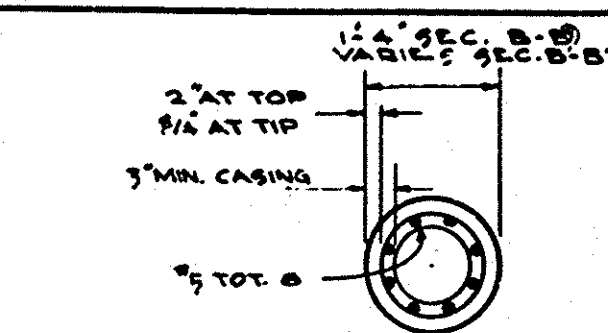
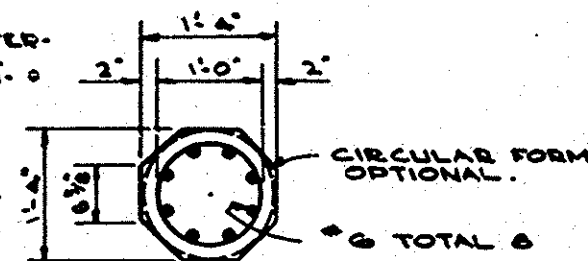




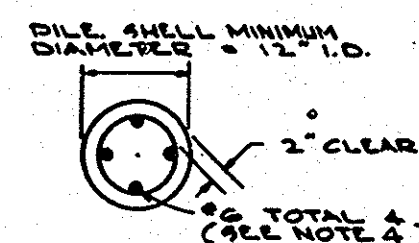
SECTION B-B
SCALE 3/4" = 1'-0"

SECTION B-B' SIMILAR
EXCEPT AS NOTED.

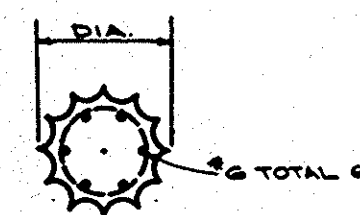
AS AN ALTERNATIVE TO THE REINFORCEMENT SHOWN, ALTERNATIVELY, LONGITUDINAL REINFORCING MEMBERS CONSIST OF STEEL STRANDS PRESTRESSED TO HAVE A TOTAL REMAINING FORCE AFTER LOSSES OF NOT LESS THAN 21000 LBS. NO TIE IN THE STEEL STRANDS IN THE STEEL EXCEED 0.8 OF ITS ULTIMATE VALUE.



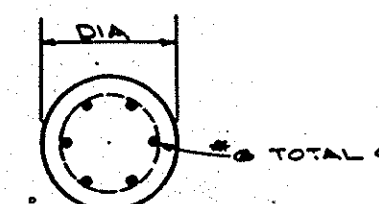
SECTION C-C
SCALE 1/4" = 1'-0"



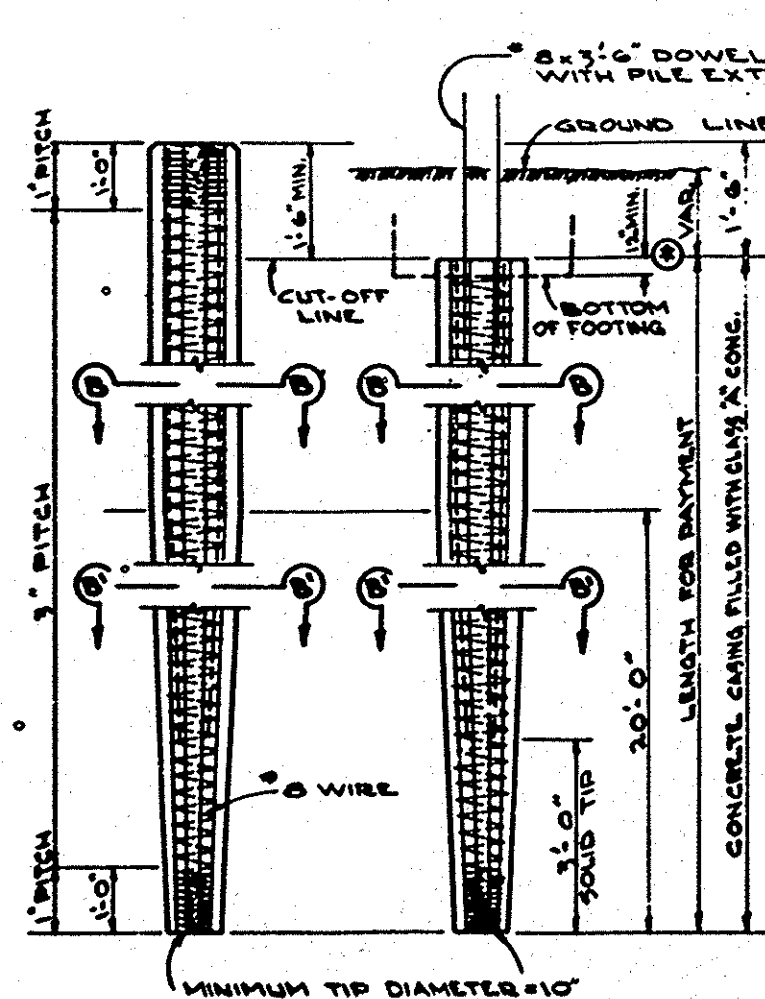
PLAN
SCALE: 3/4" = 1'-0"



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

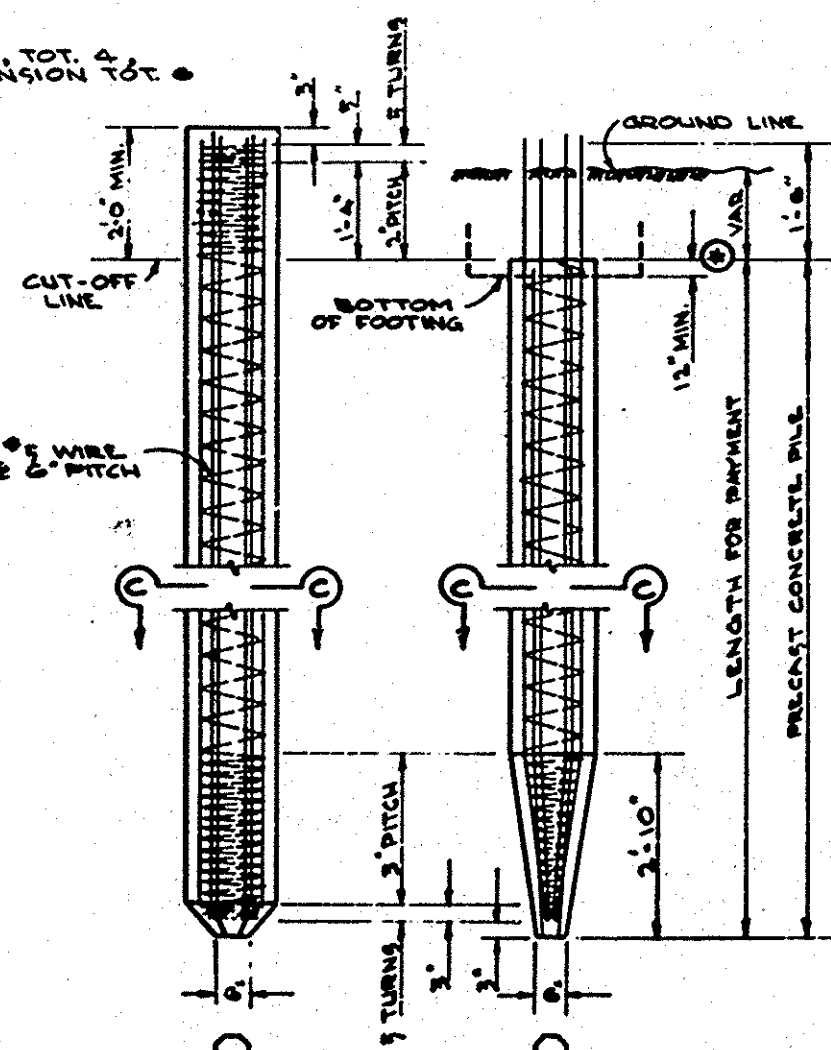


SECTION E-E
SCALE: 3/4" = 1'-0"



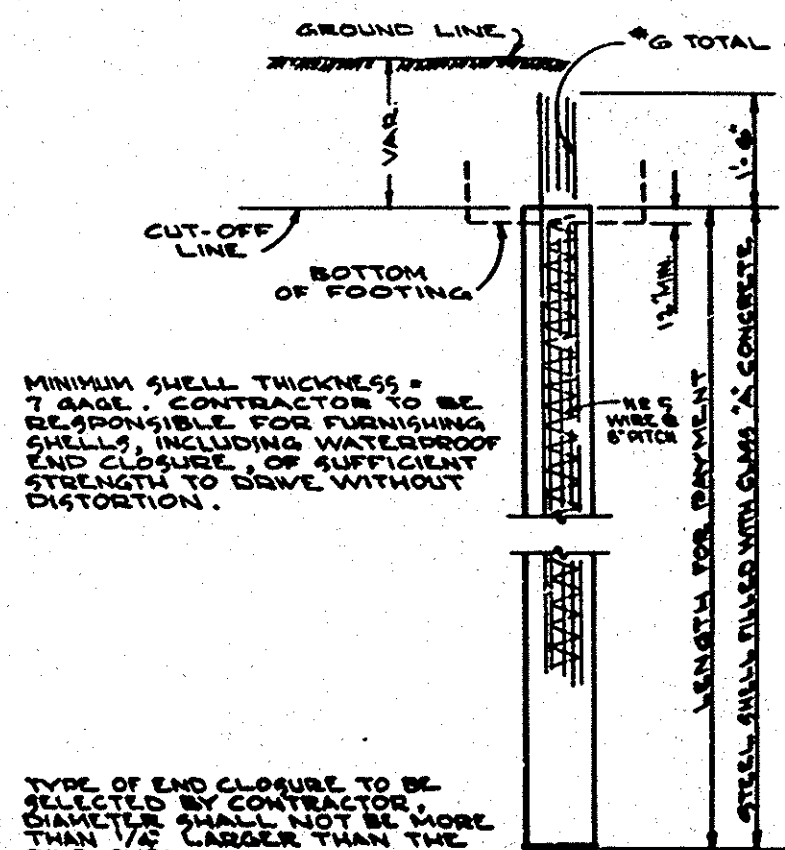
LONGITUDINAL REINFORCEMENT IN THE
DRIVEN PORTION OF ALTERNATIVE "W"
SHALL BE PRESTRESSED TO 10,000 LBS.
PER BAR.

CENTRIFUGALLY SPUN
CONCRETE PILE
ALTERNATIVE "W"



ALTERNATIVE TIP

PRECAST
CONCRETE PILE
ALTERNATIVE "X"

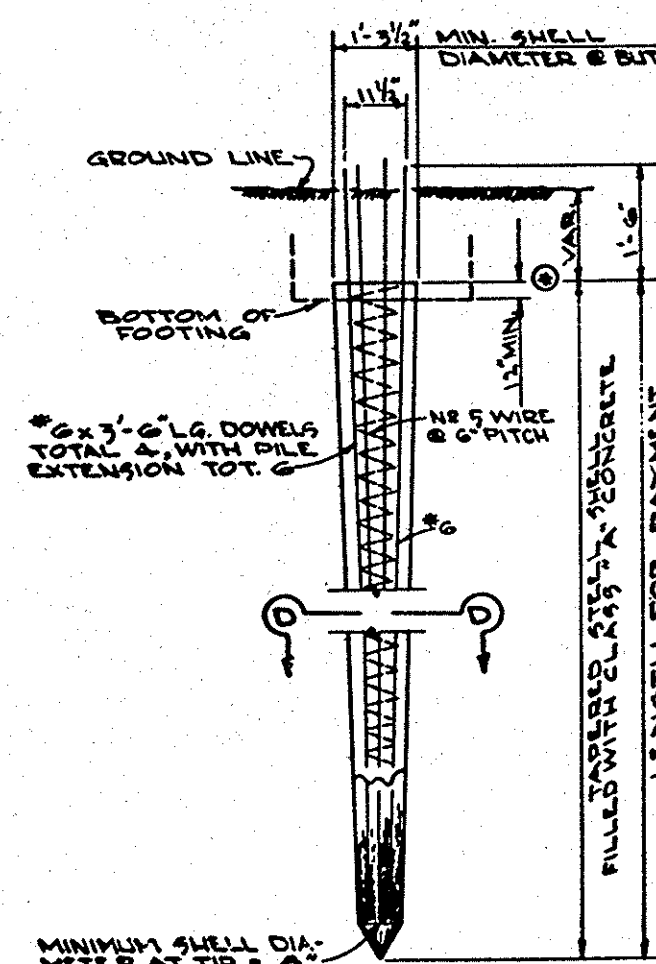


MINIMUM SHELL THICKNESS =
7 GAGE. CONTRACTOR TO BE
RESPONSIBLE FOR FURNISHING
SHELLS, INCLUDING WATERPROOF
END CLOSURE, OF SUFFICIENT
STRENGTH TO DRIVE WITHOUT
DISTORTION.

TYPE OF END CLOSURE TO BE
SELECTED BY CONTRACTOR,
DIAMETER SHALL NOT BE MORE
THAN $1/4$ " LARGER THAN THE
PILE SHELL.

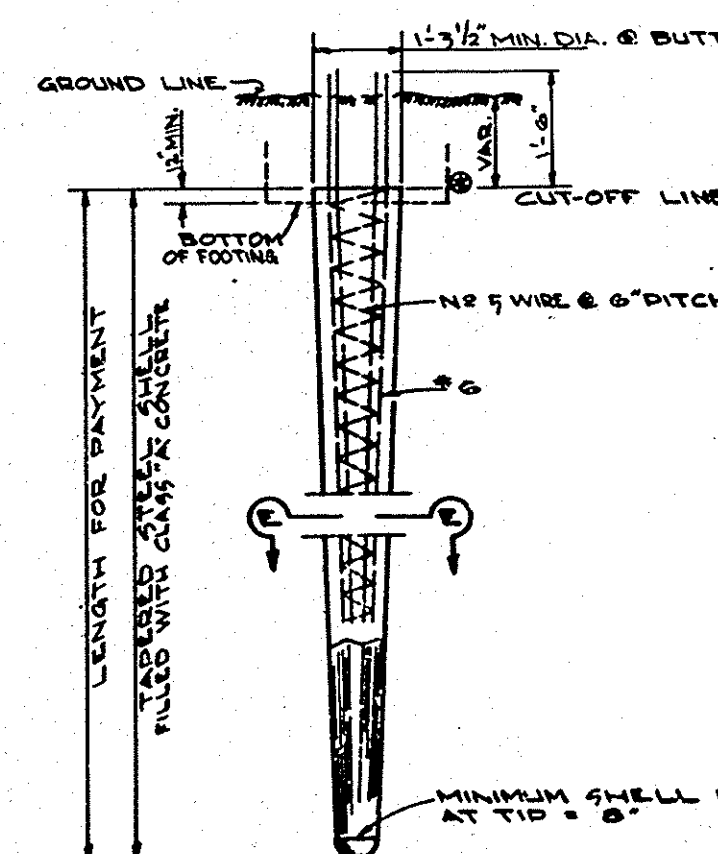
CAST-IN-PLACE
CONCRETE PILE
ALTERNATIVE "U"

EXTENSIONS OF ALTERNATIVE "U" WILL NOT BE PERMITTED ABOVE THE GROUND WITH EITHER THE TYPICAL PILE EXTENSION OR THE 12" PILE SHELL.

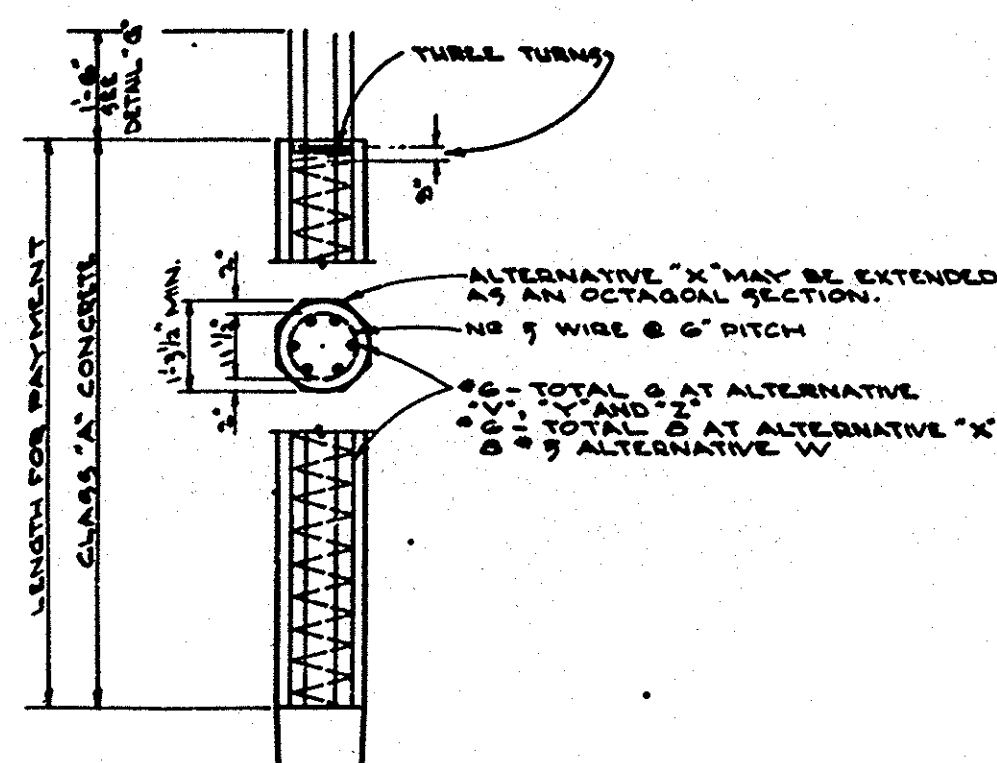


MINIMUM SHELL THICKNESS = 8 GAGE.
CONTRACTOR TO BE RESPONSIBLE FOR
FURNISHING SHELLS OF SUFFICIENT
THICKNESS TO DRIVE WITHOUT DIS-
TORTION.

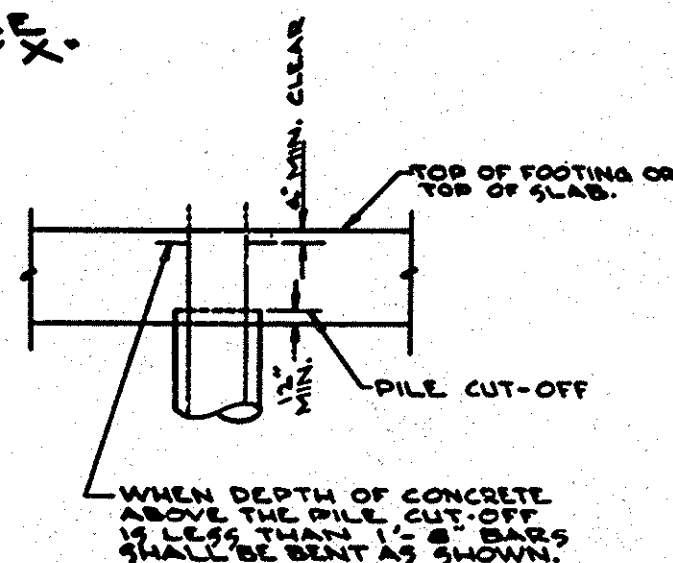
CAST-IN-PLACE
CONCRETE PILE
ALTERNATIVE "Y"



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



TYPICAL PILE EXTENSION
TYPICAL EXCEPT FOR ALTERNATIVE "U"



DETAIL "G"

Bridge #3A-26
Bolsa Ave. Bridge
Across Santa Ana River
Sheet 11 of 22
Scale as shown

NOTES

1. 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.
2. WHEN ALTERNATIVES "Y" AND "Z" ARE EXTENDED ABOVE GROUND, THE TYPICAL PILE EXTENSION SHALL BE USED.
3. WHEN PILES ARE EXTENDED THE ELEVATION OF CUT-OFF SHALL BE LOCATED 1'-0" MINIMUM BELOW GROUND LINE, UNLESS SHOWN OTHERWISE ON THE PLANS.
4. IN ALTERNATIVE "U" 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 20', WHICHEVER IS THE GREATER.
5. 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 12' WHICHEVER IS THE GREATER.

ORANGE COUNTY HIGHWAY DEPARTMENT

BOLSA AVE. BRIDGE
ACROSS SANTA ANA RIVER

PILE DETAIL

SCALE: AS NOTED

SHEET 1 OF 1