**Muhammed ERENLER - GIS Lab Assignment 5**

**MAP-1. A discussion of the accuracy of the features on the map.**

I would say that there normally exist some inaccuracies just because of the shortcomings resulting from my inaccurate selection of points while geo-referencing the Google Earth image. These shortcomings on overlapping the Erie County Roads and UB Image has resulted in some distortions on the map and it introduced the imperfect fit of these two layers. Though I tried hard to overlap “roads” and “image” rigorously, I think I failed a bit to do so. When I look at **Total RMS Errors**, all errors are under ten, which means a good fit. Therefore I can also attribute some of the error to the inaccuracy of the Erie County roads layer also, since it is easily noticed that some lines do not perfectly match the actual topography of the area. This deficiency of the Erie County Map layer also shows us that we should be more careful especially when we match a relatively small amount of area like UB North Campus and a relatively large area like Erie County Roads, since topographers inherently inclined to lose the accuracy perspective in large area attributes.

When it comes to talk about my ten points, I should admit that their locations also are not perfect. I assume that only minor part of all error can be attributed to my inaccurate GPS measurements. Then I can clearly state that major part of this inaccuracy has arisen from my inability to perfectly match the Google Earth Image and Erie County Roads. As we can instantly notice all points are located a bit **north-western** from their exact locations on earth. This is due to the reason that especially Google Earth Image is positioned a bit further to the south of the road map. And unfortunately, these caused most of the points in the image seem to locate somehow further north western of the exact locations on earth. Then we can clearly say that the faults are of more latitudinal rather than longitudinal. That is, X coordinates are unfortunately faultier than Y coordinates.

Upon examining ten points, especially points on the left half of the image seems more distorted than the right part. For example, the locations of both Governors B Lot and Hadley Village Apartments are more north western than the UB Bookstore, the Department of Geography or the Lockwood Library. These may be due to the different expansion of the image into different angles. Lastly; though I have criticized my map too much so far, I should also assert that any person given my map can easily find all 10 locations!!