$$C_{HWB} \to$$

$$\frac{1}{16\,\pi^2}\Big(-\frac{1}{8}\,g_1\,g_2\,\Big(-2\,c_\gamma^{\,2}\,\overline{y_e}^{pr}\,y_e^{\,pr}+\sum_p c_{2\gamma}\,g_2^{\,2}\Big)\,LF_{3,0}\big[m_{\tilde{l}}^{\,p}\big]+\frac{1}{8}\,g_1\,g_2\,\Big(-2\,c_\gamma^{\,2}\,\overline{y_e}^{pr}\,y_e^{\,pr}+\sum_p c_{2\gamma}\,g_2^{\,2}\Big)\,LF_{4,-1}\big[m_{\tilde{l}}^{\,p}\big]+\frac{1}{8}\,g_1\,g_2\,\Big(-2\,c_\gamma^{\,2}\,\overline{y_d}^{pr}\,y_d^{\,pr}+2\,s_\gamma^{\,2}\,\overline{y_u}^{pr}\,y_u^{\,pr}+\sum_p c_{2\gamma}\,g_2^{\,2}\Big)\,LF_{3,0}\big[m_{\tilde{q}}^{\,p}\big]-\frac{1}{8}\,g_1\,g_2\,\Big(-2\,c_\gamma^{\,2}\,\overline{y_d}^{pr}\,y_d^{\,pr}+2\,s_\gamma^{\,2}\,\overline{y_u}^{pr}\,y_u^{\,pr}+\sum_p c_{2\gamma}\,g_2^{\,2}\Big)\,LF_{4,-1}\big[m_{\tilde{q}}^{\,p}\big]+\frac{1}{32}\,\Big(g_2\,g_1^{\,3}\,(-1+c_{4\gamma})+g_1\,g_2^{\,3}\,(3+c_{4\gamma})\Big)\,LF_{3,0}[m_\oplus]-\frac{1}{32}\,g_1\,g_2\,\Big(g_1^{\,2}\,(-1+c_{4\gamma})+g_2^{\,2}\,(3+c_{4\gamma})\Big)\,LF_{4,-1}[m_\oplus]+\frac{1}{4}\,g_1\,g_2^{\,3}\,LF_{2,2,-1}[m_2,\tilde{\mu}]+g_1\,m_2\,s_\gamma\,\tilde{\mu}\,c_\gamma\,g_2^{\,3}\,LF_{2,2,0}[m_2,\tilde{\mu}]+\frac{1}{2}\,g_1\,g_2\,\Big(c_\gamma\,\overline{a_e}^{pr}-s_\gamma\,\tilde{\mu}\,\overline{y_e}^{pr}\Big)\,\Big(c_\gamma\,a_e^{\,pr}-s_\gamma\,\tilde{\mu}\,y_e^{\,pr}\Big)\,LF_{3,1,0}\big[m_{\tilde{l}}^{\,p},m_{\tilde{e}}^{\,r}\big]-g_1\,g_2\,\Big(c_\gamma\,\overline{a_e}^{pr}-s_\gamma\,\tilde{\mu}\,\overline{y_e}^{pr}\Big)\,\Big(c_\gamma\,a_e^{\,pr}-s_\gamma\,\tilde{\mu}\,y_e^{\,pr}\Big)\,LF_{4,1,-1}\big[m_{\tilde{l}}^{\,p},m_{\tilde{e}}^{\,r}\big]+\frac{1}{2}\,g_1\,g_2\,\Big(c_\gamma\,\overline{a_e}^{pr}-s_\gamma\,\tilde{\mu}\,\overline{y_e}^{pr}\Big)\,\Big(c_\gamma\,a_e^{\,pr}-s_\gamma\,\tilde{\mu}\,y_e^{\,pr}\Big)\,LF_{5,1,-2}\big[m_{\tilde{l}}^{\,p},m_{\tilde{e}}^{\,r}\big]+\frac{1}{2}\,g_1\,g_2\,\Big(c_\gamma\,\overline{a_d}^{pr}-s_\gamma\,\tilde{\mu}\,\overline{y_d}^{pr}\Big)\,\Big(c_\gamma\,a_d^{\,pr}-s_\gamma\,\tilde{\mu}\,y_d^{\,pr}\Big)\,LF_{3,1,0}\big[m_{\tilde{q}}^{\,p},m_{\tilde{d}}^{\,r}\big]-2\,g_1\,g_2\,\Big(c_\gamma\,\overline{a_d}^{pr}-s_\gamma\,\tilde{\mu}\,\overline{y_d}^{pr}\Big)\,\Big(c_\gamma\,a_d^{\,pr}-s_\gamma\,\tilde{\mu}\,y_d^{\,pr}\Big)\,LF_{4,1,-1}\big[m_{\tilde{q}}^{\,p},m_{\tilde{d}}^{\,r}\big]+\frac{3}{2}\,g_1\,g_2\,\Big(c_\gamma\,\overline{a_d}^{pr}-s_\gamma\,\tilde{\mu}\,\overline{y_d}^{pr}\Big)\,\Big(c_\gamma\,a_d^{\,pr}-s_\gamma\,\tilde{\mu}\,y_d^{\,pr}\Big)\,LF_{5,1,-2}\big[m_{\tilde{q}}^{\,p},m_{\tilde{d}}^{\,r}\big]+\frac{1}{4}\,g_1\,g_2\,\Big(s_\gamma\,\overline{a_u}^{pr}-\tilde{\mu}\,c_\gamma\,\overline{y_u}^{pr}\Big)\,\Big(s_\gamma\,a_u^{\,pr}-\tilde{\mu}\,c_\gamma\,y_u^{\,pr}\Big)\,LF_{2,2,0}\big[m_{\tilde{q}}^{\,p},m_{\tilde{u}}^{\,r}\big]+\frac{1}{4}\,g_1\,g_2\,\Big(s_\gamma\,\overline{a_u}^{pr}-\tilde{\mu}\,c_\gamma\,\overline{y_u}^{pr}\Big)\,\Big(s_\gamma\,a_u^{\,pr}-\tilde{\mu}\,c_\gamma\,y_u^{\,pr}\Big)\,LF_{3,1,0}\big[m_{\tilde{q}}^{\,p},m_{\tilde{u}}^{\,r}\big]-\frac{1}{4}\,g_1\,g_2\,\Big(s_\gamma\,\overline{a_u}^{pr}-\tilde{\mu}\,c_\gamma\,\overline{y_u}^{pr}\Big)\,\Big(s_\gamma\,a_u^{\,pr}-\tilde{\mu}\,c_\gamma\,y_u^{\,pr}\Big)\,LF_{3,2,-1}\big[m_{\tilde{q}}^{\,p},m_{\tilde{u}}^{\,r}\big]-\frac{1}{4}\,g_1\,g_2\,\Big(s_\gamma\,\overline{a_u}^{pr}-\tilde{\mu}\,c_\gamma\,\overline{y_u}^{pr}\Big)\,\Big(s_\gamma\,a_u^{\,pr}-\tilde{\mu}\,c_\gamma\,y_u^{\,pr}\Big)\,LF_{4,1,-1}\big[m_{\tilde{q}}^{\,p},m_{\tilde{u}}^{\,r}\big]+\frac{3}{4}\,g_1\,g_2\,\Big(s_\gamma\,\overline{a_u}^{pr}-\tilde{\mu}\,c_\gamma\,\overline{y_u}^{pr}\Big)\,\Big(s_\gamma\,a_u^{\,pr}-\tilde{\mu}\,c_\gamma\,y_u^{\,pr}\Big)\,LF_{3,1,0}\big[m_{\tilde{u}}^{\,r},m_{\tilde{q}}^{\,p}\big]-\frac{1}{4}\,g_1\,g_2\,\Big(s_\gamma\,\overline{a_u}^{pr}-\tilde{\mu}\,c_\gamma\,\overline{y_u}^{pr}\Big)\,\Big(s_\gamma\,a_u^{\,pr}-\tilde{\mu}\,c_\gamma\,y_u^{\,pr}\Big)\,LF_{3,2,-1}\big[m_{\tilde{u}}^{\,r},m_{\tilde{q}}^{\,p}\big]-\frac{9}{4}\,g_1\,g_2\,\Big(s_\gamma\,\overline{a_u}^{pr}-\tilde{\mu}\,c_\gamma\,\overline{y_u}^{pr}\Big)\,\Big(s_\gamma\,a_u^{\,pr}-\tilde{\mu}\,c_\gamma\,y_u^{\,pr}\Big)\,LF_{4,1,-1}\big[m_{\tilde{u}}^{\,r},m_{\tilde{q}}^{\,p}\big]+\frac{3}{2}\,g_1\,g_2\,\Big(s_\gamma\,\overline{a_u}^{pr}-\tilde{\mu}\,c_\gamma\,\overline{y_u}^{pr}\Big)\,\Big(s_\gamma\,a_u^{\,pr}-\tilde{\mu}\,c_\gamma\,y_u^{\,pr}\Big)\,LF_{5,1,-2}\big[m_{\tilde{u}}^{\,r},m_{\tilde{q}}^{\,p}\big]-\frac{1}{4}\,g_2\,g_1^{\,3}\,LF_{3,1,-1}[\tilde{\mu},m_1]-\frac{1}{2}\,g_2\,m_1\,s_\gamma\,\tilde{\mu}\,c_\gamma\,g_1^{\,3}\,LF_{3,1,0}[\tilde{\mu},m_1]+\frac{3}{4}\,g_2\,g_1^{\,3}\,LF_{4,1,-2}[\tilde{\mu},m_1]+g_2\,m_1\,s_\gamma\,\tilde{\mu}\,c_\gamma\,g_1^{\,3}\,LF_{4,1,-1}[\tilde{\mu},m_1]-\frac{1}{2}\,g_2\,g_1^{\,3}\,LF_{5,1,-3}[\tilde{\mu},m_1]-g_2\,m_1\,s_\gamma\,\tilde{\mu}\,c_\gamma\,g_1^{\,3}\,LF_{5,1,-2}[\tilde{\mu},m_1]-\frac{7}{4}\,g_1\,g_2^{\,3}\,LF_{3,1,-1}[\tilde{\mu},m_2]-\frac{3}{2}\,g_1\,m_2\,s_\gamma\,\tilde{\mu}\,c_\gamma\,g_2^{\,3}\,LF_{3,1,0}[\tilde{\mu},m_2]+\frac{13}{4}\,g_1\,g_2^{\,3}\,LF_{4,1,-2}[\tilde{\mu},m_2]+5\,g_1\,m_2\,s_\gamma\,\tilde{\mu}\,c_\gamma\,g_2^{\,3}\,LF_{4,1,-1}[\tilde{\mu},m_2]-\frac{3}{2}\,g_1\,g_2^{\,3}\,LF_{5,1,-3}[\tilde{\mu},m_2]-3\,g_1\,m_2\,s_\gamma\,\tilde{\mu}\,c_\gamma\,g_2^{\,3}\,LF_{5,1,-2}[\tilde{\mu},m_2]\Big)$$