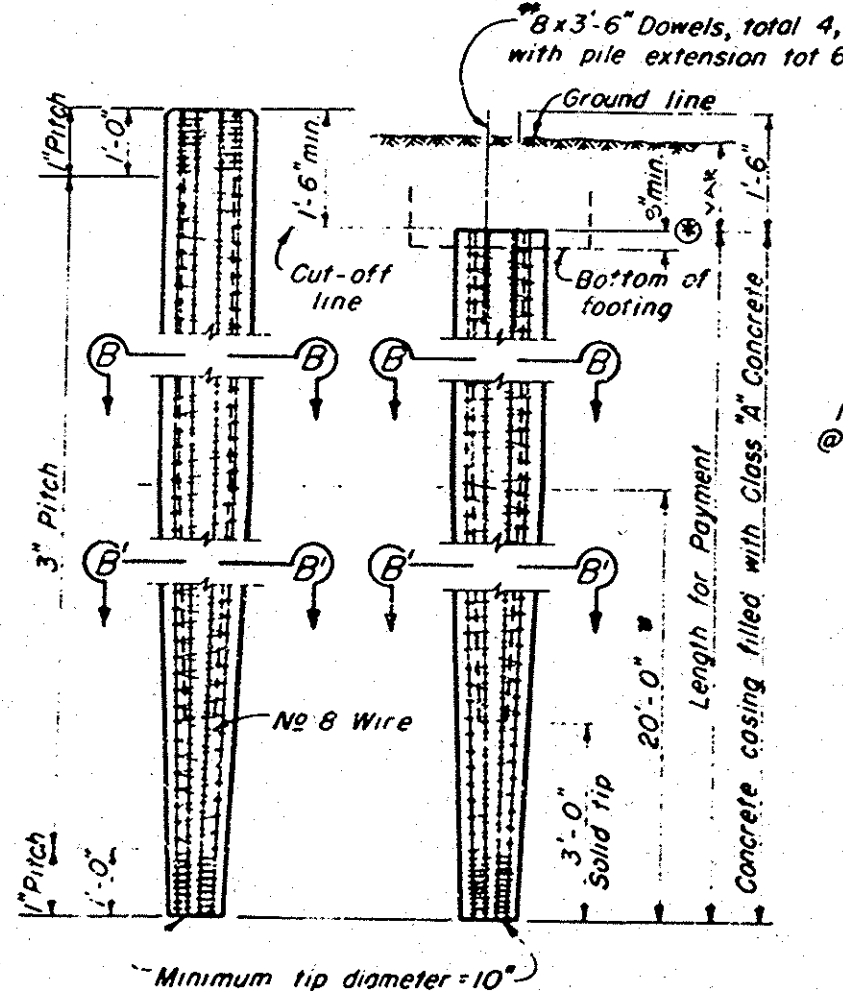
Type of end closure to be selected by contractor, diameter shall not be more than 1/4" larger than the pile shell.

CAST-IN-PLACE CONCRETE PILE ALTERNATIVE "U"

Extensions of Alternative "U" will not be permitted above the ground with either the Typical Pile Extension or the 12" pile shell.



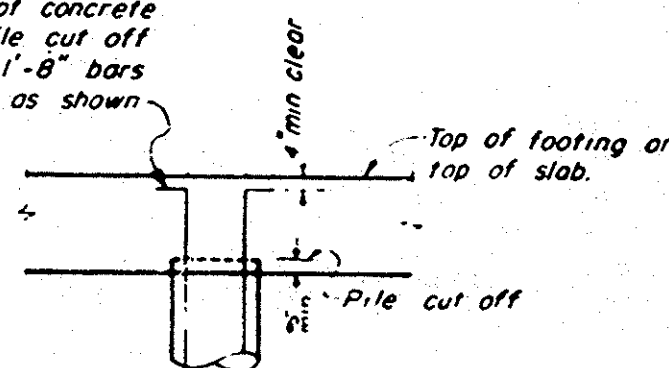
TYPICAL PILE EXTENSION
Typical except for Alternative "U"



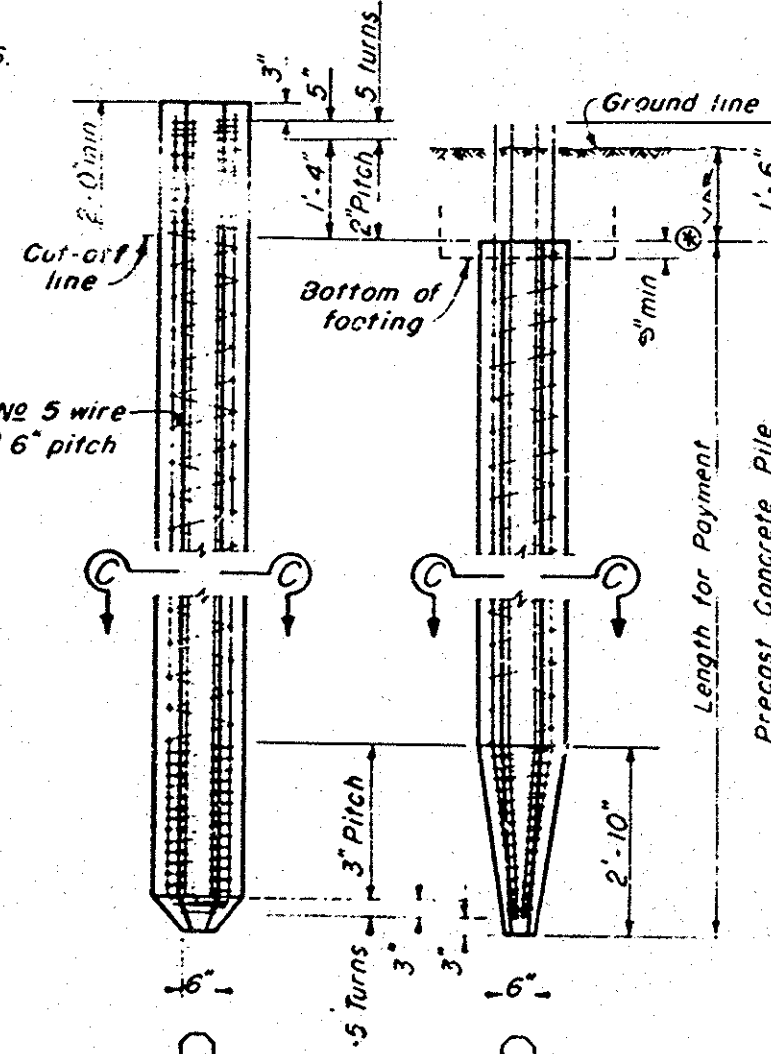
Longitudinal reinforcement in the driven portion of Alternative "W" shall be prestressed to 10,000 lbs. per bar.

CAST-IN-PLACE CONCRETE PILE ALTERNATIVE "W"

When depth of concrete above the pile cut off is less than 1'-8" bars shall be bent as shown

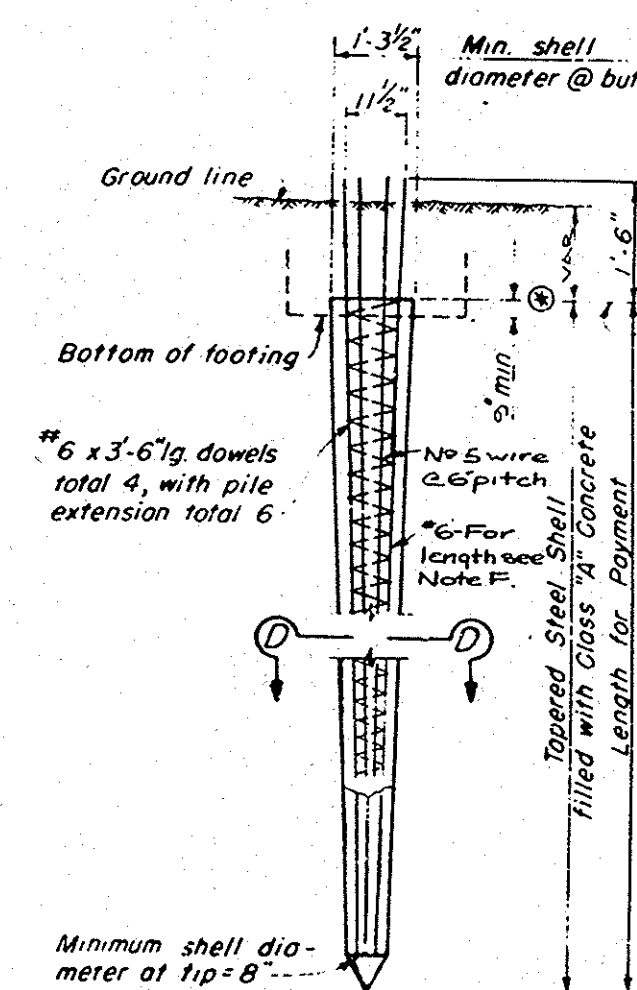


DETAIL "G"



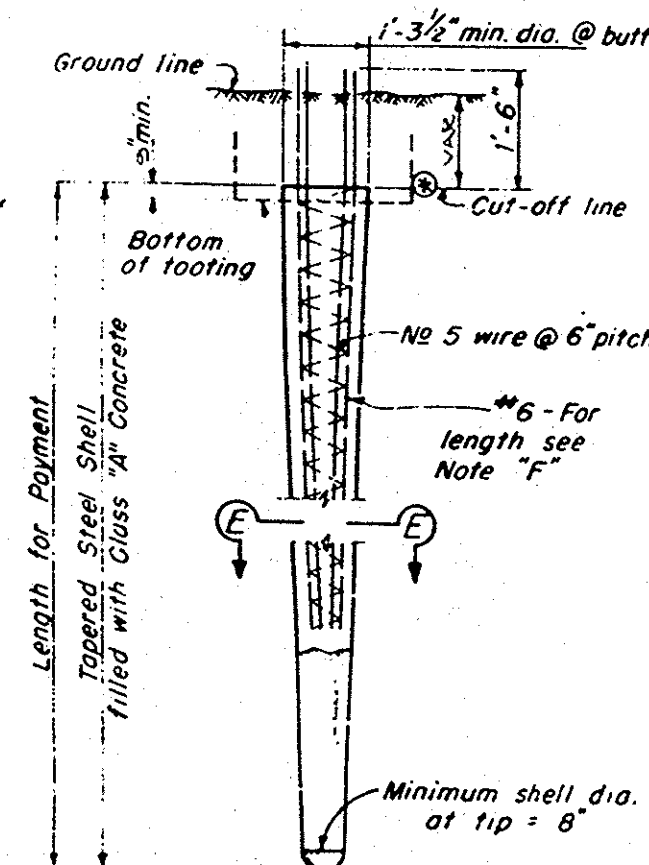
ALTERNATIVE TIP PRECAST CONCRETE PILE ALTERNATIVE "X"

Bridge #8A-28-A
Harbor Blvd.
Across Santa Ana River
Sheet 13 of 13
Revised: 1/55 Scale 3/4" = 1'-0"
Blackline Print



Minimum shell thickness = 9 gage. Contractor to be responsible for furnishing shells of sufficient thickness to drive without distortion

CAST-IN-PLACE CONCRETE PILE ALTERNATIVE "Y"



CAST-IN-PLACE CONCRETE PILE ALTERNATIVE "Z"

PILE NOTES

For Alternatives "W" and "X" the piles may be driven full length and cut off without extension or they may be extended as shown at the option of the Contractor. When Alternatives "Y" and "Z" are extended above ground, the Typical Pile Extension shall be used.

When piles are extended the elevation of cut-off shall be located 1'-0" minimum below ground line, unless shown otherwise on the plans.

Note "F":

In Alternative "Y" & "Z" the length of 6 bars, measured below ground line or bottom of footing, shall be either 1) a minimum of 1/3 penetration, or 2) 30", whichever is the greater.

When the "top of a bearing strata" is indicated on the plans, the length of 6 bars, measured below the top of the bearing strata, shall be either 1) a minimum of 1/3 penetration into this strata or 2) 30" whichever is the greater.

AS BUILT

CORRECTIONS BY:
CONTRACT NO. 58-14DDC28-P
NO CORRECTIONS THIS SHEET

MICROFILMED

Br 39c 55C-1 JUN 30 1960

C-5755-13

COUNTY OF ORANGE HIGHWAY DEPT.			
PILE DETAILS			
HARBOR BLVD. BRIDGE			
ACROSS SANTA ANA RIVER			
BRIDGE NO. 8A-28-A			
APPROVED: <i>[Signature]</i>			
ROAD COMMISSIONER			
SCALE AS NOTED OR 1/2" = 1'	DATE MAY 1957	SHEET SK-102	SHEET 13 OF 13 SHEETS