SKILLING HELLE CHRISTIANSEN ROBERTSON
Structural & Civil Engineers

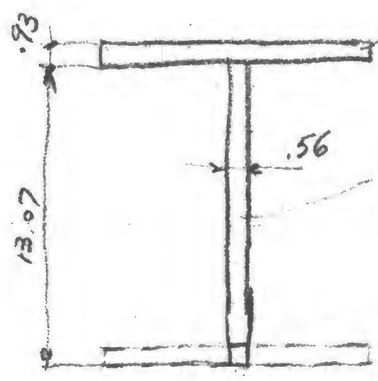
PROJECT WORLD TRADE INFORMATION
332' LEVEL DWG SK-104

DATE 10-4-71
PREPARED BY HOK
APPROVED

Sheet No.

19-K-1047 DET D.

24WF120 (330'-6") to 36WF245 (329'-4") 125K



12.09 + .93 = 11.22

13.07 - .56 = 7.30

11.22 × .46 = 5.16
7.30 × 7.47 = 54.5
18.52 59.7

C.G. = 3.22
14 - 3.22 = 10.78

7.30 × (13.07)³/12 = 103.7
11.22 × (2.76)² = 85.5
7.30 × (4.25)² = 131.8
I = 320.9

S = 320.9 / 10.78 = 29.8

M = 125 × 9.25 = 1152
Sreq = 1152/25 = 46 Fy42 1152/22 = 52.4 Fy36 NG

REINF REQ'D

Thy 12 × ½" A = 11.44 × 0.5 = 5.72

18.52 - 3.22 = 59.7
5.72 × 13.75 = 78.5
24.24 138.2
C.G. 5.7
14 - 5.7 = 8.3

I

320.9
18.52 × (2.48)² = 114.
5.72 × (8.05)² = 370
805.

S = 805/8.3 = 97 > 52.4 OK

Stirrup 125 / 13.5 × .56 = 16.5 < 17.0 OK

Vaq/I = 125 × 6 × 8.05 / 805 = 7.5 K/in

#3 @

Development

6 #11 @ 28 ksi
2 × 8.4 + 2 × 5.6
L = 4.7
Extend 1'-2"
use #4 @ = 14 × 5.6 × 2