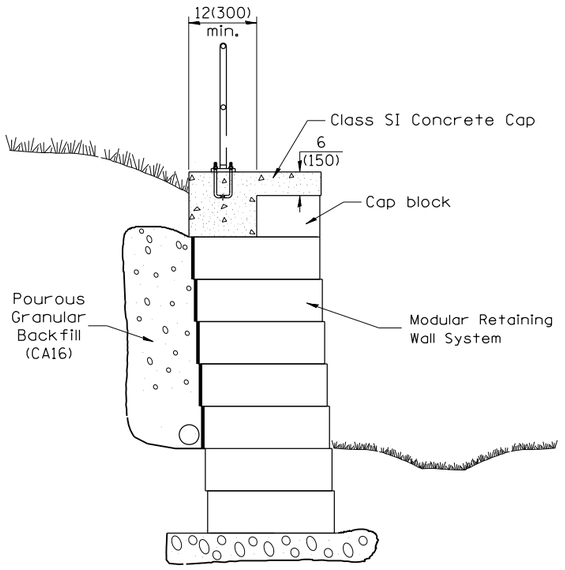
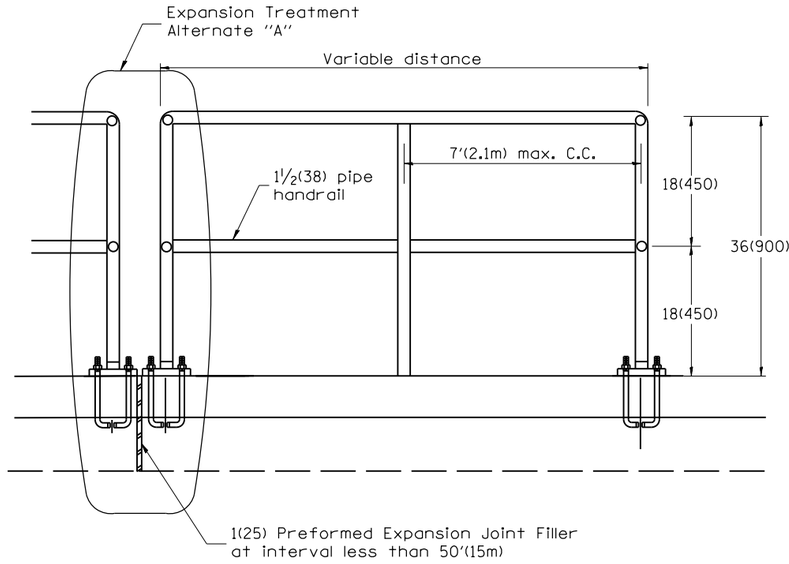
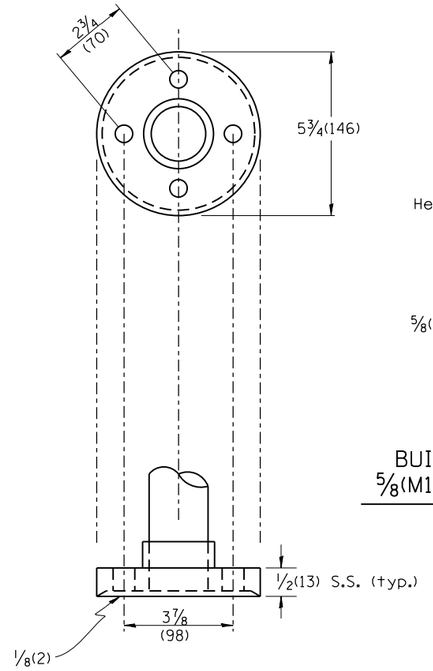
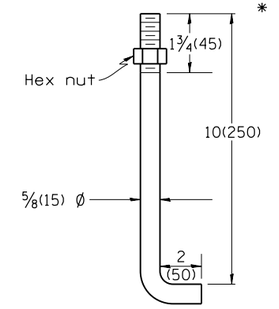
DESIGNER NOTE:
1. TO BE USED WITH CADD DRAWINGS: "MORTARED STONE WALL", AND/OR "MODULAR RETAINING WALL".
2. INCLUDE DISTRICT SPECIAL PROVISION. THE UNIT PRICE FOR PIPE HANDRAIL INCLUDES THE CONCRETE CAP, EXPANSION DEVICES, ETC.



INSTALLATION AT
MODULAR RETAINING WALL

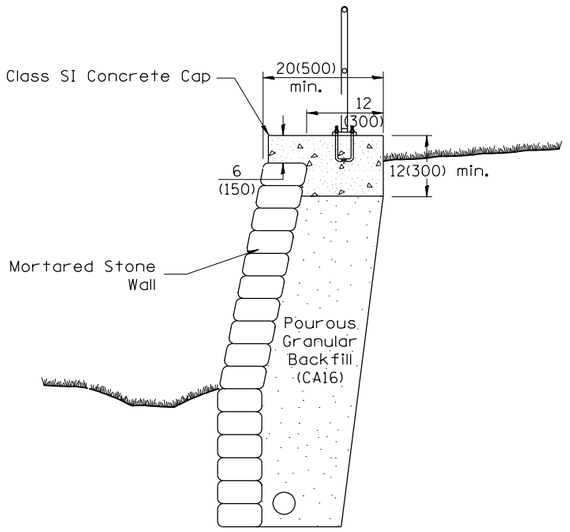




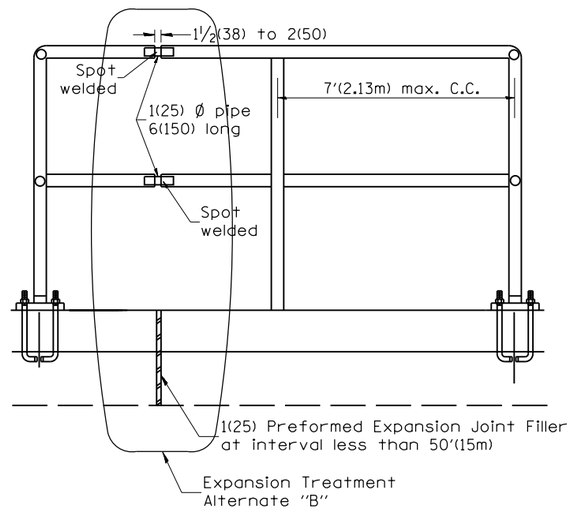


BUILT-IN ANCHOR BOLT
⅝(M16) DIA., 12(300) LONG
(See Note No. 3)

CAST IRON OR STRUCTURAL
STEEL FITTING



INSTALLATION AT
MORTARED STONE WALL



PIPE HANDRAIL

GENERAL NOTES

1. Article 509.04 of the Standard Specifications shall apply.
2. Connection of railing to posts shall be made by continuous welding or with using standard pipe fitting.
3. An equivalent epoxy anchor stud can be used in place of anchor shown. Anchor bolt holes shall be 5(125) deep x ¾(20) Ø to be pre-drilled with an electric hammer drill to a depth of 1(25) prior to use of a pnuematic drill for the remaining 4(100). A two component encapsulated epoxy such as "Parabond" or an equivalent shall be used. installation shall be according to Manufacturer's recommendations.
4. The pipe handrail shall be galvanized by the hot dip process.
5. It is Contractor's option to choose the expansion treatment "A" or "B". The spot welded area shall be painted to the satisfaction of the Engineer. This work shall be included in the contract unit price for Pipe Handrail.

All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	RENUM. B-11.02, METRICS, REVISED TITLE.	T.P.			
	NEW REVISION BOX, REVISED NOTES				
10-16-06	REVISED TO 2007 SPEC.	M.A.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL OF PIPE HANDRAIL FOR MORTARED STONE WALL AND MODULAR RETAINING WALL

NOT TO SCALE — CADD STD. 510101-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			CONTRACT NO.	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		