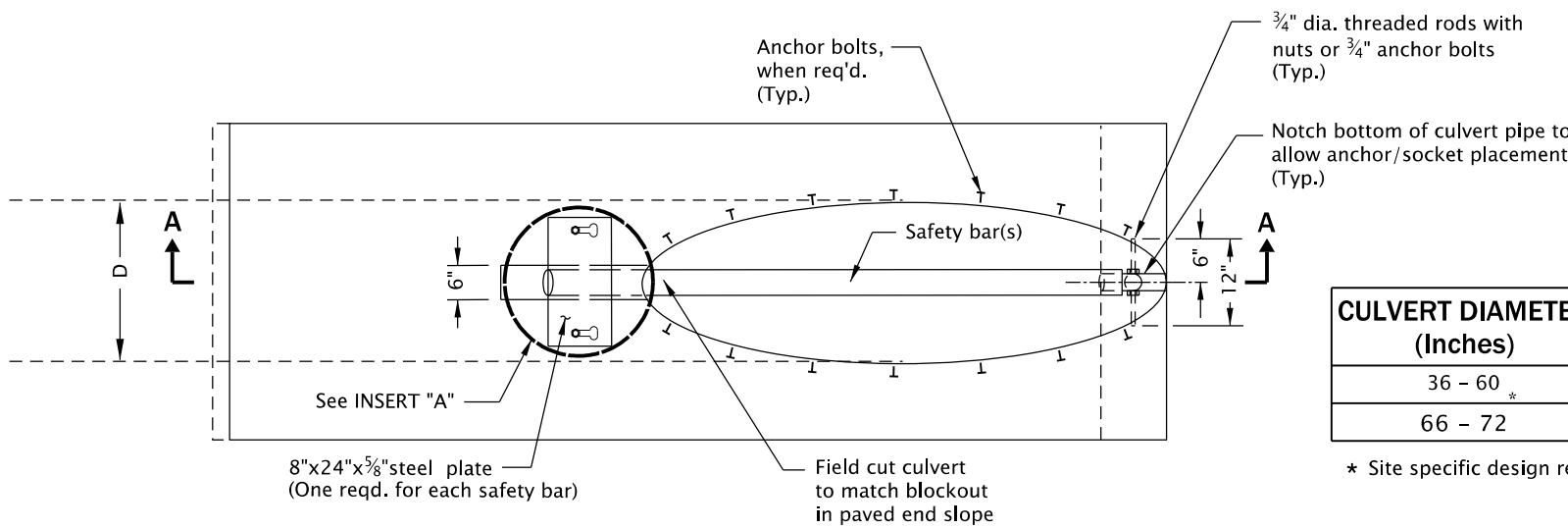


20-JUL-2020

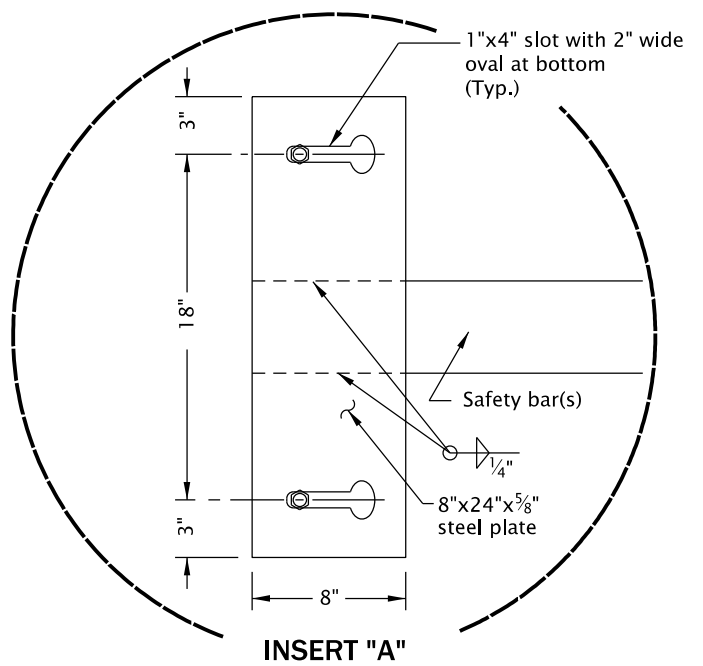
RD321.dgn



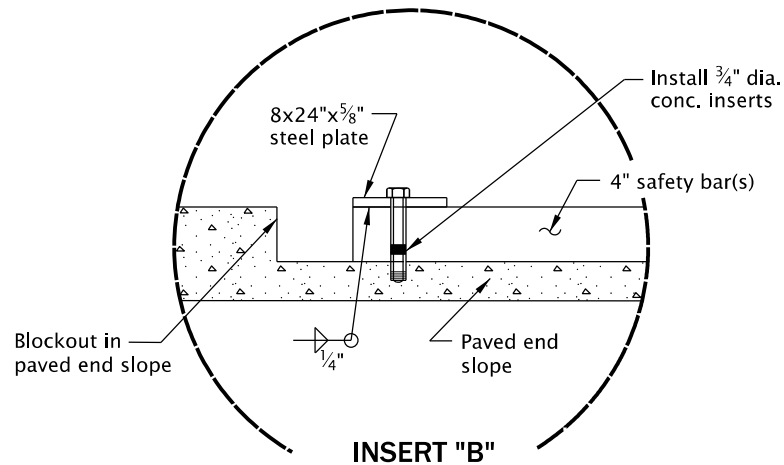
TOP VIEW

CULVERT DIAMETER (Inches)	REQUIRED NUMBER OF SAFETY BAR(S)
36 - 60 *	1
66 - 72	2

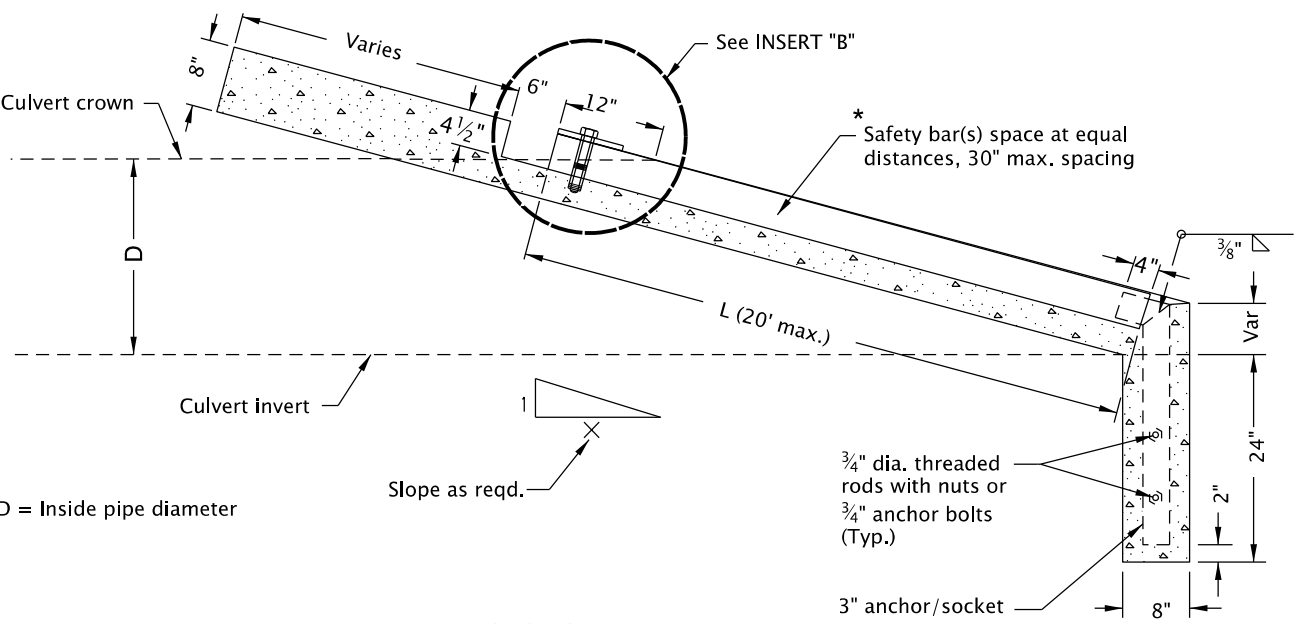
* Site specific design required for multiple safety bars



STEEL PLATE DETAIL

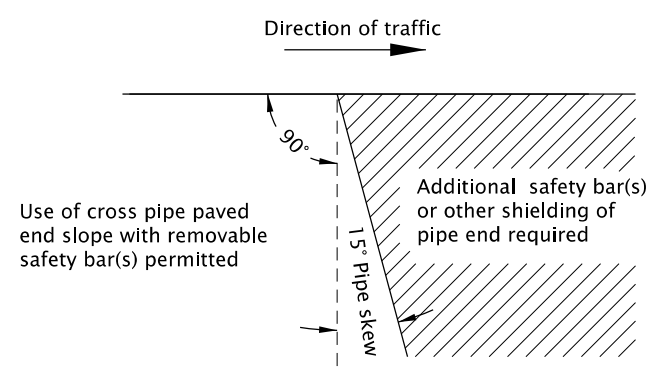


INSERT "B"



SECTION A-A

CROSS DRAINAGE STRUCTURE



LOCATION DIAGRAM

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. For details not shown see Std. Dwg. RD320.
2. Sockets are 3" extra strong (3.5" O.D.) steel pipe, sockets must be the proper angle to allow safety bar(s) to be easily removed.
3. Safety bar(s) are 4" extra strong (4.5" O.D.) steel pipe.
4. All structural steel including fasteners shall be hot-dip galvanized after fabrication.
5. Reinforcement shall be either 4x4W4xW4 welded wire reinforcement or #4 rebar spaced 18" center to center both directions. Center reinforcement in concrete section.
6. All concrete shall be commercial grade concrete.
7. Open ends of pipes normally require a site specific design, and may require special treatment (Slope ends, culvert embankment protection, paved end slopes, safety end sections, or other measures). See special details or Standard Drawings as called for on plans.
8. See Std. Dwg. RD317 for culvert embankment protection and riprap pads (When reqd.).

The selection and use of this Standard Drawing, 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.

All materials shall be in accordance with the current Oregon Standard Specifications.			
OREGON STANDARD DRAWINGS			
PAVED END SLOPE WITH REMOVABLE SAFETY BAR(S)			
2024			
DATE	REVISION DESCRIPTION		
CALC. BOOK NO.	N/A	SDR DATE	15-JAN-2016
RD321			RD321