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Keywords:

1.0 Introduction

2.0 Materials and Methods

3.0 Data Downloading and Processing

3.1 Data Downloading

3.2 Data Processing

3.2.1 Analysis of Results

Table 1.0: Misclosure

	Existing Coordinates			Observed Coordinates			Diff. Coordinates		Diff. Height
Station	Northings (m)	Eastings (m)	Height	Northings (m)	Eastings (m)	Height (m)	Misclosure (m)		
Station	Northings (m)	Eastings (m)	Height	Northings (m)	Eastings (m)	Height (m)	ΔN	ΔE	ΔH

OCSD 240S	852769.675	664283.6552	322.0736	852769.345	664283.863	322.105	0.330	-0.281	-0.0314

3.2.2 Accuracy Obtained

Linear Accuracy

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ΔN = misclosure in the Northing coordinate $= +0.330$mN

$\Delta E =$ misclosure in the Easting coordinate $= -0.281$mE

$$\sum D = \text{Total Distance} = \text{summation of distances within the network} = 5.634\text{km} = 5634$$

$$\text{The Linear accuracy} = \frac{1}{\frac{\sqrt{(+0.330^2 + -0.281^2)}}{5634}} = \frac{1}{\frac{\sqrt{(0.1089 + 0.078961)}}{5634}} = \frac{1}{0.00007693101674}$$

$$= 12{,}998.65831 \approx 13{,}000$$

$$\text{Linear accuracy} = 1:13{,}000$$

24mm√ K

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after closing on pillar OCSD 240S was -0.0314m, while the minimal accuracy determined using the formula 24mm √K was 0.057m. As a result, the job's accuracy was within the acceptable range.

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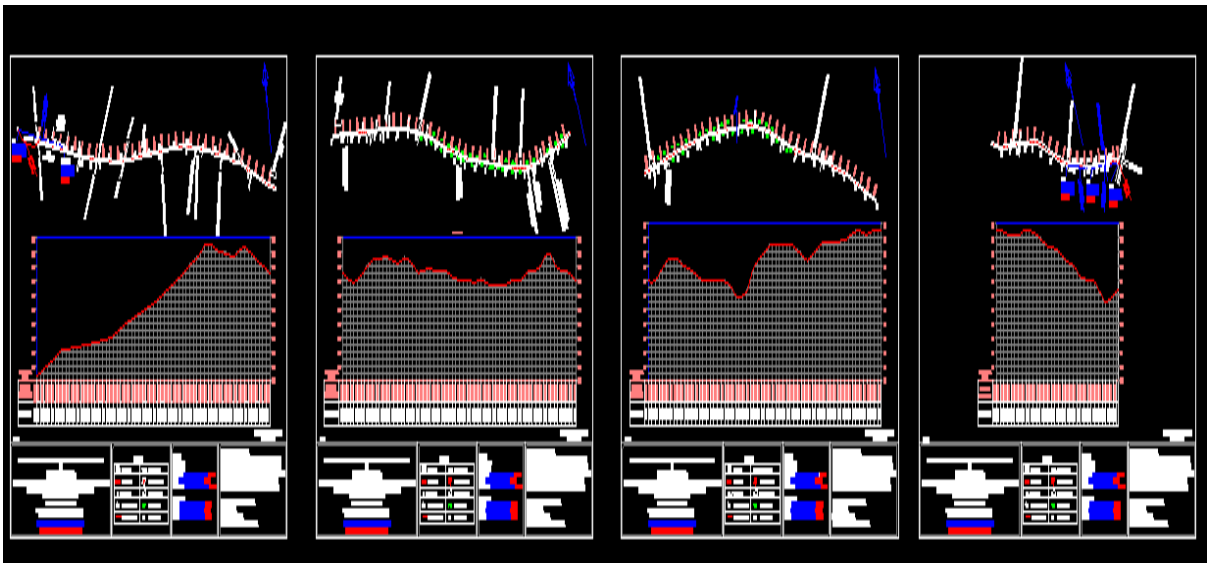
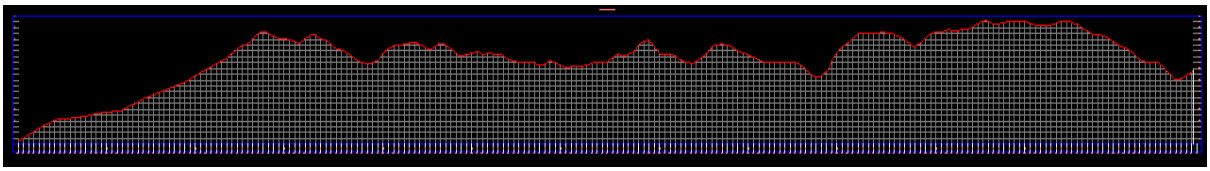
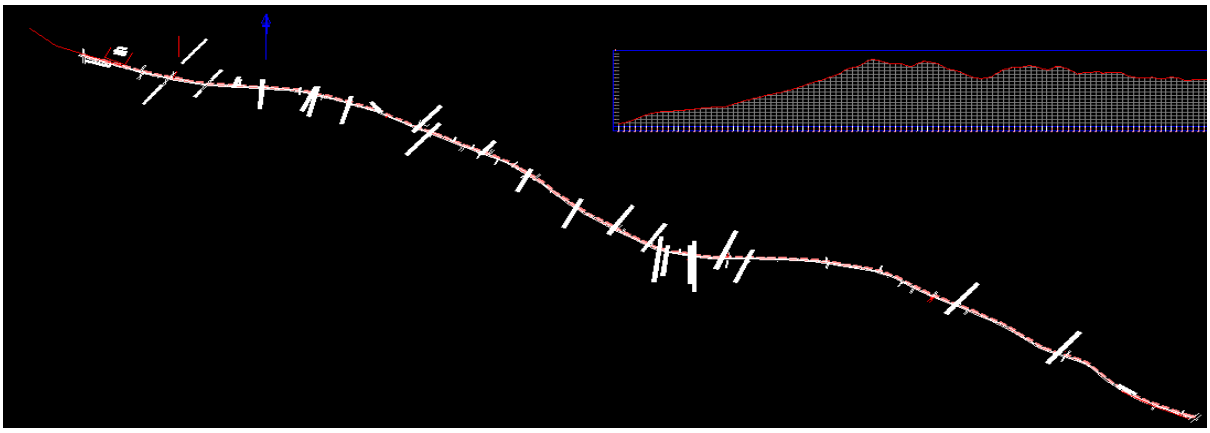
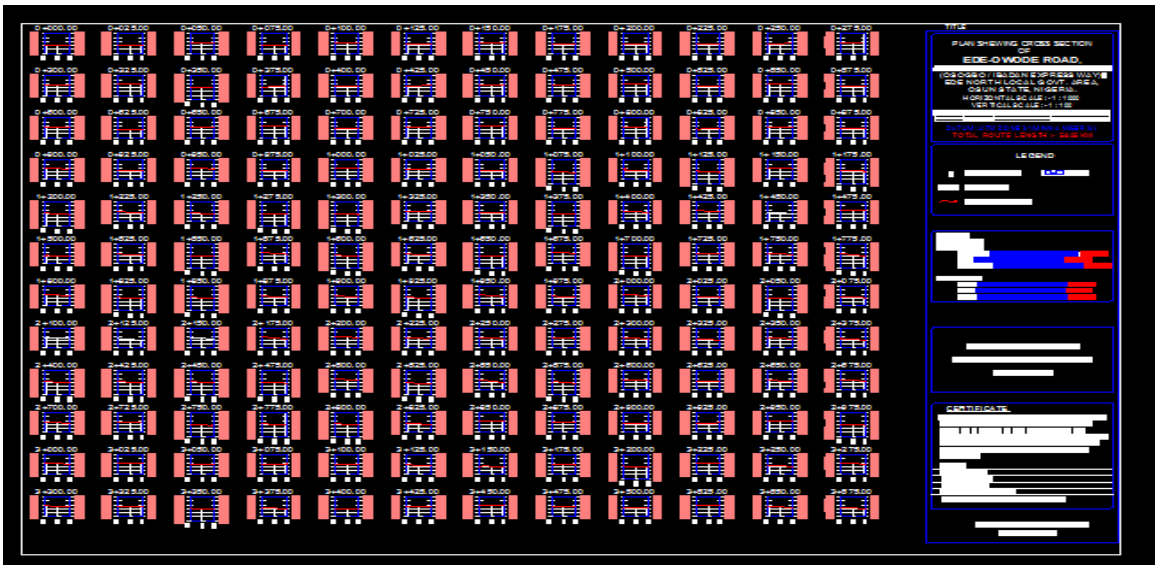
Aspect	Allowable Closure	Result Obtained	Remark
1. Traversing			
a. Angular misclosure ($30"\sqrt{N}$) Where N = total number of stations	00º 02’ 10.77”	00º 01’ 56.19”	Within allowable limit
b. Linear misclosure $\frac{1}{\sqrt{(\Delta N)^2 + (\Delta E)^2}}$ Total distance	1 : 5000	1 : 13,000	Within allowable limit
2. Levelling misclosure ($24mm\sqrt{k}$) Where k =total distance covered in kilometer.	±0.057m	-0.0314m	Within allowable limit

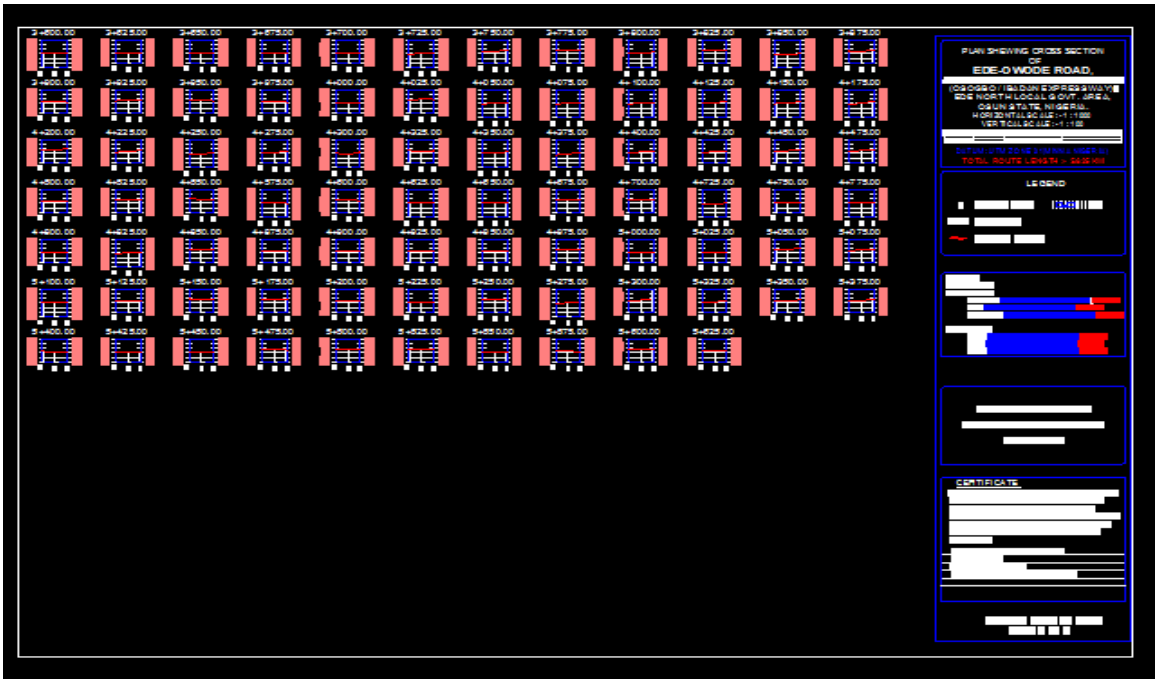
4.0 Plan Production and Presentation











5.0 Summary, Problems Encountered, Recommendation and Conclusion

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