COA 690 / 790 GIS in Marine Science

Keys for Lab2

Question: Did you pick the right GCS when you chose WGS84?

Probably.
Your coordinate values are in the right range, but they would still be in the right range had you picked the NAD27, NAD83, or WGS72. Although these GCSs are different, the differences are measured in tens or hundreds of meters—nothing you would notice at this scale. In other words, the fact that your coordinates match up confirms that you have chosen the right PCS, but it doesn't prove that you've chosen the right GCS.
WGS84 is probably the right GCS simply because the data has been captured recently with GPS units, and GCS units typically base their coordinates on the WGS84 datum.

Question: Why is this happening?

There are four possible reasons:

1. The student who collected the data may have been standing in the street with the GPS unit instead of right next to the fire hydrant.
2. The misalignment may be within the margin of error of the GPS unit.
3. The scale at which the parcels data was collected may not be fine enough to support this resolution.
4. The datum transformation may not be exact enough.