Editing Reference Station Information in MobileMapper Office
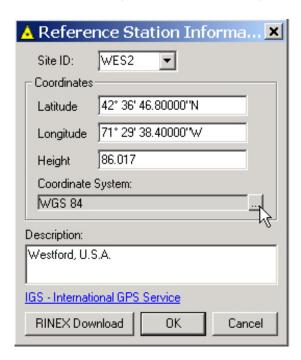
MobileMapper Office (MMO) reads the header file of the RINEX data the first time you download data from a site ID. MobileMapper Office displays this information in the Reference Station Information window (see illustration below).
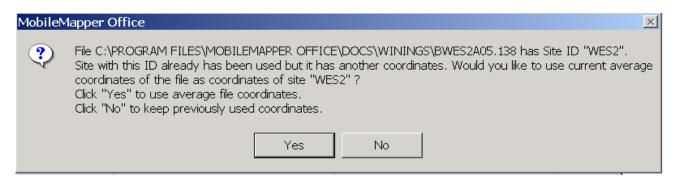

Site ID Field
The Site ID for a CORS station is a four-character code name. All CORS stations around the world should have a unique code name. Similarly, if you record your own reference station data for use in MobileMapper Office, you should give each site a unique ID or be prepared to edit the coordinates each time you use reference station data from a different location.

Coordinates Field
The Coordinates Field contains the coordinates and height (either ellipsoidal/HAE or orthometric/MSL) for the CORS station. If the ftp site from which you downloaded the RINEX data includes the appropriate coordinates file - sometimes called a "station file" or "S-file" – MMO will display these coordinates automatically. These coordinates are typically surveyed with great accuracy, but sometimes Site IDs are switched to a new location – perhaps moving the reference receiver's antenna to a new mount on the roof of a building. When this happens, it is possible for the CORS agency to fail to switch the coordinates of the Site ID after the move. If the Site ID moves 10 meters, this will introduce a 10-meter error to all of your rover data. Fortunately, this happens rarely, but we recommend checking the coordinates of CORS stations periodically to prevent such an occurrence.

After the first time data is downloaded for a specific site ID, MMO will continue to use the coordinates for this site ID even if the second downloaded file has different coordinates. If MMO detects a difference in the coordinates, it returns the following warning message:

If the user clicks "Yes" on this window, the average file coordinates will be used. These coordinates, averaged over the length of the reference station file might have an error of a few meters if the file is only one hour long. Therefore, it is better to click "No" if you see this message and continue to use the surveyed coordinates of the CORS site. These coordinates are typically posted with the RINEX files. The only time you should use averaged coordinates is when you do not have any way of determining the true coordinates of the site. If you do not know the true coordinates, using the averaged coordinates is better than nothing, but you must remember that any error in the CORS site coordinates will be passed on to each position in the rover file(s).

Coordinate System Field
The coordinate system listed in the Reference Station Information window must match that of the CORS data. (The rover job file and/or background map displayed in MMO's map display area, on the other hand, may be in any coordinate system you choose.) To select the appropriate coordinate system, click on the Edit tab (the tab with the three dots to the right of the Coordinate System field) and either select the system from MMO's predefined coordinate systems or create it. The MobileMapper User Manual (in MMO, click Help>User Manual) includes a complete description of how to create a coordinate system.

Description Field
This field is typically populated automatically when you first download data from a CORS station. The description is associated with the Site ID. Editing this field in MMO does not effect differential correction.