$\sigma(V(\mathcal{P}_a^{\ell}) \cup V(\mathcal{P}_b^{\ell}) \setminus \{v_a^{\ell}, v_b^{\ell}\}) \subseteq V(\mathcal{K}^{\ell}) \cup \{\kappa_a^{\ell}, \kappa_b^{\ell}\}.$