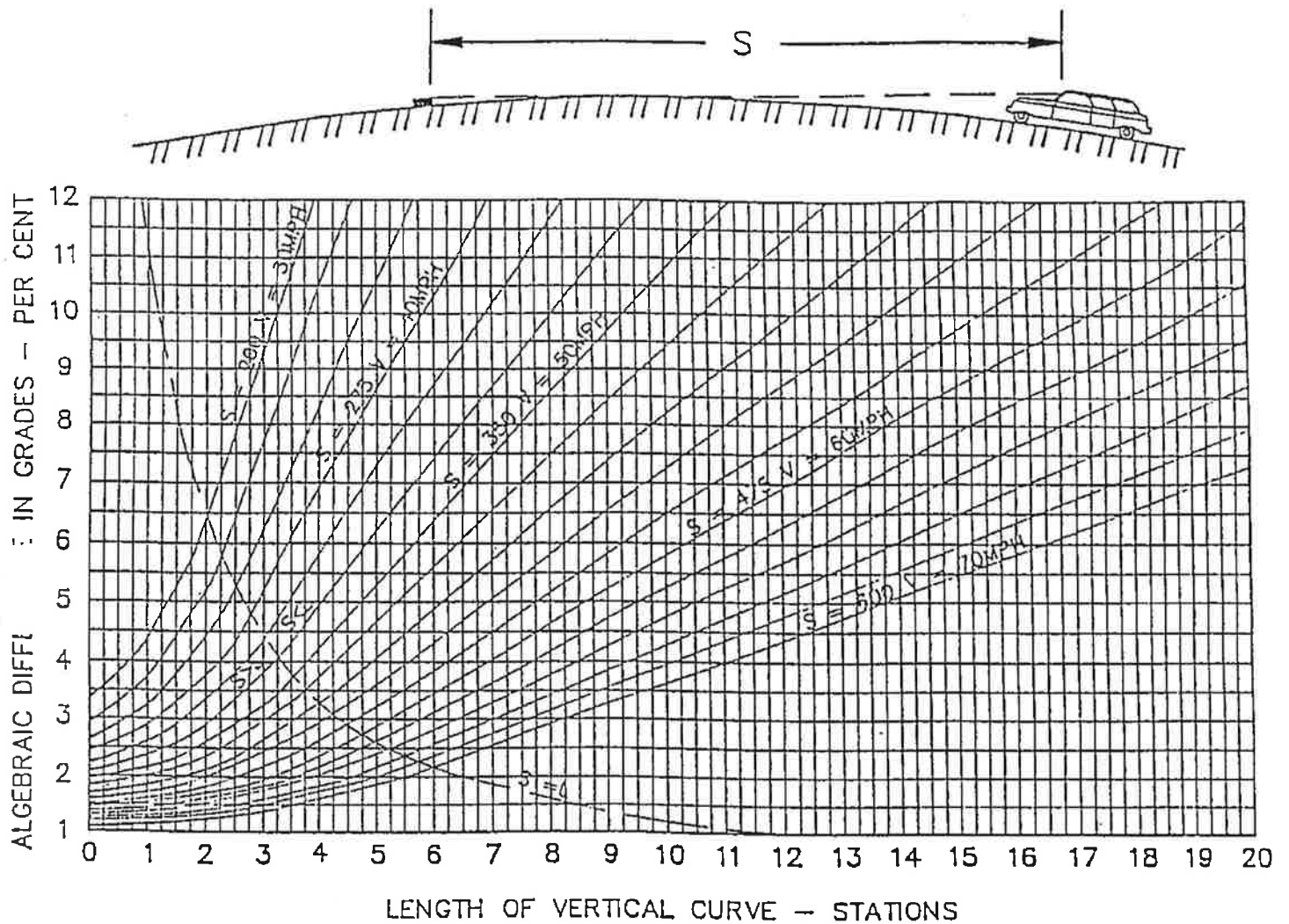


STOPPING SIGHT DISTANCE ON CREST VERTICAL CURVES

Figure 4-1

HEIGHT OF EYE 3.5 FEET
HEIGHT OF OBJECT 6 INCHES

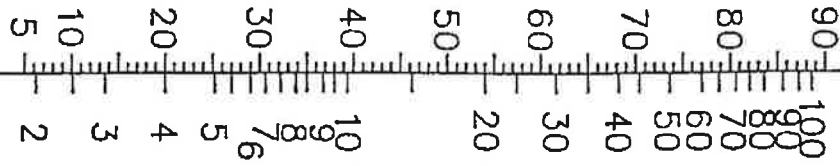


WHEN $S > L$	WHEN $S < L$
$S = \frac{664.5}{A} + 50L$	$S = 364.6 \sqrt{\frac{L}{A}}$
L = Curve length — stations A = Algebraic grade difference — % S = Sight distance — ft. V = Design speed — M.P.H. for "S"	

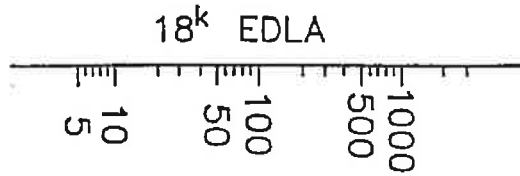
DESIGN SPEED M. P. H.	MINIMUM SIGHT DISTANCE FEET	DESIRABLE SIGHT DISTANCE FEET
30	200	200
40	275	300
50	350	450
60	475	680
65	550	750
70	600	850

Figure 4-2

R - RESISTANCE VALUE, 300 P.S.I. EXUDATION



CALIFORNIA BEARING RATIO (CBR)

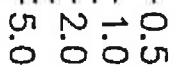


SERVICEABILITY INDEX = 2.0
TO BE USED ON COLLECTORS, LOCAL ROADS, AND LANES

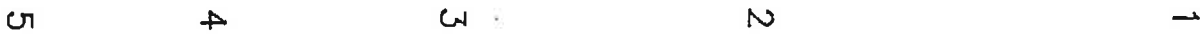
SN - STRUCTURAL NUMBER



REGIONAL FACTOR



WSN - WEIGHTED STRUCTURAL NUMBER



DESIGN NOMOGRAPH
FLEXIBLE PAVEMENTS

SERVICEABILITY INDEX = 2.5 TO BE USED ON ARTERIALS

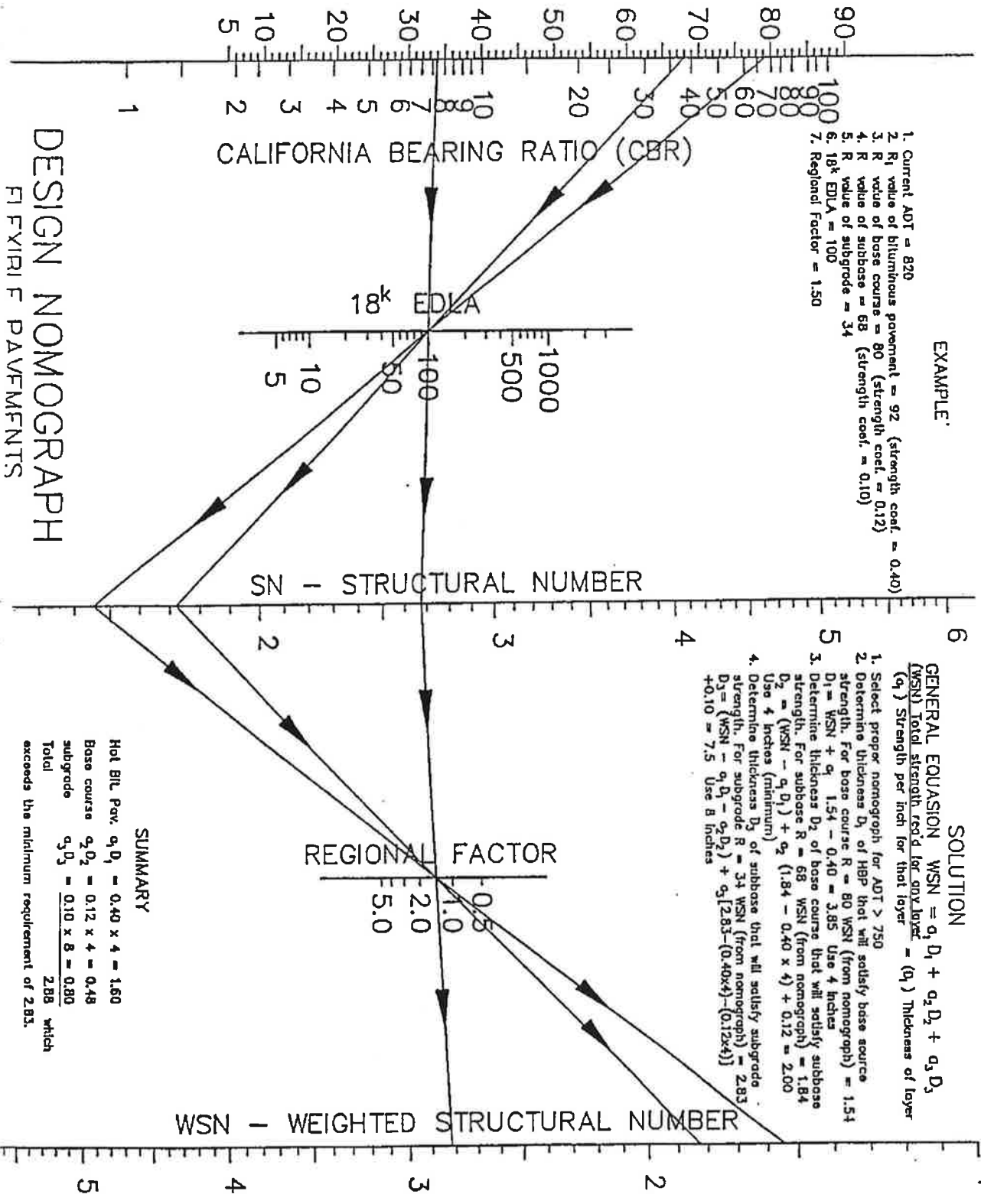
EXAMPLE:

1. Current ADT = 820
2. R_1 value of bituminous pavement = 92 (strength coef. = 0.40)
3. R_2 value of base course = 80 (strength coef. = 0.12)
4. R_3 value of subbase = 68 (strength coef. = 0.10)
5. R_4 value of subgrade = 34
6. 18^k EDLA = 100
7. Regional Factor = 1.50

SOLUTION

- GENERAL EQUATION: $WSN = a_1 D_1 + a_2 D_2 + a_3 D_3$
 (WSN) Total strength req'd for subgrade = (a₁) Thickness of layer (a₂) Strength per inch for that layer
1. Select proper nomograph for ADT > 750
 2. Determine thickness D_1 of HBP that will satisfy base source strength. For base course $R = 80$ WSN (from nomograph) = 1.54
 $D_1 = WSN + a_1 = 1.54 + 0.40 = 3.95$ Use 4 inches
 3. Determine thickness D_2 of base course that will satisfy subbase strength. For subbase $R = 68$ WSN (from nomograph) = 1.84
 $D_2 = (WSN - a_1 D_1) + a_2 = 1.84 - (0.40 \times 4) + 0.12 = 2.00$ Use 4 inches (minimum)
 4. Determine thickness D_3 of subbase that will satisfy subgrade strength. For subgrade $R = 34$ WSN (from nomograph) = 2.83
 $D_3 = (WSN - a_1 D_1 - a_2 D_2) + a_3 [2.83 - (0.40 \times 4) - (0.12 \times 4)] + 0.10 = 7.5$ Use 8 inches

R - RESISTANCE VALUE, 300 P.S.I. EXUDATION

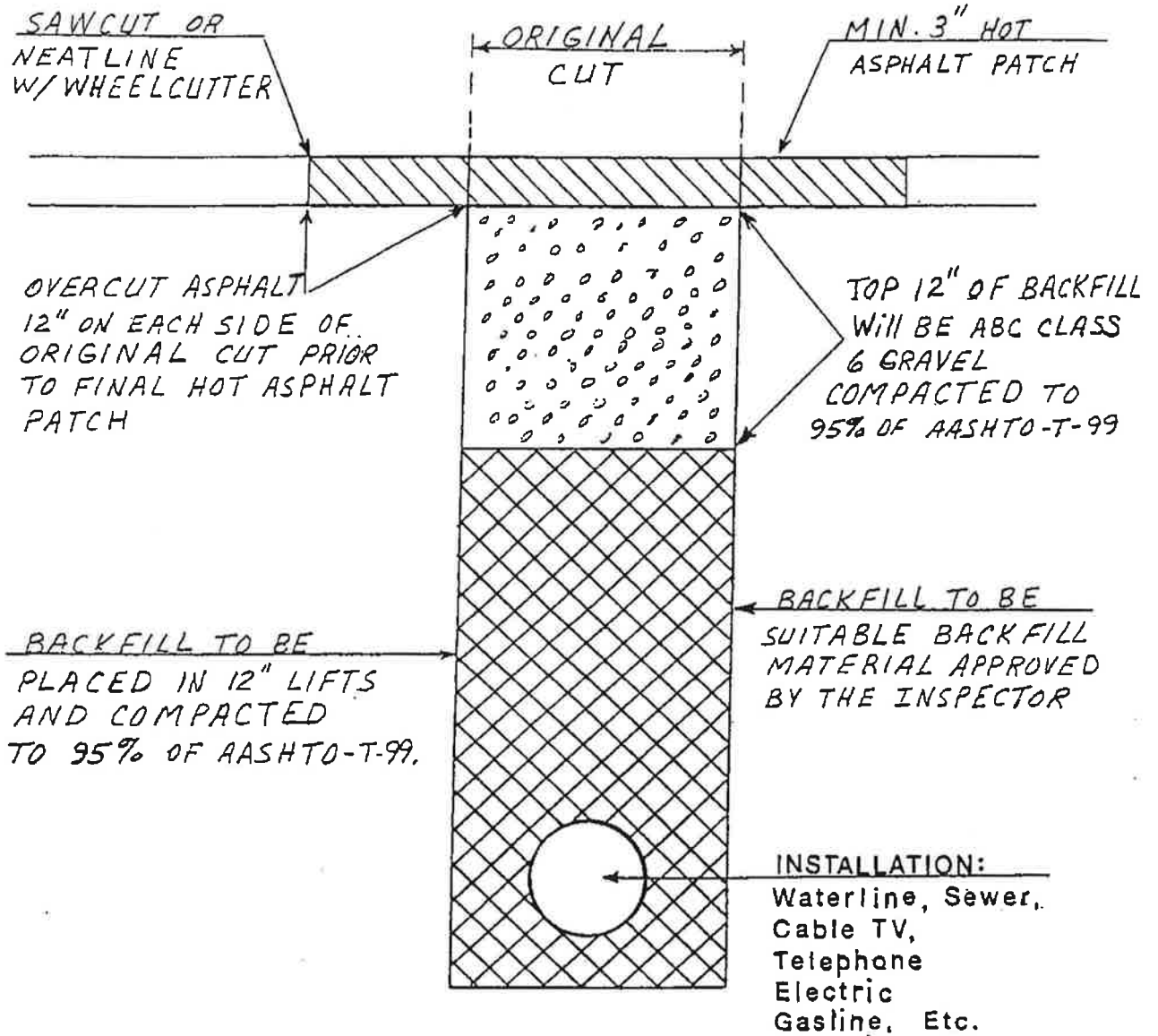


DESIGN NOMOGRAPH FOR FLEXIBLE PAVEMENTS

SUMMARY

Hot Bit. Pav. $a_1 D_1 = 0.40 \times 4 = 1.60$
 Base course $a_2 D_2 = 0.12 \times 4 = 0.48$
 subgrade $a_3 D_3 = 0.10 \times 8 = 0.80$
 Total 2.88 which exceeds the minimum requirement of 2.83.

GUNNISON COUNTY



TYPICAL ROAD CUT RESTORATION
AND BACKFILL