

GENERAL NOTES

SPECIFICATIONS: All references to the Standard Specifications are to the current edition of the Kentucky Department of Highways Standard Specifications for road and bridge construction.

CONCRETE: Use class "D" modified concrete in piles. Cylinder strength shall be 4000 psi at the time of release of the prestress strands and 5000 psi minimum at 28 days.

PRESTRESS STRANDS: Ensure prestressing reinforcement to be 1/2 inch nominal diameter uncoated seven-wire low lax strand conforming to the requirements of grade 270, AASHTO M203, current edition.

DESIGN STRESSES: Initial strand tension=30,982 pounds. f's=270,000 psi. (strands) f's=20,000 psi (mild reinforcement) f'c=5,000 psi. f'c at transfer=4000 psi. Spiral reinforcement wire W3.5 conforming to ASTM A82.

DRIVING PILES: Protect piles heads from direct hammer impact by using approved cushion blocks.

EDGES: Chamfer all edges one inch or rounded to approximately one inch radius.

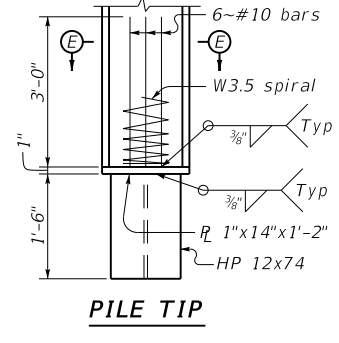
BUILD-UP AND SPLICES: Build-ups and splices may be used, as detailed, if authorized by the Engineer.

FORMS: For forming the exterior of piles, the use of steel forms on concrete casting beds is required unless otherwise approved by the Engineer. Ensure concrete finish conforms to Subsection 601.03.18, Part A of the Specifications.

PAYMENT: Payment is to be made on the basis of the unit price bid per linear foot of piling. See Section 604.04 of the Specifications.

PILE TIP: Use pile tips when specified in the bridge plans and the pile is used as a point bearing pile. Include the cost of pile tip in the unit price bid per linear foot of piling.

Pick-up Method	Maximum Length
1-Point	54 ft.
2-Point	77 ft.
3-Point	111 ft.
4-Point	151 ft.



All lifting to be at pick-up points. Clearly mark all pick-up points.

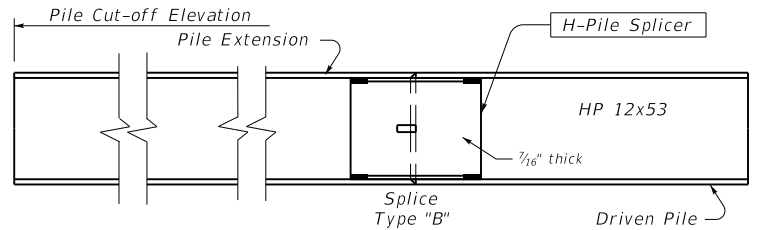
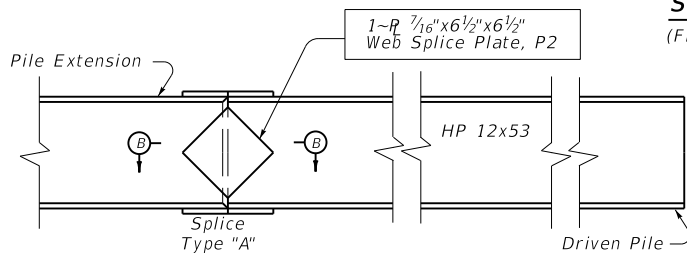
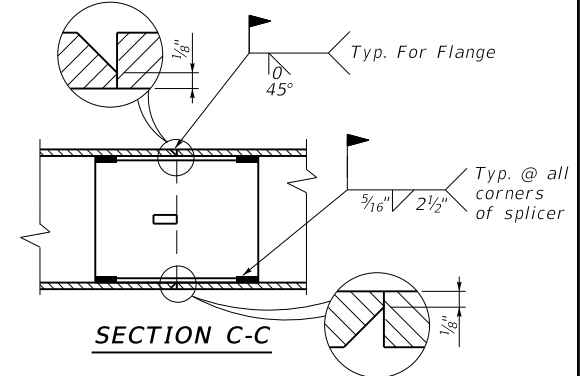
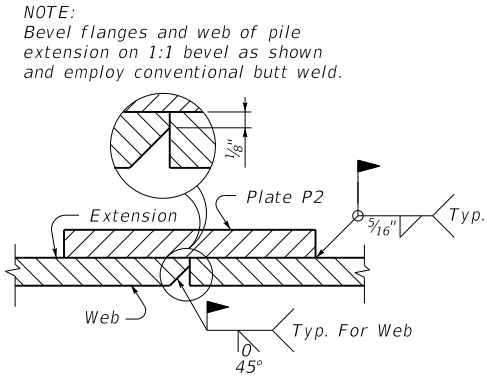
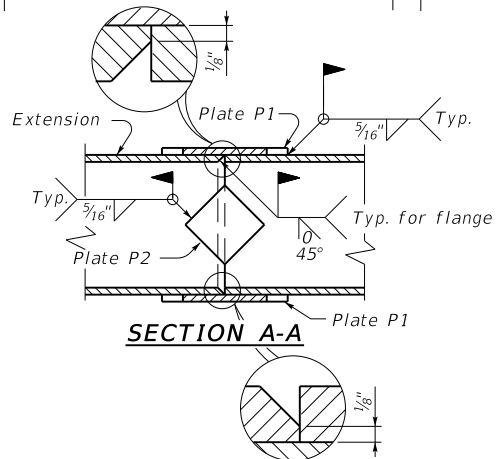
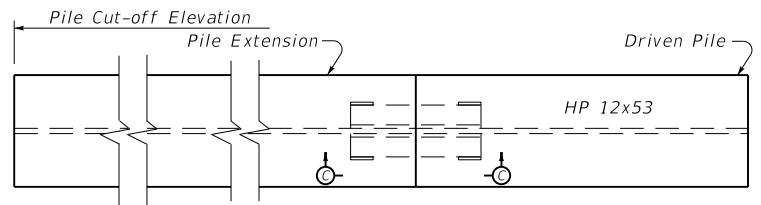
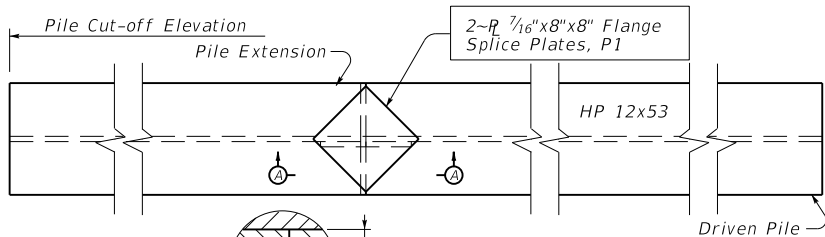
**KENTUCKY
DEPARTMENT OF HIGHWAYS**

**14" PRECAST PRESTRESSED
CONCRETE PILE**

STANDARD DRAWING NO. BPC-011-07

SUBMITTED: *Bob Adams* 02-26-20
DIRECTOR DIVISION OF STRUCTURAL DESIGN DATE

APPROVED: *[Signature]* 02-26-20
STATE REGISTERED ENGINEER DATE



SECTION B-B
(Flange Not Shown)

GENERAL NOTES

SPECIFICATIONS: Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, current edition.

MATERIALS: Ensure structural steel piles conform to A.S.T.M. A709 Grade 50, current Specifications.

SPLICE PLATES: Ensure all pile splicing options conform to A.S.T.M. A709 Grade 50, current Specifications. In lieu of Splice Option "A" or Splice option "B", splice plates may be flame cut from HP12x53 sections. If flange sections are used, the portion cut at the web must be turned outside in order to obtain a tight fit. Grind the edges smooth prior to welding.

SPLICE OPTION "B": The pile splicer shown in the details for Splice Option "B" may be Champion H-Pile Splicer, Model HP 30000, or an approved equal. Ensure the splicer is in accordance to the manufacturer's recommendations and subject to the Engineer's approval.

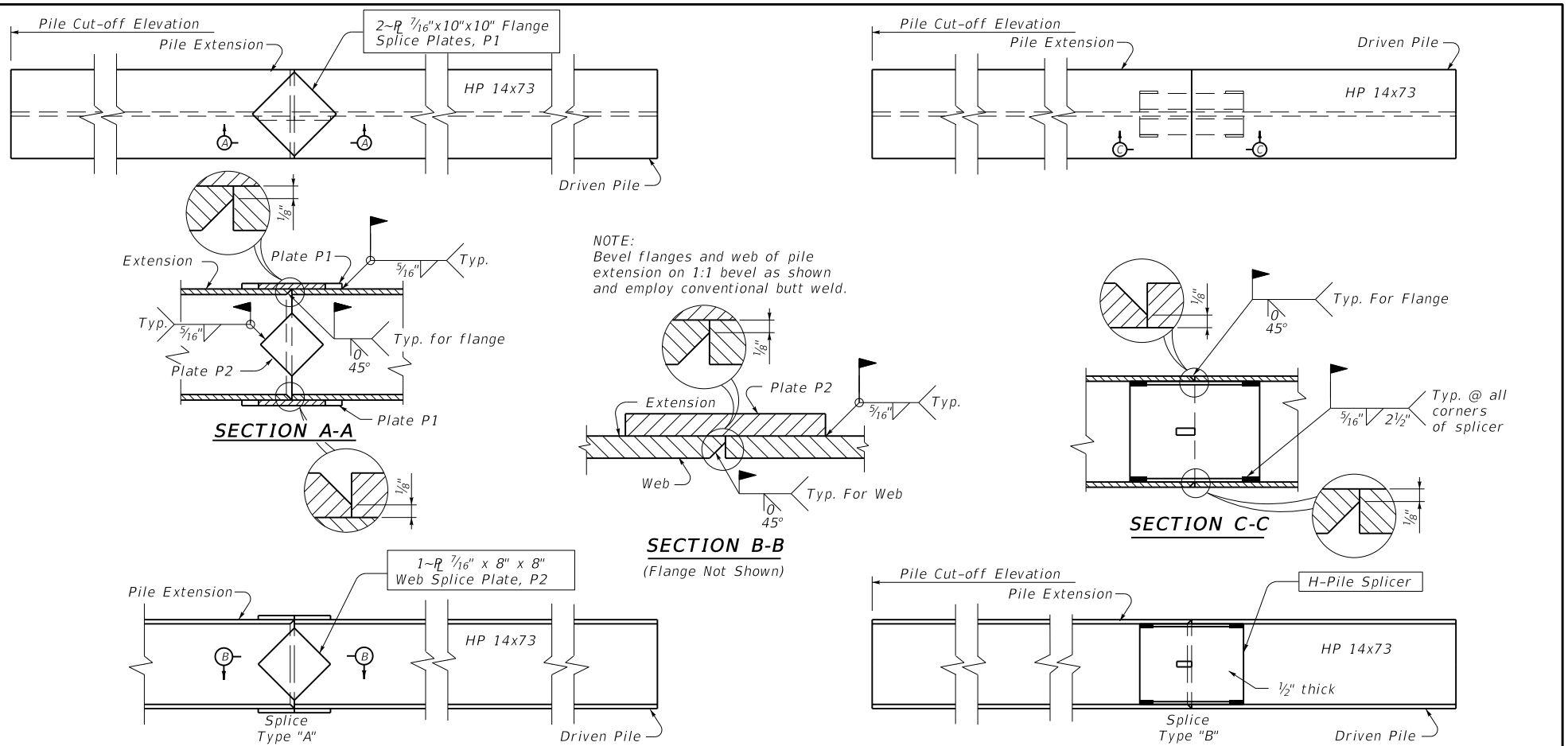
FIELD WELDS: Ensure field welding material and workmanship for all piling conforms to the current Joint Specifications ANSI/AASHTO/AWS D1.5 Bridge Welding Code. Splice piles as indicated above only when driven below cut-off elevation.

PAYMENT: Payment for the piles in accordance with plans and specifications will be made at the contract price per linear foot.

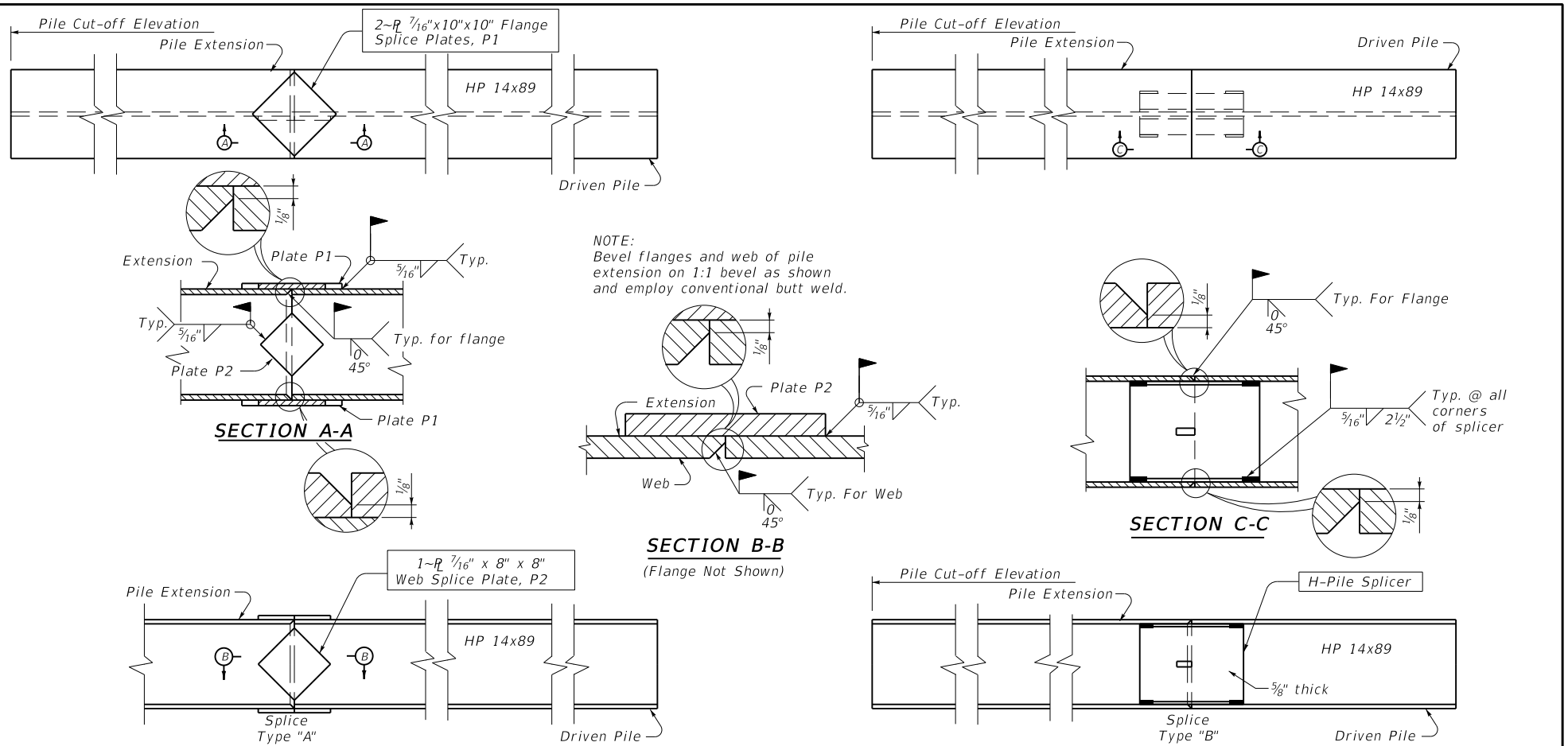
PAINT: No painting is required on steel piles.

MILL TEST REPORTS: Furnish mill test reports in triplicate to the Department showing that all materials furnished conform to the Specifications.

KENTUCKY DEPARTMENT OF HIGHWAYS		
HP12x53 Steel Pile		
STANDARD DRAWING NO. BPS-003-09		
SUBMITTED	<i>[Signature]</i> DIRECTOR DIVISION OF STRUCTURAL DESIGN	DATE 02-26-20
APPROVED	<i>[Signature]</i> STATE REGISTERED ENGINEER	DATE 02-26-20



KENTUCKY DEPARTMENT OF HIGHWAYS		
HP14x73 Steel Pile		
STANDARD DRAWING NO. BPS-009-08		
SUBMITTED	<i>Bob Adams</i> DIRECTOR DIVISION OF STRUCTURAL DESIGN	02-26-20 DATE
APPROVED	<i>[Signature]</i> STATE ENGINEER	02-26-20 DATE

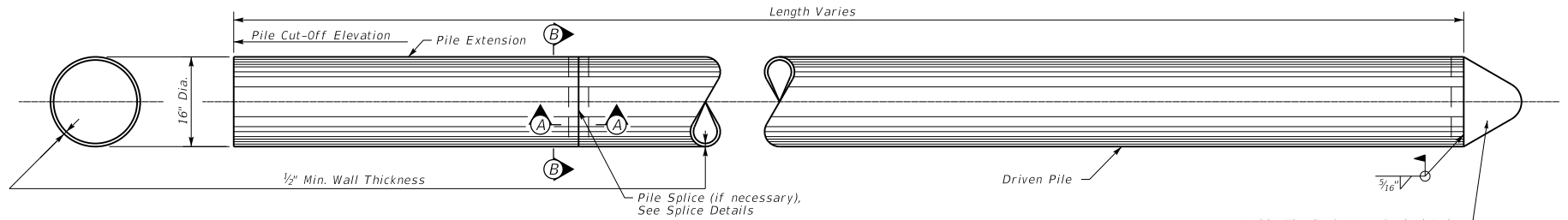


NOTE:
Bevel flanges and web of pile extension on 1:1 bevel as shown and employ conventional butt weld.

GENERAL NOTES

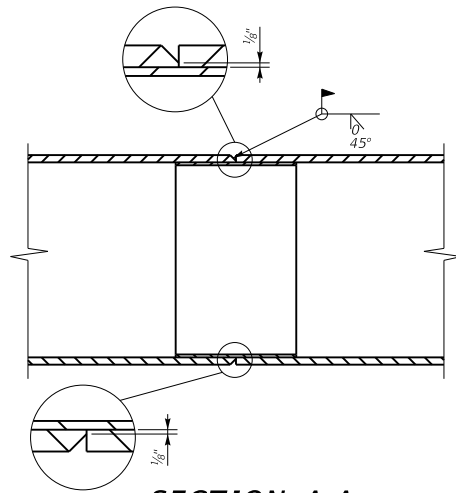
- SPECIFICATIONS:** Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, current edition.
- MATERIALS:** Ensure structural steel piles conform to A.S.T.M. A709 Grade 50, current Specifications.
- SPLICE PLATES:** Ensure all pile splicing options conform to A.S.T.M. A709 Grade 50, current Specifications. In lieu of Splice Option "A" or Splice option "B", splice plates may be flame cut from HP14x89 sections. If flange sections are used, the portion cut at the web must be turned outside in order to obtain a tight fit. Grind the edges smooth prior to welding.
- SPLICE OPTION "B":** The pile splicer shown in the details for Splice Option "B" may be Champion H-Pile Splicer, Model HP 30000, or an approved equal. Ensure the splicer is in accordance to the manufacturer's recommendations and subject to the Engineer's approval.
- FIELD WELDS:** Ensure field welding material and workmanship for all piling conforms to the current Joint Specifications ANSI/AASHTO/AWS D1.5 Bridge Welding Code. Splice piles as indicated above only when driven below cut-off elevation.
- PAYMENT:** Payment for the piles in accordance with plans and specifications will be made at the contract price per linear foot.
- PAINT:** No painting is required on steel piles.
- MILL TEST REPORTS:** Furnish mill test reports in triplicate to the Department showing that all materials furnished conform to the Specifications.

KENTUCKY DEPARTMENT OF HIGHWAYS		
HP14x89 Steel Pile		
STANDARD DRAWING NO. BPS-011-04		
SUBMITTED	<i>[Signature]</i> DIRECTOR DIVISION OF STRUCTURAL DESIGN	02-26-20 DATE
APPROVED	<i>[Signature]</i> STATE REGISTERED ENGINEER	02-26-20 DATE

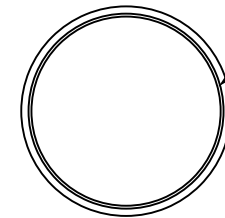


Inside Fit, Snub Nose Conical Point or Open Ended, Outside Fit Cutting Shoe. See Plans for Pile Point Type Required.

Note: Bevel pile extension on 1:1 bevel as shown and employ conventional butt weld.



SECTION A-A



SECTION B-B

Back-up ring or sleeve must be a tight enough fit to ensure the pile extension does not move relative to the driven pile. The ring or sleeve may be tack-welded to the driven pile.

GENERAL NOTES

SPECIFICATIONS: Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, current edition.

PIPE PILE MATERIAL: The steel for the pipe piling shall conform to the requirements of ASTM A252, Grade 3 (minimum yield strength of 45 ksi), for welded or seamless steel pipe piles.

PIPE FILL: The pipe piles shall be filled with sand or gravel to the bottom of cap or footing elevation unless the plans specify the pipes to be filled with concrete. If the plans specify that the pipes shall be filled with concrete, fill pipes with Class A concrete at the same time the footing or pile cap is poured. The cost of this material and labor is incidental to the price per linear foot pipe pile 16".

PAINT: No paint shall be required on the steel pile shell.

PILE POINTS: Inside Fit, Snub Nose Conical Points and Open Ended, Outside Fit Cutting Shoes, with a minimum thickness of 1", shall conform to ASTM A148 or AASHTO M103 Grade 65/35 minimum. Pile points shall be attached using a minimum 3/16" fillet weld around the circumference.

SPLICES: Splices shall be welded as detailed on this sheet, employing the use of a back-up ring or sleeve to align the pile sections. When splicing is necessary, use a length that will reasonably assure that capacity will be attained without additional splicing.

FIELD WELDS: Ensure field welding material and workmanship for all piling conforms to the current Joint Specifications ANSI/AASHTO/AWS D1.5 Bridge Welding Code. Splice piles as indicated above only when driven below cut-off elevation.

PAYMENT: Payment for the piles in accordance with the plans and specifications will be made at the contract price per linear foot.

PIPE PILE THICKNESS: Contractor shall select wall thickness sufficient to withstand driving without injury and resist harmful distortion and/or buckling due to soil pressures after driving. Selected wall thickness shall not be less than that indicated above.

MILL TEST REPORTS: Furnish notarized mill test reports in triplicate to the Department showing that all materials furnished conform to the Specifications.

KENTUCKY
DEPARTMENT OF HIGHWAYS

PIPE PILE
16 INCH

STANDARD DRAWING NO. BPS-012

SUBMITTED *Bert Adams* 02-26-20
DIRECTOR DIVISION OF STRUCTURAL DESIGN DATE

APPROVED *[Signature]* 02-26-20
STATE REGISTERED ENGINEER DATE