



NOTES:

THE FOLLOWING EQUATIONS ARE FOR PARABOLIC, VERTICAL CURVES. THE GRADES g_1 AND g_2 MUST BE USED WITH THEIR ALGEBRAIC SIGNS (+ OR -). IF g_1 AND g_2 ARE EXPRESSED AS PERCENTAGES, L AND X MUST BE EXPRESSED IN STATIONS. IF g_1 AND g_2 ARE EXPRESSED AS FEET PER FOOT, L AND X MUST BE EXPRESSED IN FEET. THE SYMBOLS ARE DEFINED BY THE ABOVE DIAGRAMS.

$$A = g_1 - g_2 \quad G = g_1 - g_2 \quad e = LG/8 \quad y = 4e(X/L)^2 = (A/sL)X^2$$

THE EQUATION BELOW PROVIDES THE LOCATION, X_T , OF THE CURVE TURNING POINT WHICH IS THE HIGH POINT OR LOW POINT ON THE CURVE. THIS EQUATION IS ONLY APPLICABLE WHEN g_1 AND g_2 ARE NOT OF THE SAME SIGN, ALGEBRAICALLY.

$$X_T = (g_1 L) / (g_1 - g_2)$$

VERTICAL CURVE RELATIONSHIPS



CITY OF VANCOUVER
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