Lab 3

Differential Leveling

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OBJECTIVE

The objective of this lab is to learn how to measure different elevations and side shots using the equipment provided by the instructor. We also were required to show our notes and figure out the accuracy of our measurements.

EQUIPMENT

Philadelphia Rod

Auto Level

Steel Tape

MEASUREMENTS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Station | Sight + | HI | Sight - | Elevation | Distance |
| BM1 |   |   |   | 500.00 |   |
|   | 3.10 | 503.10 |   |   |   |
| Stairwell |   |   | 6.08 | 497.02 |   |
| TP1 |   |   | 2.85 | 500.25 | 84.00 |
|   | 2.44 | 502.69 |   |   |   |
| TP2 |   |   | 6.56 | 496.13 | 108.00 |
| Fire Hyd. |   |   | 1.73 | 500.96 |   |
|   | 6.80 | 502.93 |   |   |   |
| Combs |   |   | 6.74 | 496.19 |   |
| TP3 |   |   | 4.47 | 498.46 | 48.00 |
|   | 8.16 | 506.62 |   |   |   |
| TP4 |   |   | 3.12 | 503.50 | 48.00 |
|   | 8.66 | 512.16 |   |   |   |
| TP5 |   |   | 4.20 | 507.96 | 80.00 |
| Sign | 4.40 |   |   | 512.36 |   |
| Steps | 4.02 |   |   | 511.98 |   |
|   | 5.09 | 513.05 |   |   |   |
| TP6 |   |   | 4.44 | 508.61 | 40.00 |
|   | 4.12 | 512.73 |   |   |   |
| TP7 |   |   | 6.70 | 506.03 | 48.00 |
| WBF |   |   | 3.41 | 509.32 |   |
| RHF |   |   | 2.78 | 506.39 |   |
|   | 0.23 | 506.26 |   |   |   |
| TP8 |   |   | 7.05 | 499.21 | 64.00 |
|   | 4.46 | 503.67 |   |   |   |
| BM1 |   |   | 3.94 | 499.73 | 60.00 |
|   |   |   |   |   |   |
|   |   |   |   | Total Dist. | 580.00 |

$$\frac{0.27}{580}= \frac{1}{2148.15}$$



CONCLUSION

This lab was difficult to complete. The side shots were what made it hard to do. I got confused about what and where to write them in my notes. This lab helped me understand better what to do when surveying.