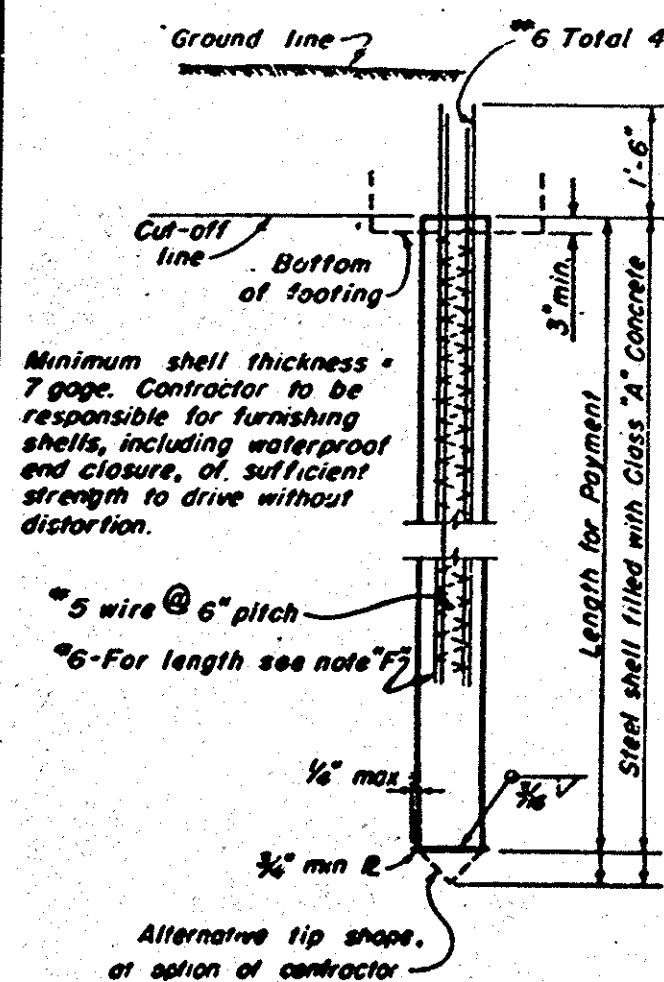
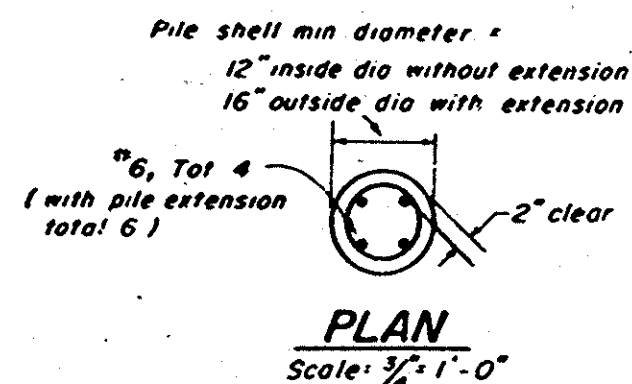
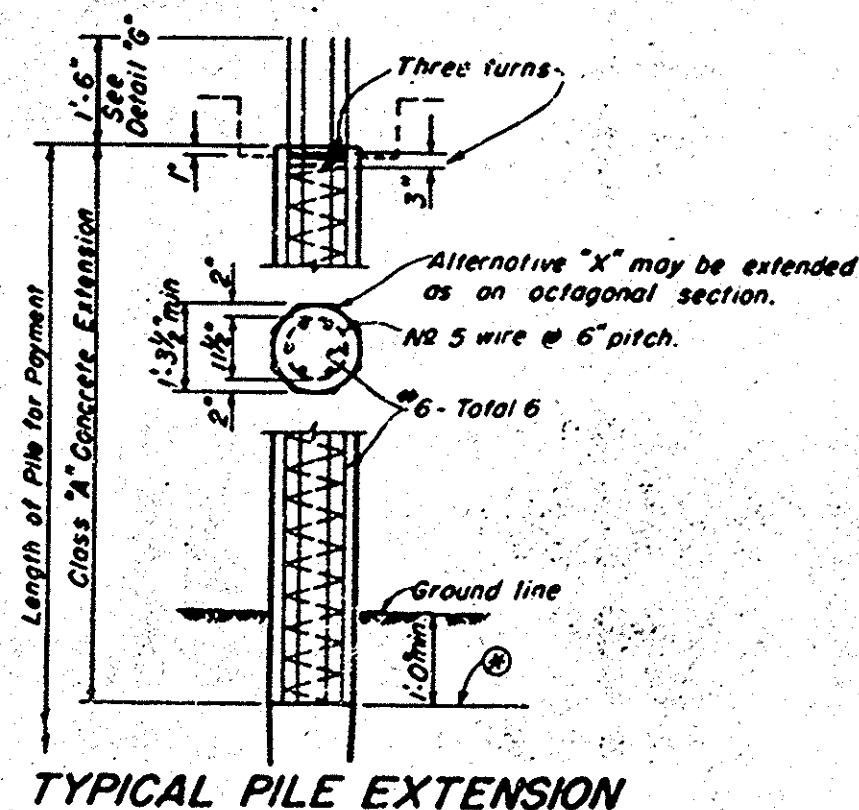
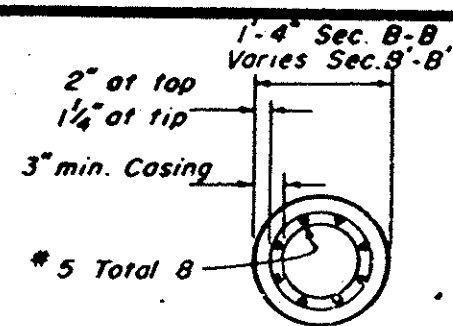




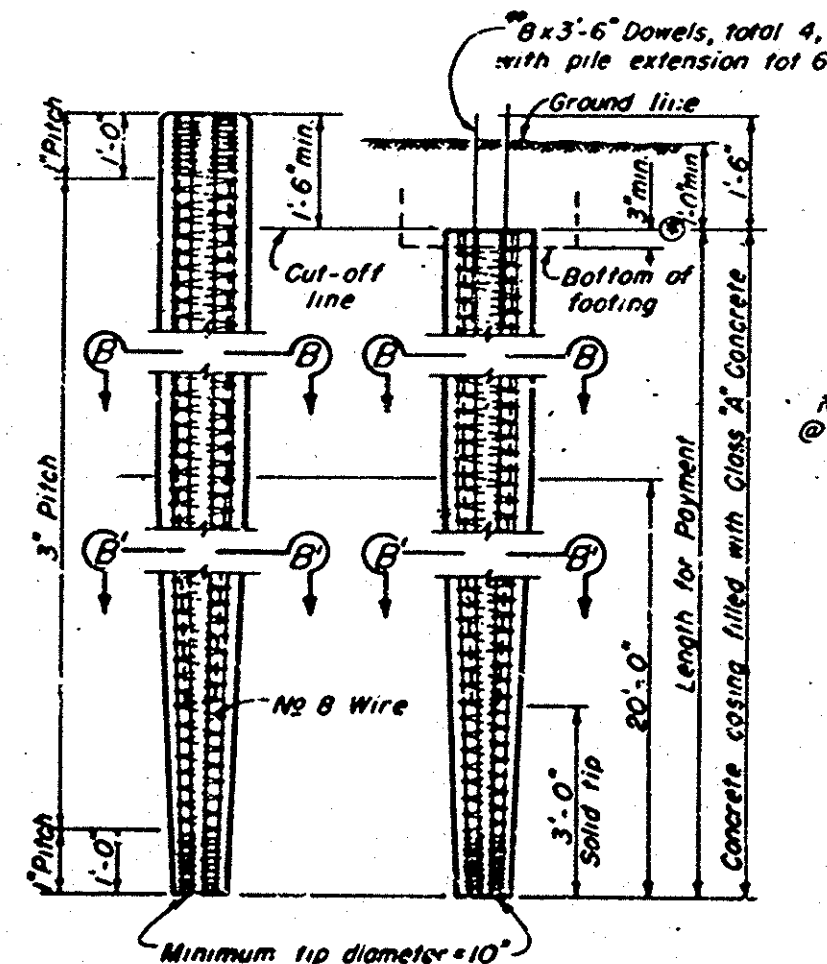
**CAST-IN-PLACE
CONCRETE PILE
ALTERNATIVE "U"**



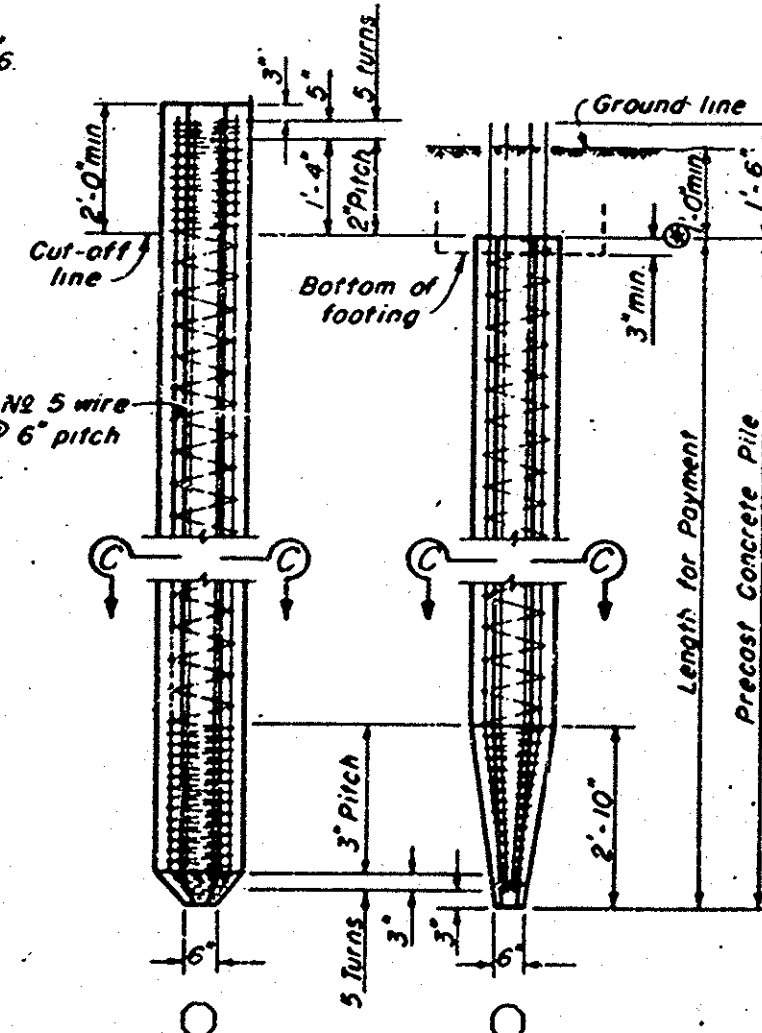
TYPICAL PILE EXTENSION



SECTION B-B
Scale: $\frac{3}{4}'' = 1'-0''$
Section B-B similar except as noted.

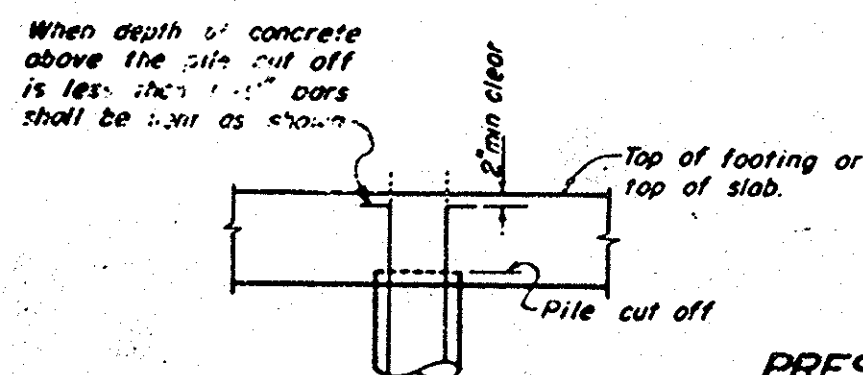


**CAST-IN-PLACE
CONCRETE PILE
ALTERNATIVE "W"**



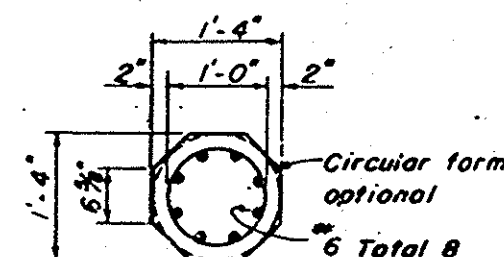
**ALTERNATIVE TIP
PRECAST
CONCRETE PILE
ALTERNATIVE "X"**

As an alternative to the reinforcement shown this pile may be prestressed by the use of steel strands to provide a total remaining force after losses of not less than 150,000 lbs. At no time shall the stress in the steel exceed 0.7 of its ultimate value. Place 6-6x8 in top of prestressed pile to provide for pile extension or connection to cap or footing.

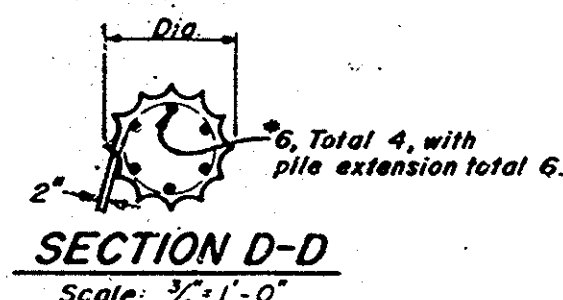


PRESTRESSING NOTE

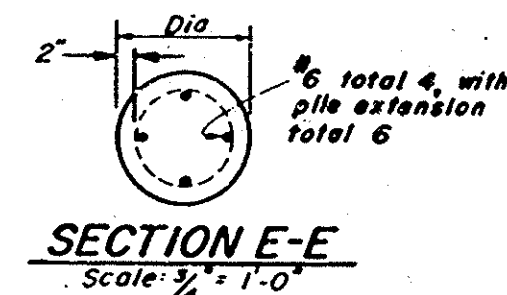
All steel strand to be prestressed shall be high tensile cold-drawn stress relieved wire strand, of a diameter not to exceed $\frac{1}{8}''$ having an ultimate tensile strength of not less than 200,000 p.s.i. and an elongation at rupture of not less than 4% in 24".



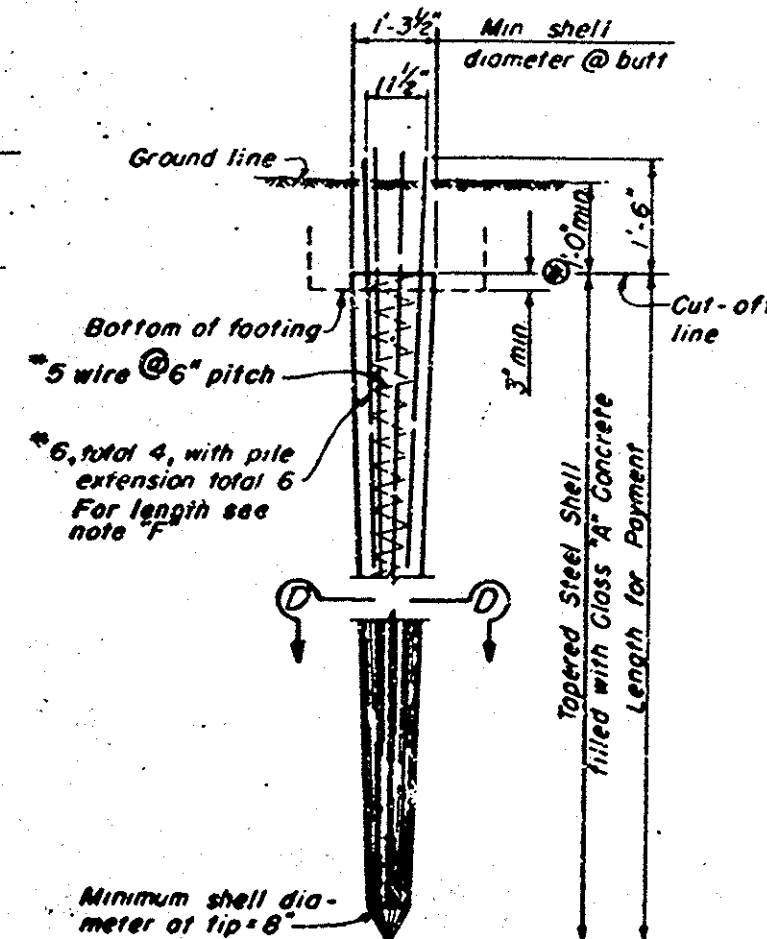
SECTION C-C
Scale: $\frac{3}{4}'' = 1'-0''$



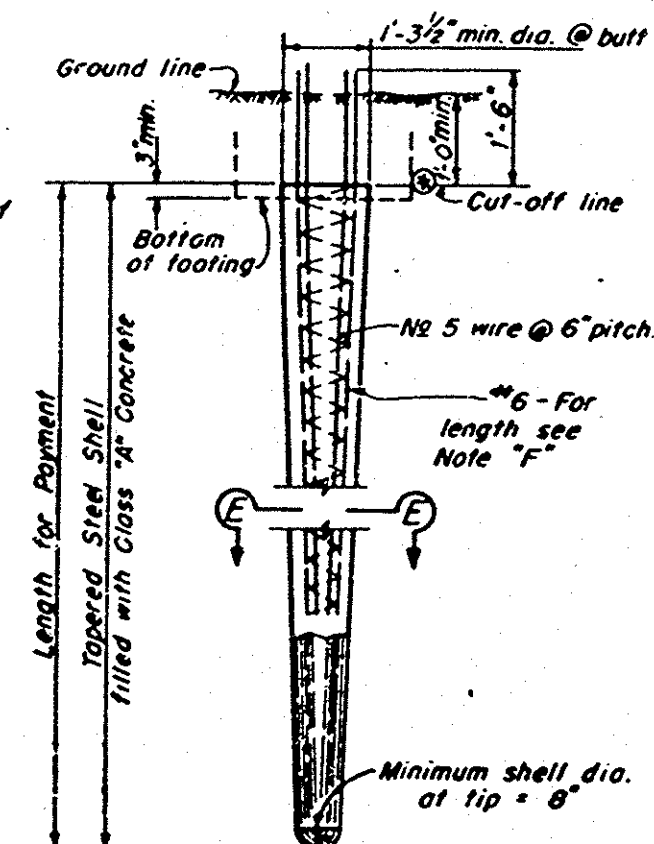
SECTION D-D
Scale: $\frac{3}{4}'' = 1'-0''$



SECTION E-E
Scale: $\frac{3}{4}'' = 1'-0''$



**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 "U", "Y", and "Z" are extended above ground, the Typical Pile Extension shall be used.

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

Note "F". In Alternatives "U", "Y", and "Z" the length of #6 bars shall be either a minimum of $\frac{1}{2}$ penetration or 20", whichever is the greater. Penetration shall be measured below the lowest of the following controlling elevations:

1. Bottom of footing.
2. Top of final ground surface.
3. Top of original ground surface, when piles are driven through fills.

FOR PILE TEST: PLACE 4-#8 FULL LENGTH OF PILE TENSION PILES ONLY, ALTERNATES "Y" & "Z" ONLY IN ADDITION TO REIN. SPECIFIED ABOVE.

ORANGE COUNTY HIGHWAY DEPARTMENT	
FAIRVIEW STREET BRIDGE	
ACROSS	
SANTA ANA RIVER	
PILE DETAIL	
SCALE	AS NOTED
SHEET	13 OF 15