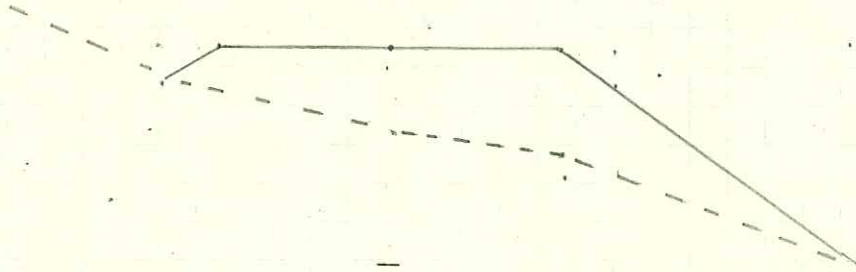


1) THROUGHFILL 18' SUBGRADE SS 1/2:1 FILLS 1/4:1 CUTS

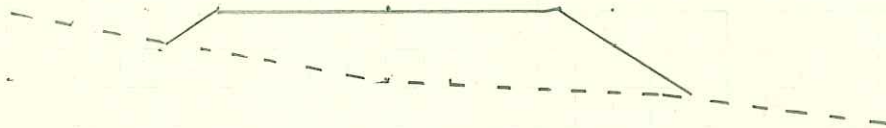
6+57³

$$\frac{F1^7}{12^2} \quad \frac{F2^4}{9^2} \quad \frac{F4^2}{0} \quad \frac{F5^5}{9^2} \quad \frac{F11^3}{23^2}$$



$$\frac{F1^2}{11^2} \quad \frac{F1^9}{9^2} \quad \frac{F3^8}{0} \quad \frac{F4^0}{9^2} \quad \frac{F4^3}{16^2}$$

7+51⁸



AEA CALC

$$A_{7+51^8} = \frac{CB + f_L D_L + f_R D_R}{2} = \frac{3^8(18^0) + (12)(11^9) + (4^6)(16^2)}{2} = 82^8 \text{ FT}^2$$

$$A_{6+57^3} = \frac{4^2(18^0) + 2^4(12^2) + (5^5)(23^2)}{2} = 120^5 \text{ FT}^2$$

$$VOL = \frac{120^5 + 82^8}{2} \times \frac{94^5}{27} = 355^8 \text{ YDS}^3$$

2) PRISMOID VOLUME

NEED MID SECTION

6+57 ³	$\frac{F1^2}{12^2}$	$\frac{F2^4}{9^2}$	$\frac{F4^2}{0}$	$\frac{F5^5}{9^2}$	$\frac{F11^3}{23^1}$
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7+51 ⁸	$\frac{F1^2}{11^2}$	$\frac{F1^9}{9^2}$	$\frac{F3^8}{0}$	$\frac{F4^0}{9^2}$	$\frac{F4^3}{16^2}$
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$L = 94^5, \quad 1/2 L = 47^3$

MID STATION = 7+04⁶

$\frac{F1^5}{12^1}$	$\frac{F2^2}{9^2}$	$\frac{F4^3}{0}$	$\frac{F4^8}{9^2}$	$\frac{F7^8}{19^2}$
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$A_{7+04^6} = \frac{4^3(18^2) + (2^2)(12^1) + (4^8)(19^2)}{2}$

= 99³ FT²

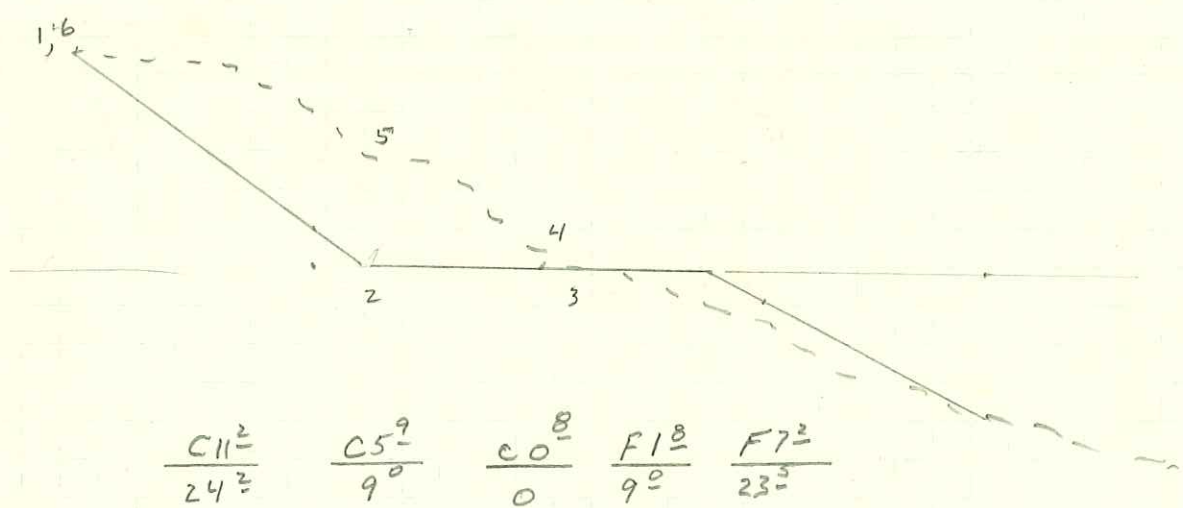
$V_p = \frac{[120^5 + 4(99^3) + 82^8] 94^5}{6 \times 27}$

350³ 70³

$\Delta_v = 355^8 - 350^3 = 5^5 70^3 \text{ (1/2 TRUCK)}$

$\% \Delta_v = \frac{355^8 - 350^3}{350.3} \times 100\% = +16\%$

AREA BY COORDINATES



$$\frac{C11^2}{24^2} \quad \frac{C5^2}{9^2} \quad \frac{C0^8}{0} \quad \frac{F1^8}{9^2} \quad \frac{F7^2}{23^2}$$

STARTING AT FAR LEFT
 ASSUMING 100.0 = X 100.0 = Y

PT	X	Y
1	100.0	100.0
2	115.2	88.8
3	124.2	88.8
4	124.2	89.8
5	115.2	94.2
6	100.0	100.0

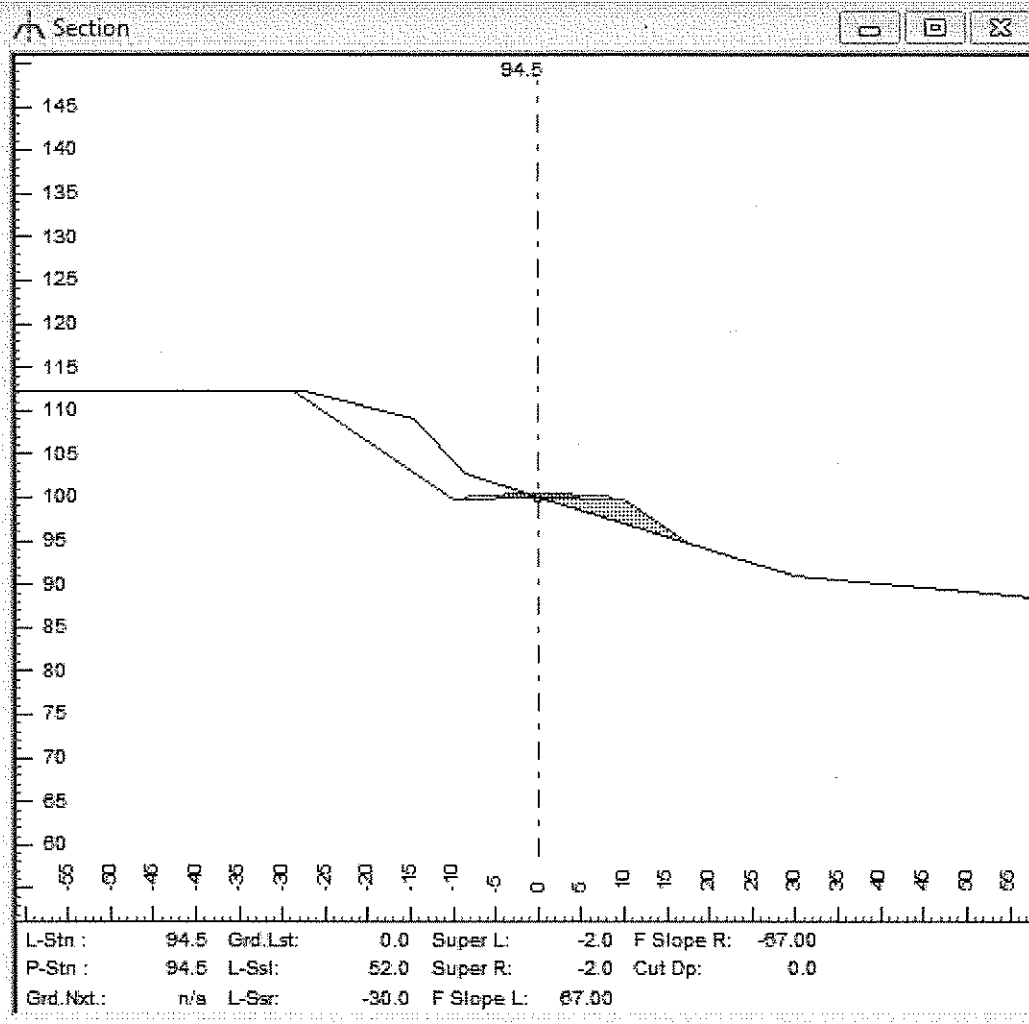
$$(X = 100.0 + (24.2 - 9^2)) \quad Y = (100.0 + (11^2 - 23^2))$$

$$\Sigma XY = 53519.8$$

$$\Sigma YX = 53369.8$$

$$A = 149.98$$

$$1/2 = 75 \text{ FT}^2$$



L-Stn ft.	P-Stn ft.	SG Cut A. Sq. ft.	Cut Dp. ft.	Grade %	V.Brk %
0.0	0.0	23.3	0.0	* 0.0	0.00
94.5	94.5	88.9	0.0		0.00