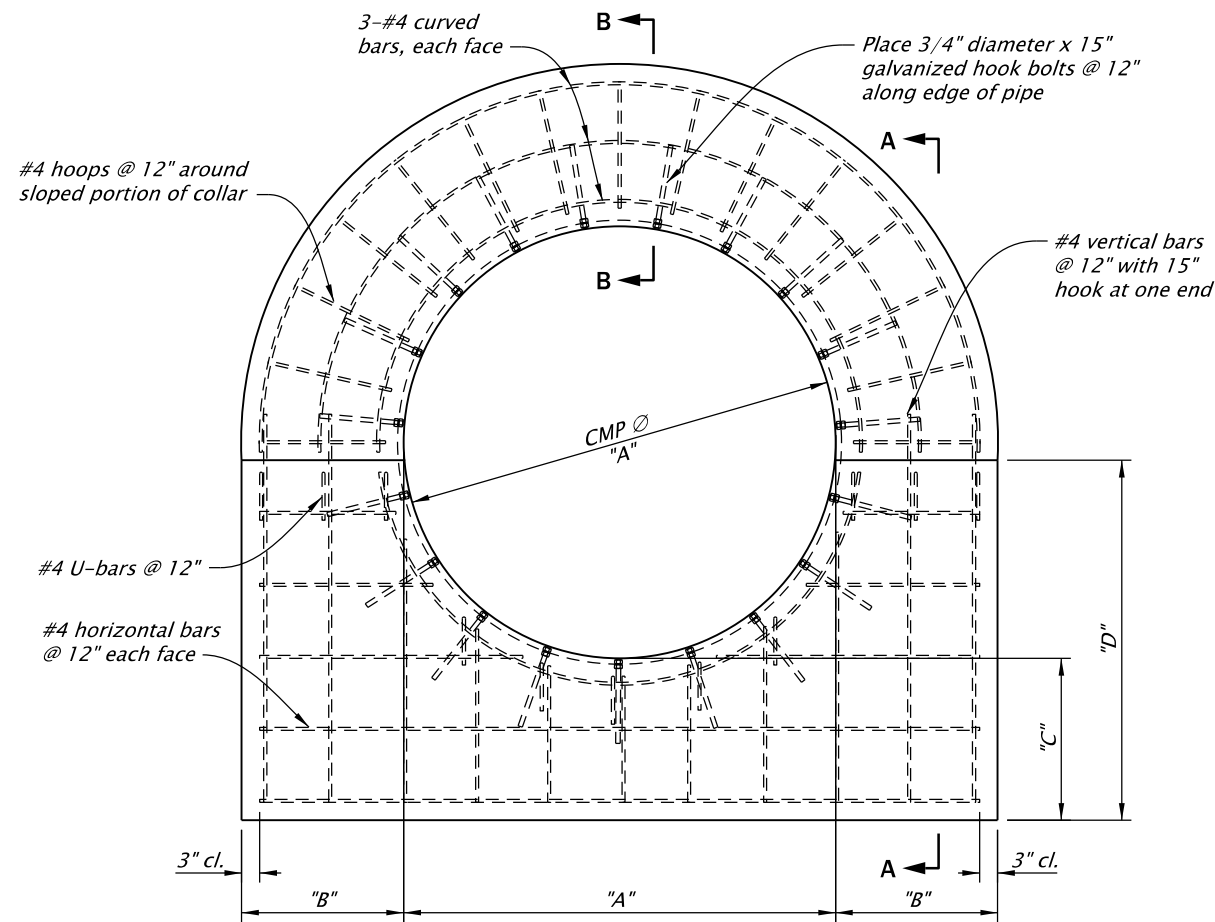
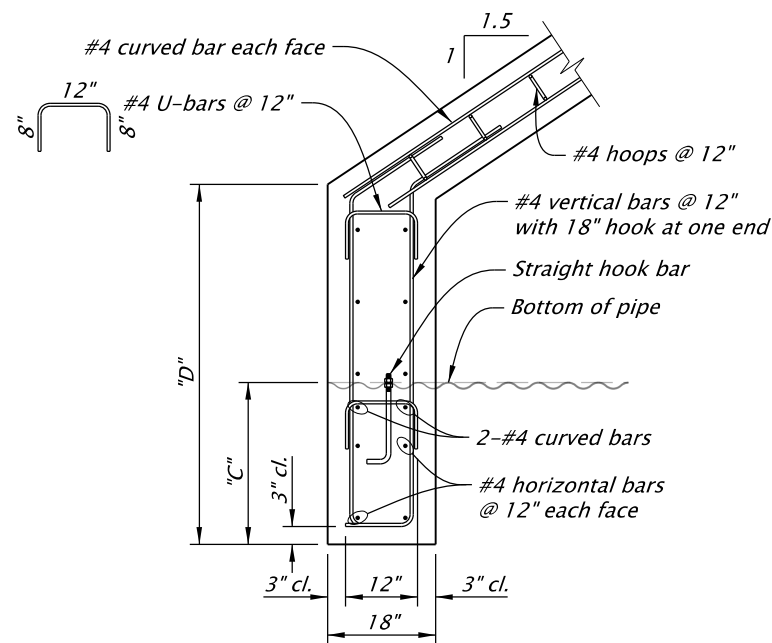
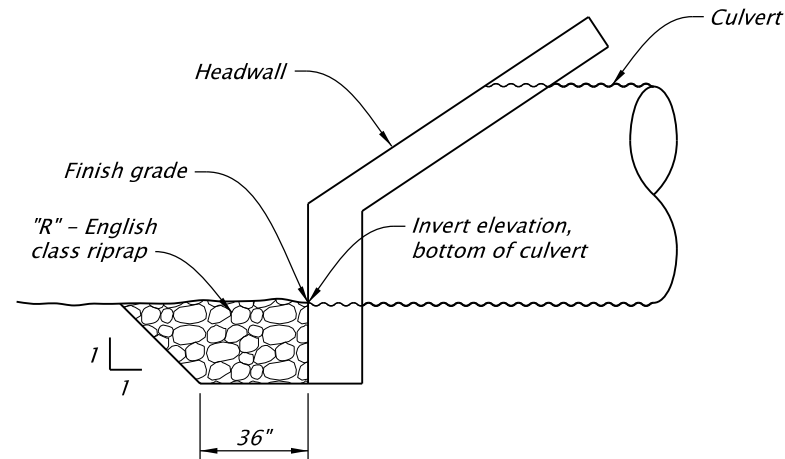




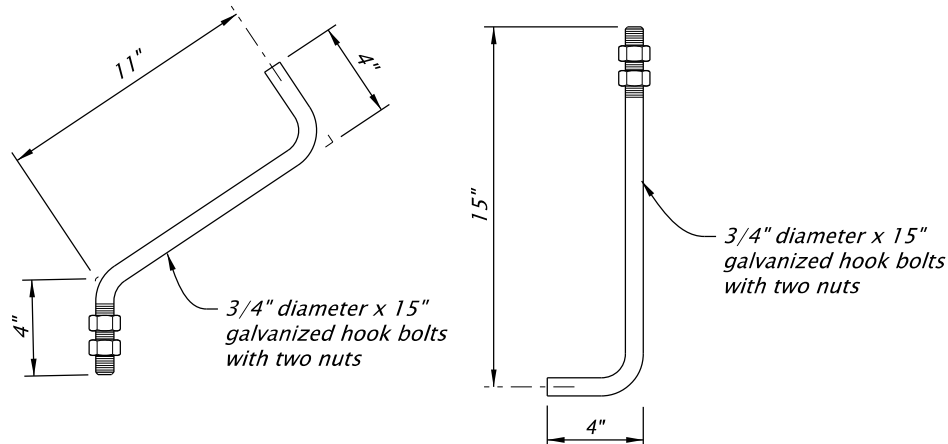
TYPICAL INLET / OUTLET HEADWALL ELEVATION



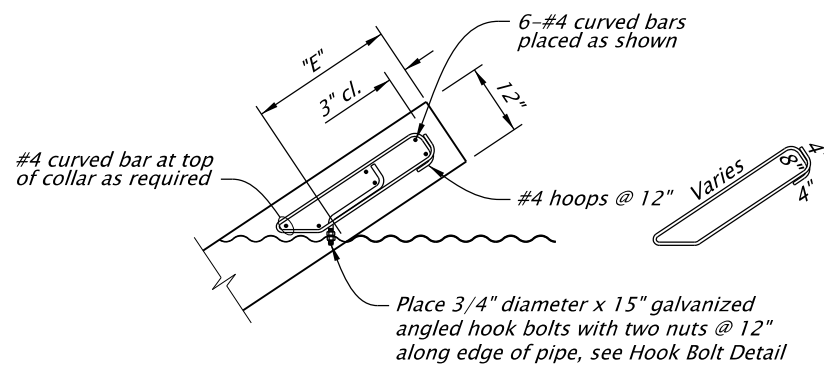
SECTION A-A



RIPRAP INLET / OUTLET



HOOK BOLT DETAIL



SECTION B-B

GENERAL NOTES FOR ALL DETAILS THIS SHEET:

1. Provide all materials and perform all work according to the 2002 Standard Specifications for Highway Construction of the Oregon Department of Transportation.
2. All reinforcing steel shall conform to ASTM Specification A706 or AASHTO M31 (ASTM A615), Grade 420.

3. The following splice lengths shall be used unless shown otherwise:

Bar Size		3	4	5	6	7	8
Splice Length (in.)	Uncoated	12	13	17	24	33	43

4. All bars shall be placed 2 inches clear of the nearest face of concrete unless shown otherwise.
5. All bolts and nuts shall be hot-dipped galvanized to meet ASTM Specifications A153.
6. Concrete in cut-off wall and concrete collar shall be class 3000 psi.
7. Cut off wall: The minimum depth shown may be reduced in solid rock, provided wall is keyed into the rock at least 12 inches.

DIMENSION TABLE

"A"	"B"	"C"	"D"	"E"	"R" Class
72"	27"	27"	60"	24"	200
84"	27"	27"	60"	24"	200
96"	39"	39"	66"	36"	700
108"	39"	39"	66"	36"	700
120"	39"	39"	66"	36"	700

The selection and use of this detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

OREGON DEPARTMENT OF TRANSPORTATION



ENGINEERING AND TECHNICAL SERVICES BRANCH

SLOPE PAVING CULVERTS
72" TO 120" DIAMETER

DETAIL NO.

DET1385