First, I made plotted my waypoint from the first week onto a map. This map looked like so:

This map accurately reflects the location of my waypoint, in a parking lot just off of Faculty Rd., bordering Lake Carnegie.

In the late afternoon on Tuesday, February 20, Sudeep Doshi and I set out to complete the more time-intensive part of the project. We started outside of Firestone library, hiked through the town of Princeton, and then tried to cut through the Princeton cemetery. However, upon finding there to be no rear exit in the cemetery, we looped back around (see below):
We then continued our trek, moving east for a bit and then heading north, away from the Princeton campus. At this point, we brainstormed as to what shapes we might try to make out of our finished track. We considered going for a top hat shape, but were limited in our shape-making ability by the highway. After about 30 minutes heading north, we looped around and walked back towards campus, passing the Ryder Conservatory of music on the way. When we returned to Nassau Hall, Sudeep returned to Rocky, which was not very far away, while I had to walk back to Butler. This difference in length helps account for some of the discrepancies in our calculated values of distance traveled and average speed. I uploaded the track onto my computer, and superimposed them on a map, as shown below:
Here are the calculations that the GPS provided about the trip:

**GPS Calculations:**

Distance traveled:
4.99 mi

Moving Time
1 hr. 34 min.

Moving Avg:
3.2 m/h
Time Stopped:
13 min. 56 sec.

Overall avg:
2.8 m/h

Using an excel spreadsheet and the following formulas, my partner and I were able to make many of these calculations for ourselves:

North-South distance = (latitude1 - latitude 2) * (PI/180) * radius of earth (6371000)

East-West distance = (longitude 1 - longitude2) * (PI/180) * 6371000 * cos(radians(latitude))

**Personal Calculations:**

Distance traveled:
3.99 miles

Avg. Speed:
3.03 miles/hr

Total climb:
206m

**Sudeep’s Calculations:**

Distance traveled:
3.71 miles

Avg. Speed:
3.04 miles/hr

Total Climb:
192m