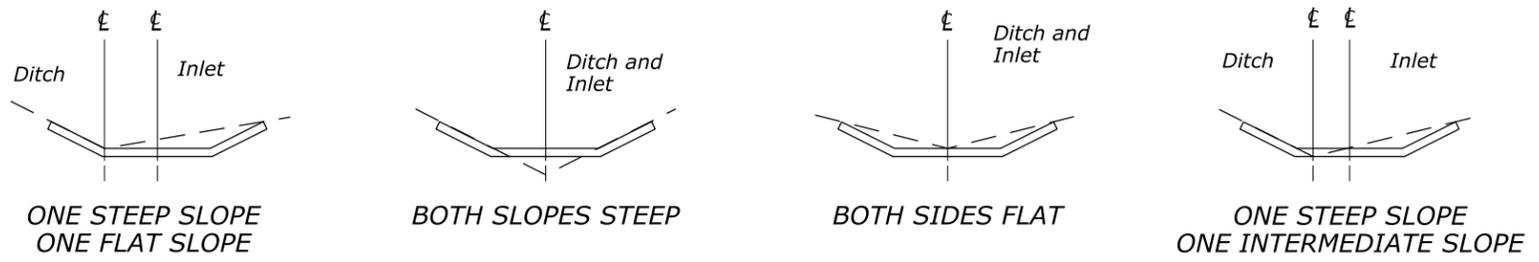
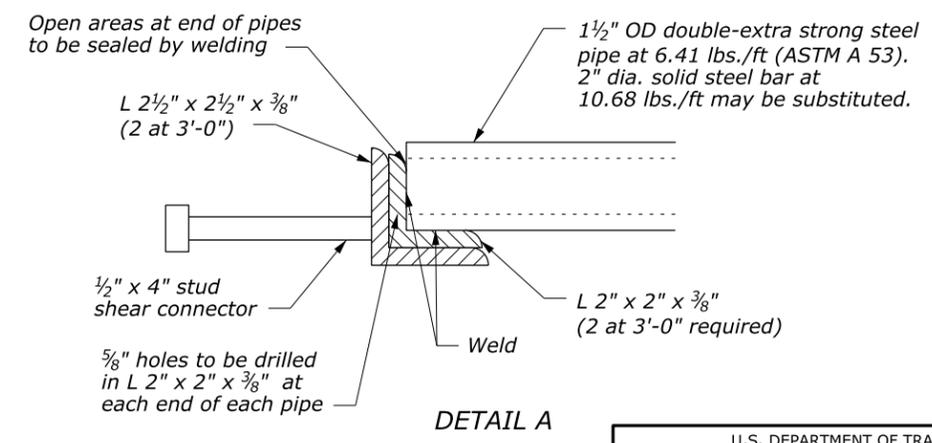
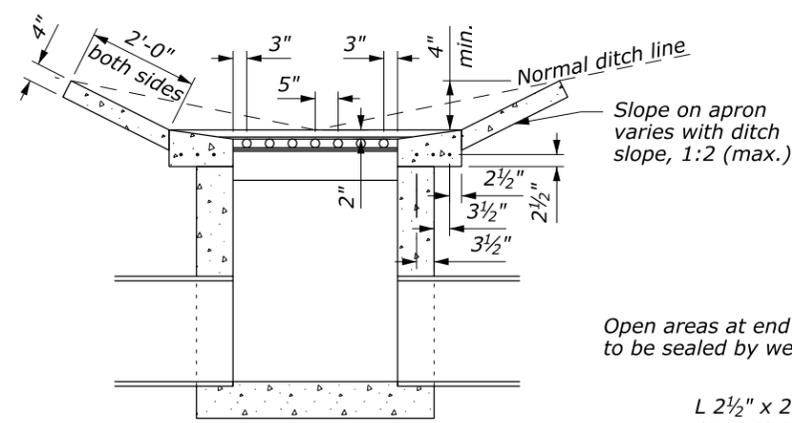
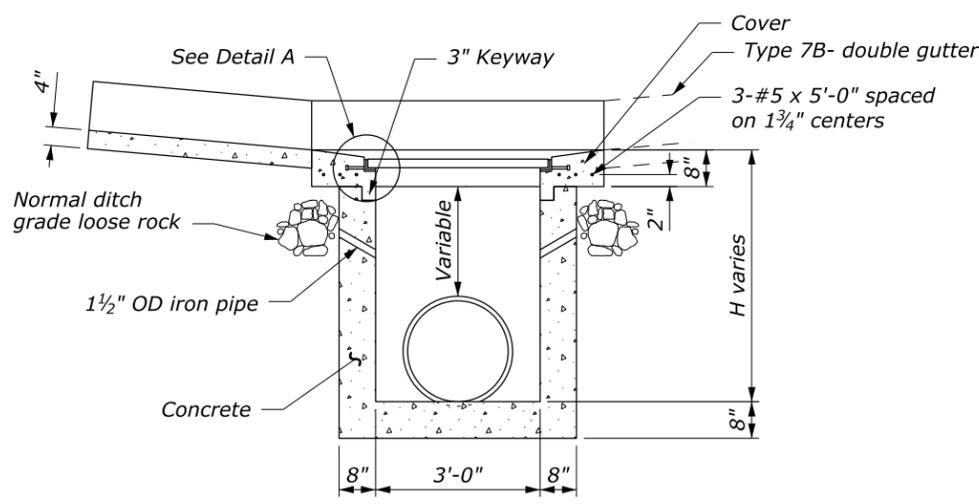


- NOTE:**
1. Type 7A has a single gutter when inlet is on a grade.
 2. Type 7B has a double gutter when inlet is in a sag between two grades.
 3. Ditch to be warped to tie smoothly into inlet gutter.
 4. Outside dimensions of grate to be 3'-4" x 2'-11³/₄".
 5. Maximum depth (H) is 12'-8".
 6. All reinforcing bars are #5 placed a minimum 1¹/₂ inch clear from face of concrete. In floors, place bars on 6 inch centers each way. In walls, place horizontal bars on 6 inch centers and vertical bars on 12 inch centers.
 7. Galvanize grate after fabrication in accordance with AASHTO M 111.
 8. Alternate methods of anchoring angle iron will be acceptable if approved by the CO.

APPROXIMATE QUANTITIES						
Pipe size	12"	15"	18"	24"	30"	36"
Minimum Depth (H)	2'-0"	2'-3 ¹ / ₄ "	2'-6 ¹ / ₂ "	3'-1"	3'-7 ¹ / ₂ "	4'-2"
Inlet concrete for minimum depth, CUYD	0.947	1.045	1.143	1.339	1.535	1.731
Additional inlet concrete	0.362 cuyd for each additional foot of depth (H)					
Gutter concrete	Type 7A: 0.724 cuyd Type 7B: 1.185 cuyd					
Cover concrete (not included above)	0.413 cuyd					
Cover reinforcing steel	63 lb					



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

**INLET
TYPE 7A AND 7B
FOR 12" TO 36" CULVERT**

STANDARD APPROVED FOR USE 6/2005
REVISED: 6/2007

STANDARD
604-8

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NO SCALE