

**GENERAL NOTES**

**DESIGN SPECIFICATIONS:**  
 THIS STANDARD DRAWING CONFORMS TO THE "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2007, INCLUDING THE 2008 INTERIM REVISIONS, AND THE 2007 ODOT BRIDGE DESIGN MANUAL.

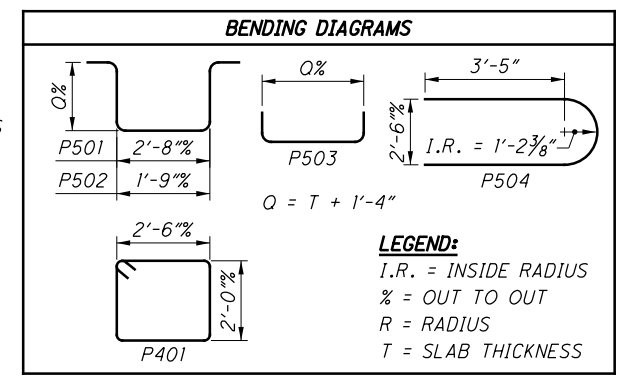
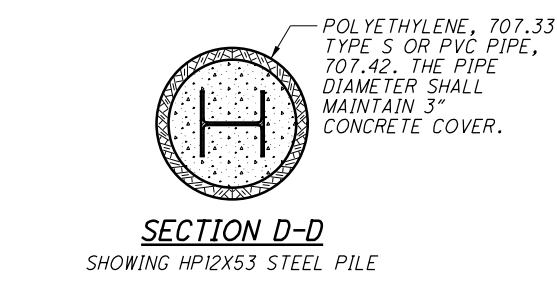
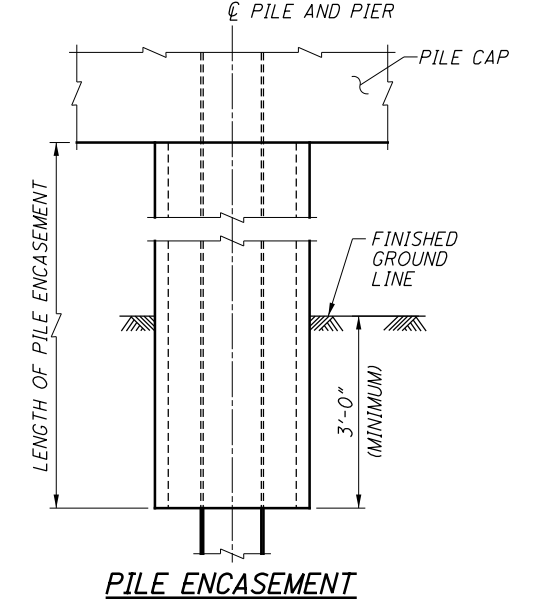
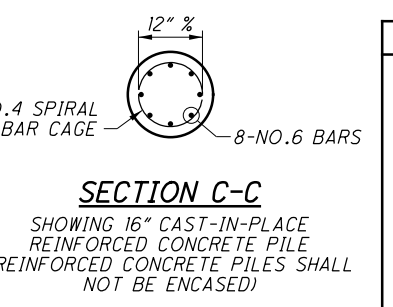
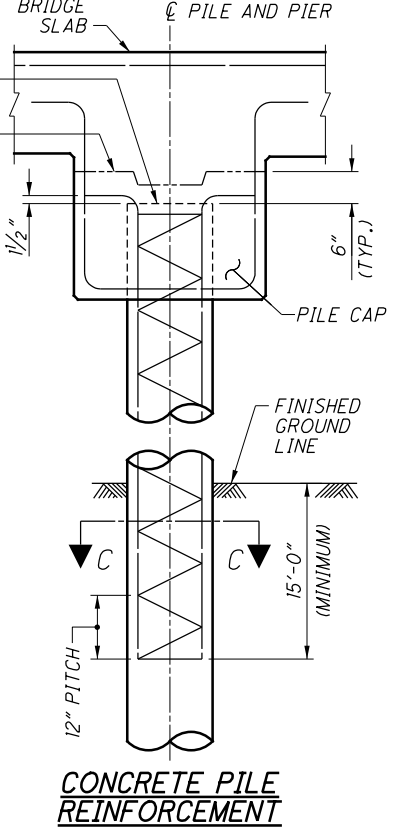
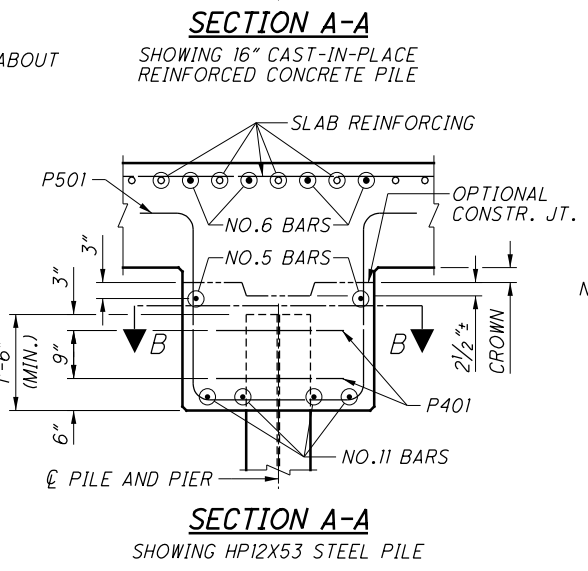
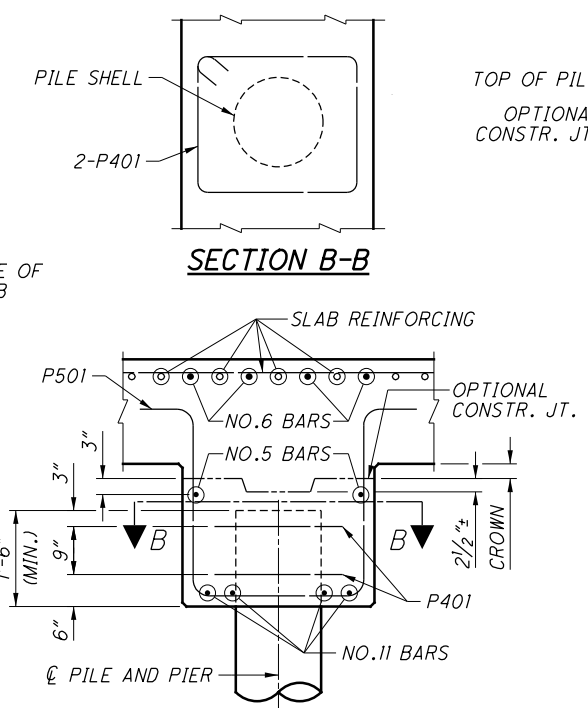
**DESIGN DATA:**  
 DESIGN METHOD - LOAD AND RESISTANCE FACTOR DESIGN  
 LIVE LOAD - HL93  
 FUTURE WEARING SURFACE - 0.06 KSF  
 DESIGN STRESSES:  
 CONCRETE - COMPRESSIVE STRENGTH = 4.5 KSI  
 REINFORCING STEEL - MIN. YIELD STRENGTH = 60 KSI  
 SPIRAL STEEL - MIN. YIELD STRENGTH = 60 KSI  
 HPI2X53 STEEL PILE - MIN. YIELD STRENGTH = 50 KSI

**ITEM SPECIAL - PILE ENCASEMENT:**  
 ENCASE ALL STEEL H-PILES AS SHOWN. CONCRETE FOR ENCASEMENT SHALL CONFORM TO C&MS 511 (f'c = 4.0 KSI). PROVIDE A CONCRETE SLUMP BETWEEN 6 TO 8 INCHES WITH THE USE OF A SUPERPLASTICIZER.

**GENERAL NOTES (CONTINUED)**

THE DEPARTMENT WILL MEASURE PILE ENCASEMENT BY THE NUMBER OF FEET. THE DEPARTMENT WILL DETERMINE THE SUM AS THE LENGTH MEASURED ALONG THE AXIS OF EACH PILE FROM THE BOTTOM OF THE ENCASEMENT TO THE BOTTOM OF THE PIER CAP. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM - SPECIAL, PILE ENCASEMENT.

**FALSEWORK SUPPORT:**  
 THE DEPARTMENT WILL ALLOW PERMANENT ATTACHMENT OF THE FALSEWORK ONLY IF THE ATTACHMENT IS MADE TO THE PORTION OF THE PILE ENCASED IN THE PIER CAP. THE DEPARTMENT WILL NOT ALLOW OTHER METHODS OF PERMANENT ATTACHMENT TO THE PIER INCLUDING METHODS THAT REQUIRE PERMANENT FALSEWORK SUPPORT ENCASED IN THE BRIDGE SLAB. THE FALSEWORK SUPPORT SHALL NOT PRODUCE ECCENTRIC LOADS IN THE PILES.



**DESIGN INSTRUCTIONS**

**GENERAL:**  
 THIS DRAWING PROVIDES GENERAL DESIGN AND CONSTRUCTION DETAILS. THE PROJECT PLANS FOR EACH STRUCTURE SHALL SHOW STATIONS, SPAN LENGTHS, ROADWAY WIDTH, SKEW, CURVE AND SUPERELEVATION DATA (IF ANY), ELEVATIONS, SUPERSTRUCTURE DETAILS, ESTIMATED QUANTITIES, REINFORCING STEEL LIST AND OTHER NECESSARY DETAILS AND SPECIAL NOTES.

**PILES:**  
 THE DESIGNER SHALL FURNISH THE PILE TYPE, SIZE, SPACING AND ULTIMATE BEARING VALUE OR TOTAL FACTORED LOAD ON THE PROJECT PLANS. THE MINIMUM SIZE SHALL BE A 16" DIAMETER CAST-IN-PLACE PILE AND AN HPI2X53 PILE. THE MAXIMUM PILE SPACING IS 7'-6".

**REINFORCING STEEL:**  
 THE MINIMUM LAP LENGTHS ARE 3'-7" FOR NO. 5 BARS AND 4'-4" FOR NO. 6. LAP LENGTHS ASSUME EPOXY COATED STEEL. NO. 11 BARS SHALL BE SPLICED BY THE USE OF MECHANICAL CONNECTORS. THE MECHANICAL CONNECTOR SYSTEM USED SHALL BE ABLE TO DEVELOP 125 PERCENT OF THE FULL YIELD STRENGTH OF THE REINFORCING STEEL AS A MINIMUM. IF THE LONGITUDINAL BARS ARE SPLICED, PLACE LAP SPLICES IN A STAGGERED ARRANGEMENT.

**DESIGN INSTRUCTIONS (CONTINUED)**

**SLAB THICKNESS:** SEE THE CONTINUOUS CONCRETE SLAB STANDARD BRIDGE DRAWING FOR THE VALUE OF "T".

**LIMITS OF DESIGN:** THIS STANDARD DRAWING SHOULD NOT BE USED FOR ANY BRIDGE IN WHICH THE FOLLOWING LIMITS ARE EXCEEDED:

- (A) SKEW ANGLE OF 30°.
- (B) UNSUPPORTED LENGTH OF PILES EQUALS 20 FEET (CONSIDER SCOUR DEPTHS AND POINT OF FIXITY).
- (C) TO SUPPORT A STANDARD CONTINUOUS CONCRETE SLAB WITH AN INDIVIDUAL SPAN OF 57.50 FEET.
- (D) SLOPED EMBANKMENT, DEBRIS OR ICE FLOW LOADS WHICH WOULD CAUSE APPRECIABLE HORIZONTAL FORCE AGAINST THE PILE BENT.
- (E) ROCK OR OTHER FIRM MATERIAL THAT WOULD PREVENT DRIVING PILES AT LEAST 10 FEET BELOW THE FINISHED GROUND LINE.

**16" C.I.P. REINFORCED CONCRETE PILES:**  
 THE REINFORCING STEEL SHALL BE EPOXY COATED AND SHOWN IN THE STRUCTURE'S REINFORCING BAR LIST AND BE INCLUDED IN ITEM 507, 16 INCH CAST-IN-PLACE PILES FURNISHED FOR PAYMENT.