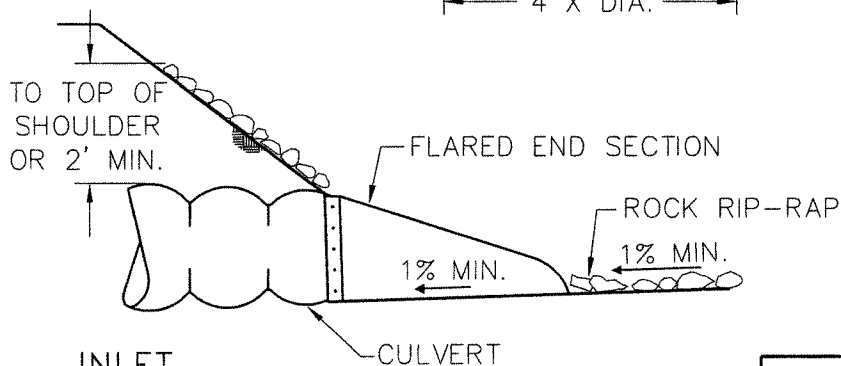
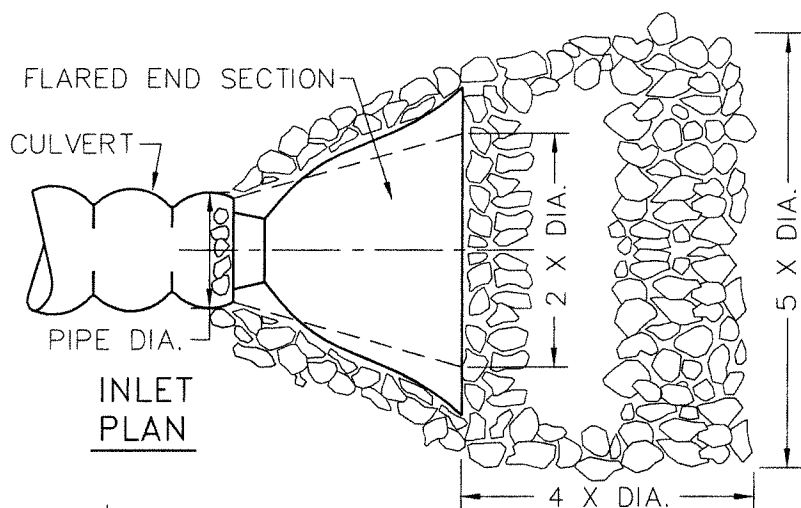
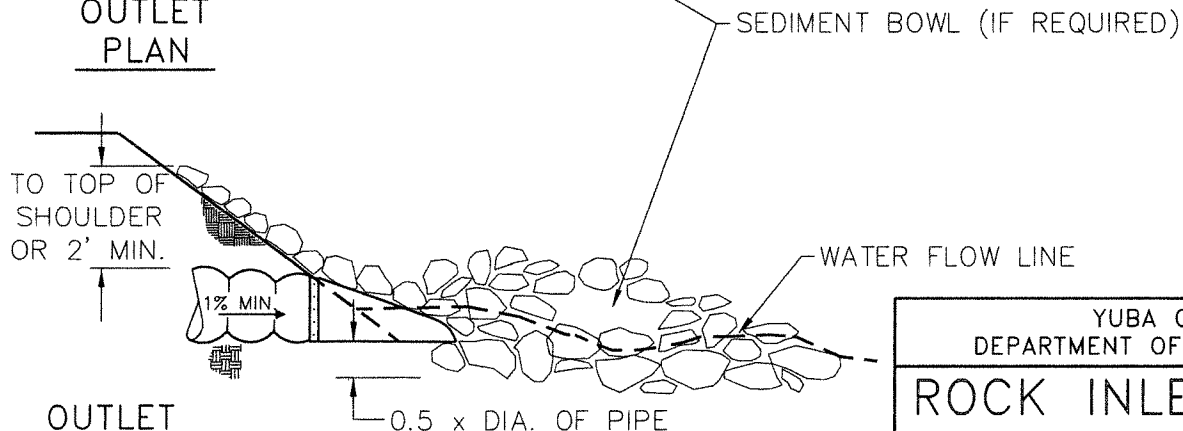
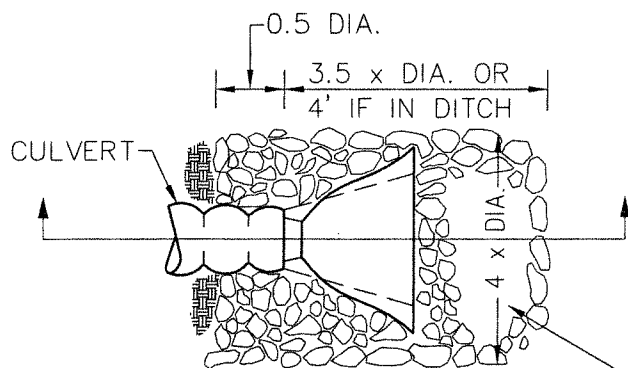




NOTES:

1. HAND PLACE ANGULAR ROCK. ROCK SHALL BE 4" MINIMUM DIMENSION.
2. WHERE SLOPE OF OUTLET EXCEEDS 5%, A SEDIMENT BOWL OR APPROVED ENERGY DISSIPATER SHALL BE REQUIRED.
3. FLARED END SECTIONS AND ROCK RIP-RAP WILL SLOPE AT A MINIMUM OF 1% INTO AND OUT OF THE CULVERT.
4. SLOPE PROTECTION CONFORMING TO THE DIMENSIONS SHOWN MAY BE SUBSTITUTED FOR THE FLARED END SECTIONS ON PIPES 18" AND SMALLER.
5. GROUT ROCK RIP-RAP AND SLOPE PROTECTION WHEN DITCH SLOPE IS 12% OR GREATER.

PIPE ϕ (in)	(2x) (ft)	(3.5x) (ft)	(4x) (ft)	(5x) (ft)
12	2	3.5	4	5
18	3	5.25	6	7.5
24	4	7	8	10
30	5	8.75	10	12.5
36	6	10.5	12	15



YUBA COUNTY
DEPARTMENT OF PUBLIC WORKS

ROCK INLET/OUTLET PROTECTION

APPROVED BY:

8-29-06
DATE:

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