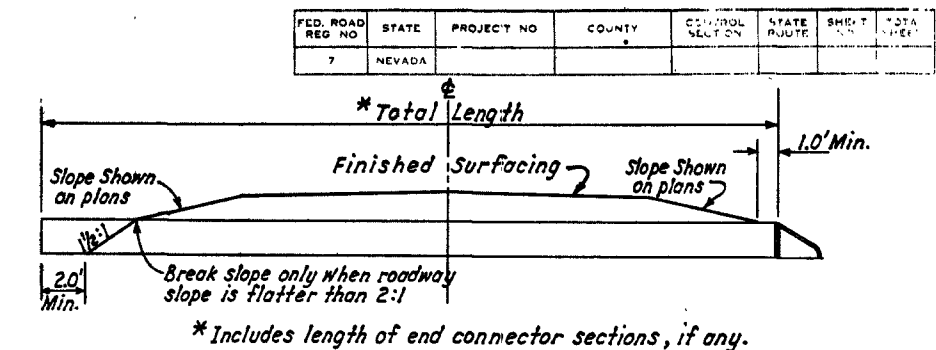
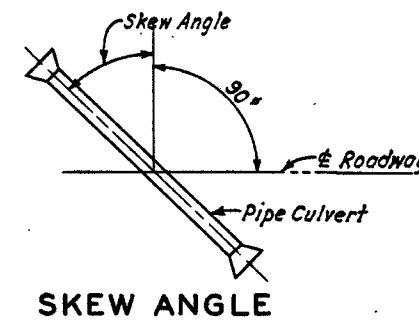
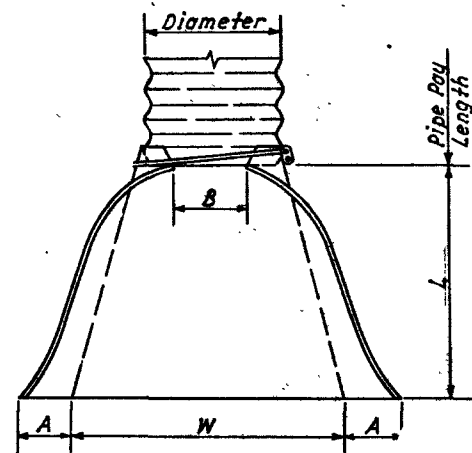


TYPE CONNECTION	PIPE DIAM.	GAGE	DIMENSIONS					APPROX SLOPE
			A 1" TOL.	B MAX.	H 1" TOL.	L 1/2" TOL.	W 2" TOL.	
TYPE 1	12"	16	6"	6"	6"	21"	24"	2 1/2 : 1
	15	16	7	8	6	26	30	2 1/2 : 1
	18	16	8	10	6	31	36	2 1/2 : 1
	21	16	9	12	6	36	42	2 1/2 : 1
	24	16	10	13	6	41	48	2 1/2 : 1
TYPE 2	30	14	12	16	8	51	60	2 1/2 : 1
	36	14	14	19	9	60	72	2 1/2 : 1
TYPE 3	42	12	16	22	11	69	84	2 1/2 : 1
	48	12	18	27	12	78	90	2 1/4 : 1
	54	12	18	30	12	84	102	2 : 1
	60	12	18	33	12	87	114	1 3/4 : 1
	66	12	18	36	12	87	120	1 1/2 : 1
	72	12	18	39	12	87	126	1 1/3 : 1
	78	12	18	42	12	87	132	1 1/4 : 1
84	12	18	45	12	87	138	1 1/6 : 1	

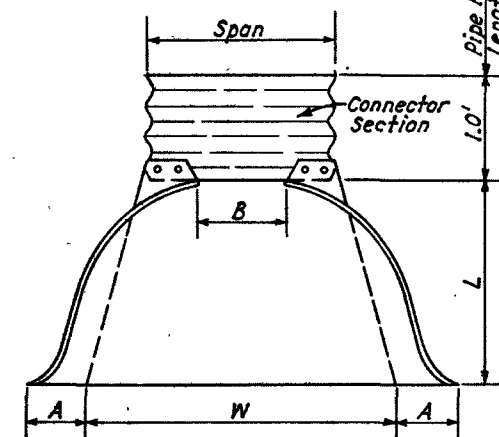
TYPE CONNECTION	PIPE DIMENSIONS		GAGE	DIMENSIONS					APPROX. SLOPE
	SPAN	RISE		A 1" TOL.	B MAX.	H 1" TOL.	L 1/2" TOL.	W 2" TOL.	
TYPE 2	18"	11"	16	7"	9"	6"	19"	30"	2 1/2 : 1
	22	13	16	7	10	6	23	36	2 1/2 : 1
	25	16	16	8	12	6	28	42	2 1/2 : 1
	29	18	16	9	14	6	32	48	2 1/2 : 1
	36	22	14	10	16	6	39	60	2 1/2 : 1
	43	27	14	12	18	8	46	75	2 1/2 : 1
	50	31	12	13	21	9	53	85	2 1/2 : 1
	58	36	12	18	26	12	63	90	2 1/2 : 1
TYPE 3	65	40	12	18	30	12	70	102	2 1/4 : 1
	72	44	12	18	33	12	77	114	2 1/4 : 1
	79	49	12	18	36	12	77	126	2 : 1
	85	54	12	18	39	12	77	138	2 : 1



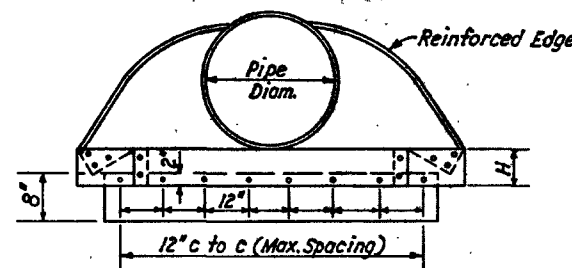
SKETCH SHOWING CULVERT INSTALLATION



PLAN

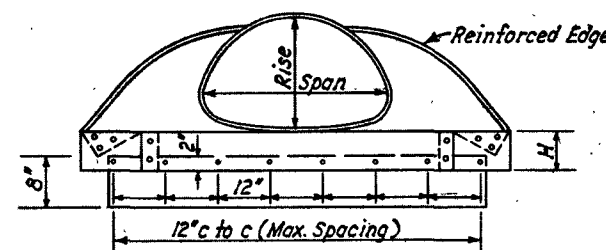


PLAN



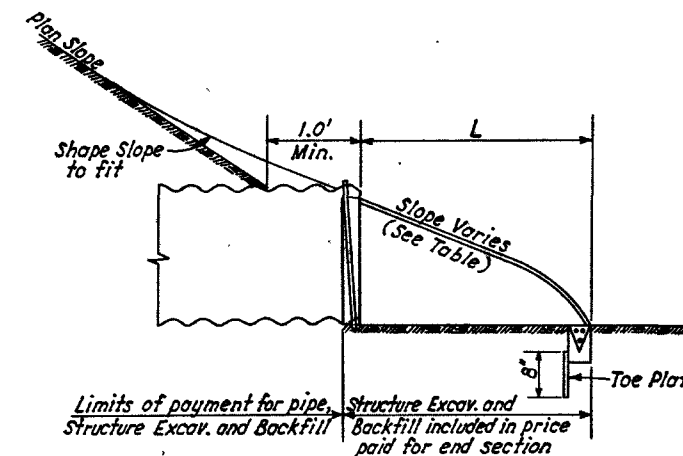
Length of toe plate to be $W + 10"$ Min. for 12" to 30" diameter pipe inclusive and $W + 22"$ Min. for 36" diameter pipes and larger.

ELEVATION



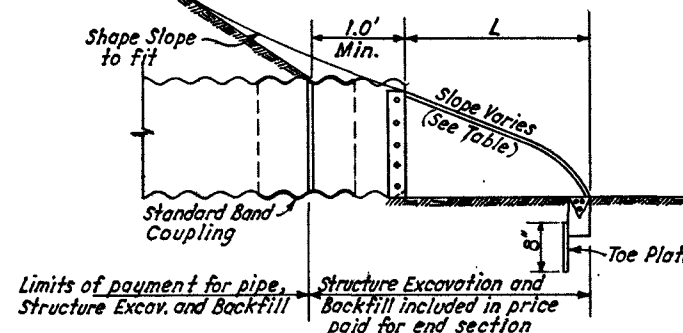
Length of toe plate to be $W + 10"$ Min. for pipe arches with rise of 11" to 27" inclusive and $W + 18"$ Min. for pipe arches with rise of 31" and larger.

ELEVATION



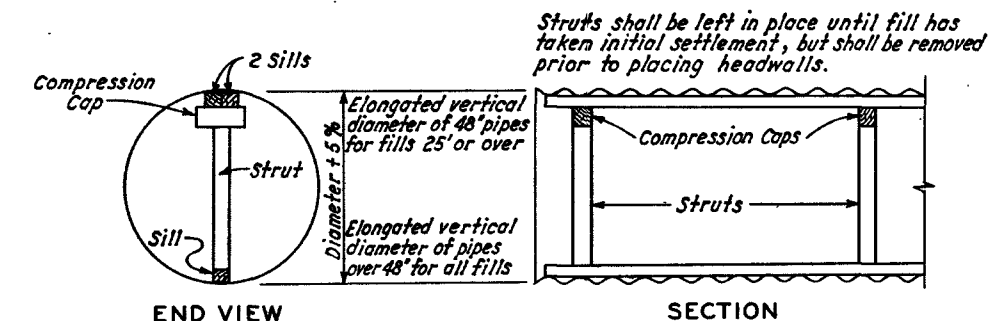
SECTION

TYPE 1 OR 2 CONNECTION



SECTION

TYPE 3 CONNECTION



END VIEW

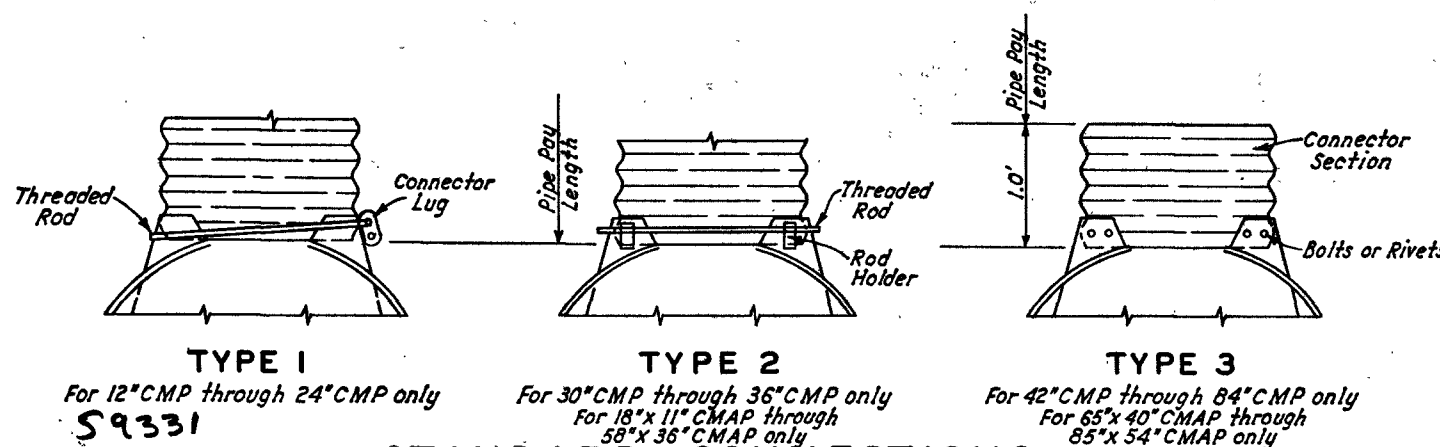
SECTION

STRUTTING CMP

NOTE: For strut, cap, sill size and spacing use manufacturers recommendations. Struts, caps, and sills to be the same dimension

GENERAL NOTES

1. Minimum total length of pipe culverts with 1.0' to 10.0' cover shall be determined as shown on the above sketch. Where cover exceeds 10', the total length shall be increased 1.0' for each additional 5.0' or portion thereof.
2. The culvert lengths shown on the plans and structure list shall be the pay length as indicated on the standard sheet exclusive of connector sections.
3. Pipe on skew shall not be mitered. Sufficient additional length of pipe shall be allowed to provide clearance for end sections.
4. Toe plates required on round pipe 24" and over in diameter and on arch pipe 29" x 18" and over unless otherwise specified on the plans or in the Special Provisions.
5. Toe plate shall be punched with 7/16" holes to match holes in lip of end section and bolted with 3/8" galvanized bolts.



TYPE 1

TYPE 2

TYPE 3

For 12" CMP through 24" CMP only
59331

For 30" CMP through 36" CMP only
For 18" x 11" CMAP through
58" x 36" CMAP only

For 42" CMP through 84" CMP only
For 65" x 40" CMAP through
85" x 54" CMAP only

107V 3834

STATE OF NEVADA
DEPARTMENT OF HIGHWAYS

97

STANDARD METAL
END SECTIONS

APPROVED BY: Owen D. Walker 5-27-65