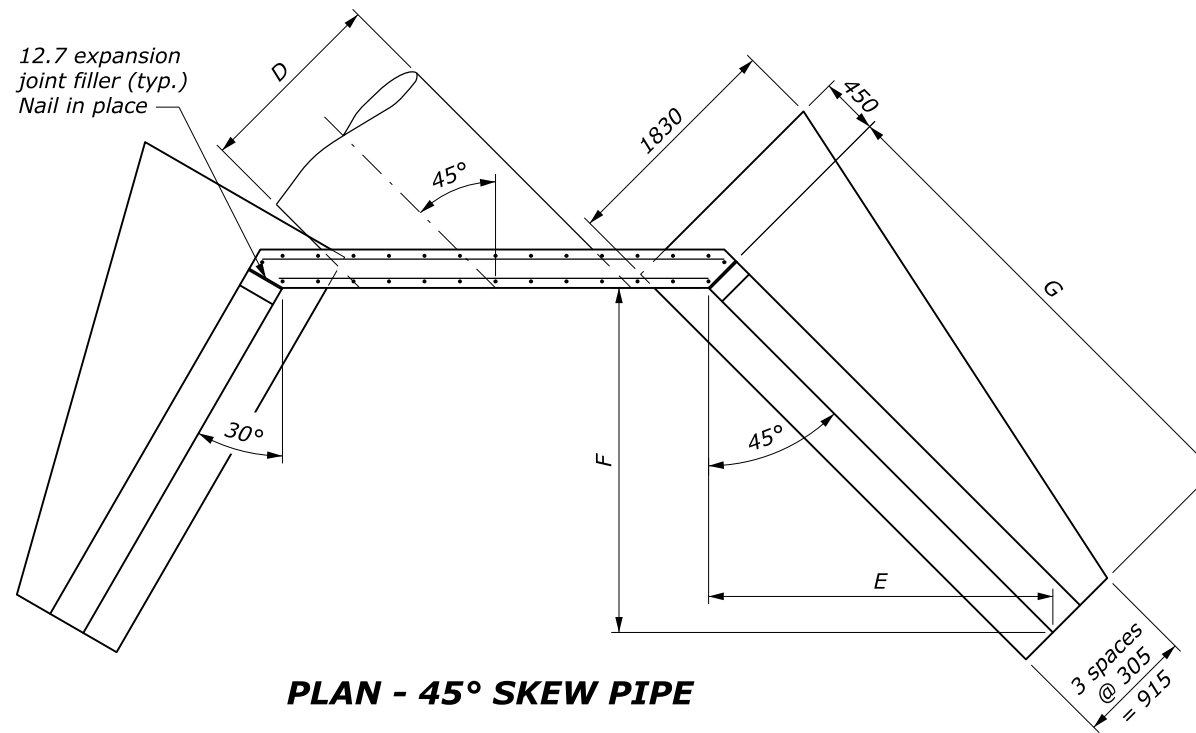


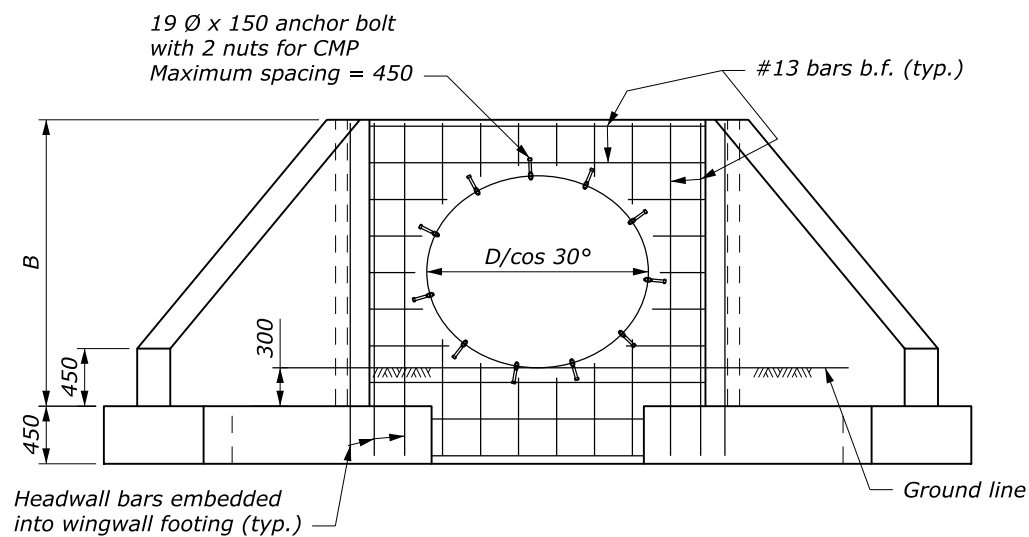
**PLAN - 30° SKEW PIPE**



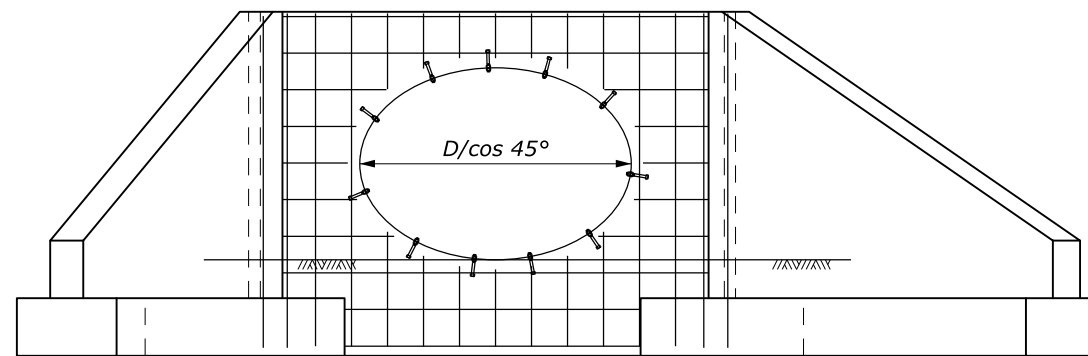
**PLAN - 45° SKEW PIPE**

**NOTE:**

1. Use the 30° Skew Detail for skews greater than 15° to 37°30'. Use the 45° Skew Detail for skews greater than 37°30' to 45°.
2. Quantities shown in table are for one headwall and two wingwalls and are based on CMP. Concrete and steel quantities shown will be used as basis for final payment for headwall/wingwalls constructed according to this standard.
3. For dimensions and reinforcing details not shown, and additional notes see Standard M601-5.
4. Dimensions without units are millimeters.



**FRONT ELEVATION - 30° SKEW PIPE**  
(Showing headwall reinforcement)



**FRONT ELEVATION - 45° SKEW PIPE**  
(Showing headwall reinforcement)

DIMENSIONS AND QUANTITIES FOR 30° SKEW PIPE									
		D (Diameter of pipe culvert)							
		1050	1200	1350	1500	1650	1800	1950	2100
1V:1.5H fill slope	Conc. (m <sup>3</sup> )	6.4	7.2	8.0	8.9	9.7	10.7	11.6	12.5
	Steel (kg)	309	346	387	412	461	490	542	587
1V:2H fill slope	Conc. (m <sup>3</sup> )	7.9	9.0	10.0	11.1	12.1	13.3	14.5	15.7
	Steel (kg)	376	425	470	515	565	614	662	725

DIMENSIONS AND QUANTITIES FOR 45° SKEW PIPE									
		D (Diameter of pipe culvert)							
		1050	1200	1350	1500	1650	1800	1950	2100
1V:1.5H fill slope	A	2725	2945	3155	3375	3590	3810	4020	4240
	C	3030	3250	3460	3680	3895	4115	4325	4545
	E	2050	2280	2505	2735	2960	3195	3420	3655
	F	2050	2280	2505	2735	2960	3195	3420	3655
	G	2895	3225	3545	3870	4190	4520	4835	5165
	Conc. (m <sup>3</sup> )	7.2	8.1	9.1	10.0	11.0	12.0	13.1	14.2
	Steel (kg)	357	394	443	477	534	566	621	676
1V:2H fill slope	E	2730	3040	3340	3650	3950	4260	4560	4870
	F	2730	3040	3340	3650	3950	4260	4560	4870
	G	3860	4300	4725	5160	5585	6025	6450	6885
	Conc. (m <sup>3</sup> )	8.9	10.1	11.2	12.4	13.7	15.0	16.3	17.7
	Steel (kg)	431	485	539	591	653	707	768	837

NO SCALE

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

METRIC STANDARD

**CONCRETE HEADWALL/WINGWALL  
FOR SINGLE SKEW  
1050 TO 2100 PIPE CULVERT**

STANDARD APPROVED FOR USE 3/1996  
REVISED: 5/1997 6/2005

STANDARD  
M601-6