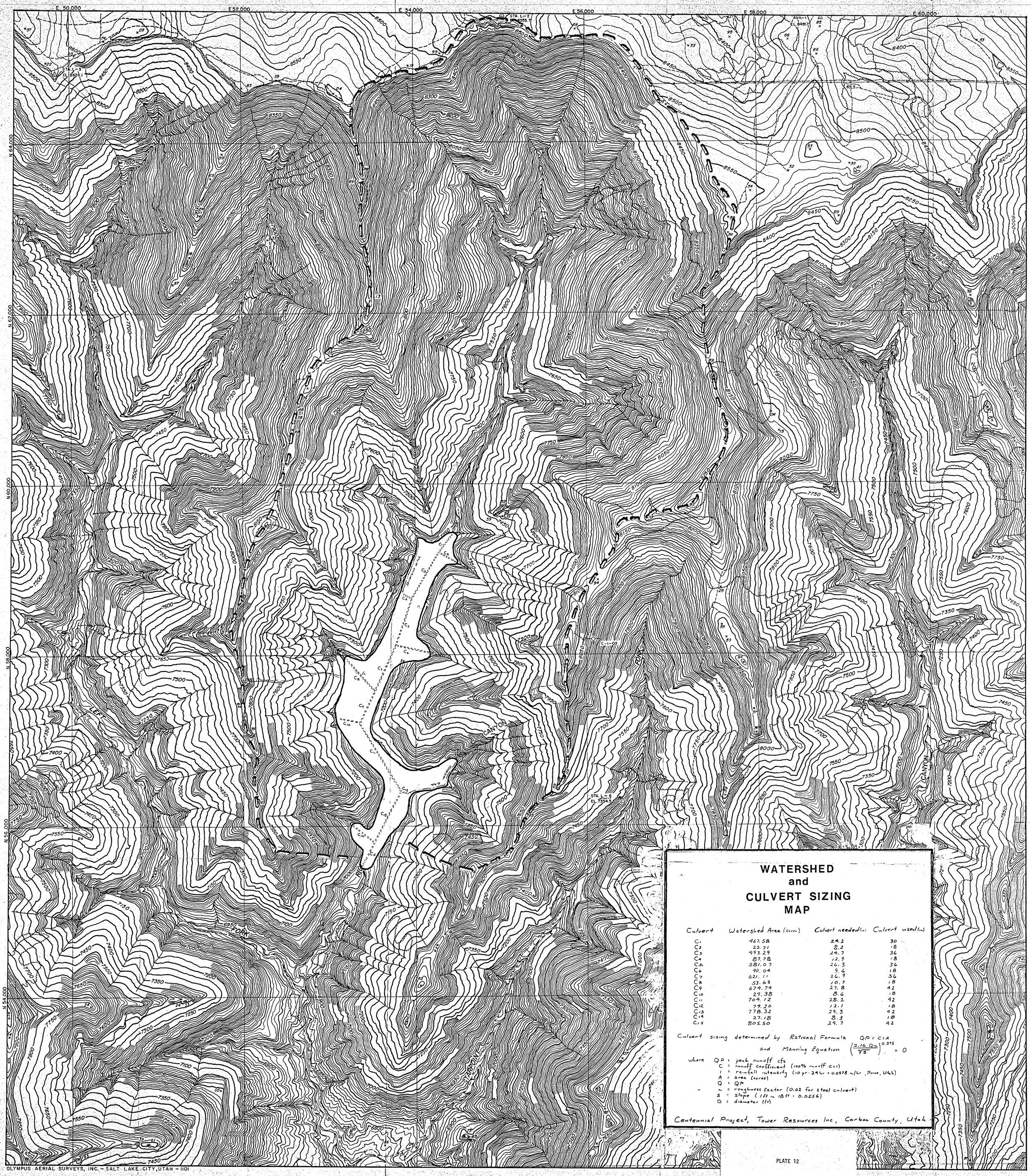

WATERSHED and CULVERT SIZING MAP

Culvert	Watershed Area (acres)	Culvert needed (in)	Culvert used (in)
C_1	467.58	24.2	30
C_2	25.71	8.2	18
C_3	493.29	29.7	36
C_4	87.78	12.9	18
C_5	581.07	26.3	36
C_6	40.04	9.6	18
C_7	621.11	26.9	36
C_8	53.63	10.7	18
C_9	674.74	27.8	42
C_{10}	29.38	8.6	18
C_{11}	704.12	28.2	42
C_{12}	79.20	12.1	18
C_{13}	778.32	29.3	42
C_{14}	27.18	8.3	18
C_{15}	805.50	29.7	42

Culvert sizing determined by Rational Formula $QP = CIA$

and Manning Equation $\left(\frac{2.16\,Qn}{\sqrt{S}}\right)^{0.375} = D$

where
- QP = peak runoff cfs
- C = runoff coefficient (100% runoff C=1)
- I = rainfall intensity (10 yr · 24 hr = 0.0578 in/hr, Price, Utah)
- A = area (acres)
- Q = QP
- n = roughness factor (0.02 for steel culvert)
- S = slope (1 ft in 18 ft = 0.0556)
- D = diameter (ft)

Centennial Project, Tower Resources Inc, Carbon County, Utah

PLATE 12

SCALE 1" = 400' - PHOTOGRAPHY DATE NOV. 6, 1971

400' 0 400' 800' 1200'

CONTOUR INTERVAL 10'