were corrected to account for horizontal displacement and the resulting vertical displacement of the Ott current meter due to drag forces associated with higher flow velocities. Appendix B presents the depth-correction calculations.

3.5.2 Depth-averaged Transverse Velocity Profiles

Figure 3.5 shows a plot of depth averaged velocity, $\bar{u}$, based on the vertical profiles in Fig. 3.3, against the location of the profile as measured from the indicated shoreline. The curve connecting these points is assumed to represent a continuous transverse velocity profile for the indicated cross-section. Values of $\bar{u}$, profile position, and the mean time corresponding to the cross-sectional velocity measurements were non-dimensionalized and plotted in the manner shown in Fig. 3.6 in order to present the results in a generalized manner. Similar plots for the non-dimensionalized transverse velocity profiles obtained at each cross-section are presented in Appendix C. The parameters describing the tidal conditions corresponding to the measurements on which these plots are based are defined as follows (Mehta and Sheppard, 1977):

W = width of the flow cross-section at the time the vertical velocity profiles were measured,

x = distance from the shore on which the tide box was installed to the location of the stations where the profiles were obtained,

$K = x/W$ = dimensionless parameter to normalize the abscissa,

$\bar{u}$ = vertically averaged horizontal velocity obtained from averaging the vertical velocity profile measured at each station,

g = acceleration due to gravity,