Planar degenerate case

Consider again two indices $i < j$. We suppose WLOG $i < j$ with respect to the order of Γ, so that we can write $\Gamma = Y_1|X_1 i X_2|Y_2|X_3 j X_4|Y_3$, with the usual convention for clouds of points. Then we have:

$D_1^i D_2^{ij}(Y_1|X_1 i X_2|Y_2|X_3 j X_4|Y_3) =$
$= Y_1|X_1 i X_2|Y_2|X_3(j+2)X_4|Y_3||Y_1|X_1(i+1)X_2|Y_2|Y_3||Y_1|X_1(i+2)X_2|Y_2|X_3(j+3)X_4|Y_3$
$+ Y_1|X_1 i X_2|Y_2|Y_3||Y_1|X_1(i+1)X_2|Y_2|X_3(j+2)X_4|Y_3||Y_1|X_1(i+2)X_2|Y_2|X_3(j+3)X_4|Y_3$

$D_2^{i,j+1} D_1^i(Y_1|X_1 i X_2|Y_2|X_3 j X_4|Y_3) =$
$= Y_1|X_1 i X_2|Y_2|X_3(j+2)X_4|Y_3||Y_1|X_1(i+1)X_2|Y_2|X_3(j+3)X_4|Y_3||Y_1|X_1(i+2)X_2|Y_2|Y_3$

$D_2^{i+1,j+1} D_1^i(Y_1|X_1 i X_2|Y_2|X_3 j X_4|Y_3) =$
$= Y_1|X_1 i X_2|Y_2|Y_3||Y_1|X_1(i+1)X_2|Y_2|X_3(j+2)X_4|Y_3||Y_1|X_1(i+2)X_2|Y_2|X_3(j+3)X_4|Y_3$

$D_1^{i+1} D_2^{ij}(Y_1|X_1 i X_2 j X_3|Y_3) =$
$= Y_1|X_1 i X_2|Y_2|X_3(j+2)X_4|Y_3||Y_1|X_1(i+1)X_2|Y_2|Y_3||Y_1|X_1(i+2)X_2|Y_2|X_3(j+3)X_4|Y_3$
$+ Y_1|X_1 i X_2|Y_2|X_3(j+2)X_4|Y_3||Y_1|X_1(i+1)X_2|Y_2|X_3(j+3)X_4|Y_3||Y_1|X_1(i+2)X_2|Y_2|Y_3$