₡ MEDIAN

SUBGRADE SECTION

PAVEMENT SECTION

Z_2 Z_1

X_2 Y_2 (5.7 m) Y_1 (6.7 m) X_1

P_2 PROFILE GRADE
0.02m/m   0.02m/m P_1
TWO FUTURE OVERLAYS   (160mm)
FINAL PAVING
Ist STAGE PAVING

5:1   5:1

A_2 A_1

T_2 T_1

B_2 B_1

5:1   0.02m/m   0.02m/m   5:1

6:1   SUBGRADE   SUBGRADE   6:1

SUBGRADE CROWN   PAVEMENT CROWN

INSTALL RUMBLE STRIPS ON
SHOULDERS AT EACH STAGE
AS PER NORMAL PRACTICE.
REFER TO CB6-3.52MI (TYP)

X_3 X_4

BASEGRADE CROWN

NOTE:
THIS DRAWING MAY BE USED TO CALCULATE
THE REQUIRED SUBGRADE WIDTH BASED ON
SURFACING THICKNESS ON FOUR LANE DIVIDED
HIGHWAYS.

NOTES:		

- THE PROFILE GRADE IS ON THE CENTRELINE
  OF THE FINISHED TRAVEL LANES.
- SUPERELEVATION IS NORMALLY ATTAINED
  BY ROTATING INDIVIDUAL ROADWAYS ABOUT
  THE CENTRELINE OF TRAVEL LANES.

SUBGRADE AND SURFACING DIMENSIONS

A_1, A_2 = THICKNESS OF ACP (Ist STAGE + FINAL STAGE PAVING)
B_1, B_2 = THICKNESS OF BASE
$T_1 = A_1 + B_1$, $T_2 = A_2 + B_2$
P_1, P_2 = THICKNESS OF FIRST STAGE PAVING

△4			
△3			
△2			
△1		.	
No.	REVISIONS	BY	DATE

EXAMPLE: IF A_1 = 220mm, A_2 = 200mm, B_1 = 400mm, B_2 = 350mm
         P_1 = 100mm, P_2 = 80mm
         T_1 = 620mm, T_2 = 550mm, Y_1 = 6.70m, AND Y_2 = 5.70m

$$X_3 = \frac{B_1 - B_2}{40} = \frac{400 - 350}{40} = 1.25m \text{ ;(OFFSET DISTANCE FROM SUBGRADE CROWN TO BASECOURSE CROWN)}$$

$$X_4 = \frac{P_1 - P_2}{40} = \frac{100 - 80}{40} = 0.5m \text{ ;(OFFSET DISTANCE FROM BASECOURSE CROWN TO PAVEMENT CROWN)}$$
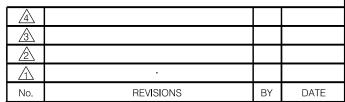
$Z_1 = 5(T_1 + 0.16) = 5(0.62 + 0.16) = 3.9m$

$Z_2 = 5(T_2 + 0.16) = 5(0.55 + 0.16) = 3.55m$

∴ TOTAL SUBGRADE WIDTH = FINISHED PAVEMENT + Z_1 + Z_2
                       = 5.7 + 6.7 + 3.9 + 3.55
                       = 19.85 m

Approved:

ORIGINAL SIGNED
BY DES WILLIAMSON

Executive Director,
Technical Services Branch

Date: APRIL, 2017

Alberta
Transportation

OBSOLETE
March, 2022

TYPICAL PAVEMENT DESIGN
FOR FOUR LANE DIVIDED HWY
RFD-412.4-130 &
RAD-412.4-120

Prepared By: G.E.C.	Checked By: H.T.	Scale: N.T.S.	Dwg No.:	CB6-3.50M9