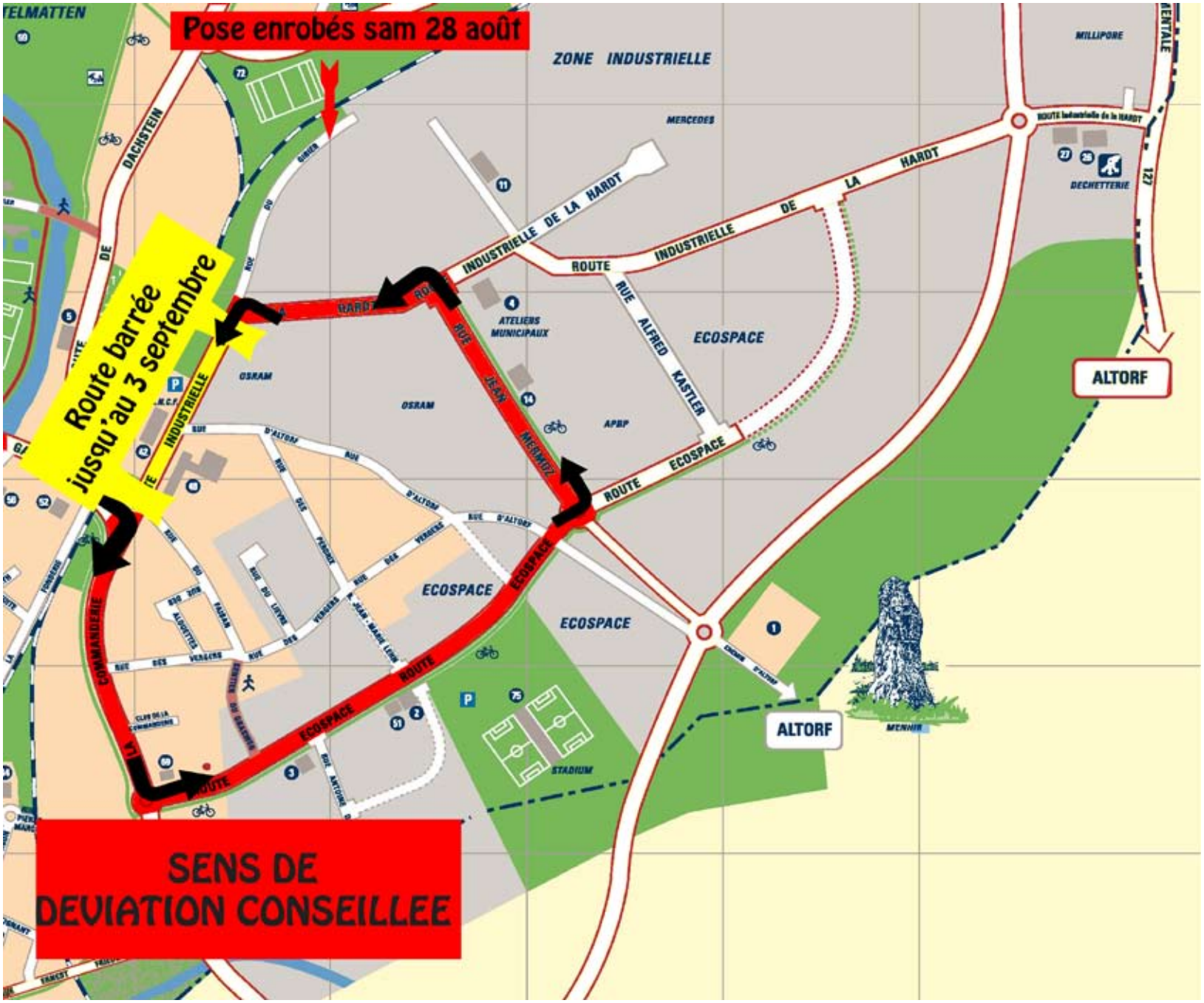TRAVAUX ZI HARDT AOUT 2010