

Category	Signature	Trigger	Signature
H → Hadrons H → b \bar{b} H → $\tau_h \tau_h$ H → WW	Lepton + Jets ($t\bar{t}H \rightarrow l\nu jjbbbb$)	Single Lepton	1 e/ μ , $p_T > 30$ GeV ≥ 4 jets + ≥ 2 b-tags, $p_T > 30$ GeV
	Dilepton ($t\bar{t}H \rightarrow l\nu l\nu bbbb$)	Dilepton	1 e/ μ , $p_T > 20$ GeV 1 e/ μ , $p_T > 10$ GeV ≥ 3 jets + ≥ 2 b-tags, $p_T > 30$ GeV
	Hadronic τ ($t\bar{t}H \rightarrow l\nu \tau_h[\nu] \tau_h[\nu] jjbb$)	Single Lepton	1 e/ μ , $p_T > 30$ GeV 2 τ_h , $p_T > 20$ GeV ≥ 2 jets + 1-2 b-tags, $p_T > 30$ GeV
H → Photons H → $\gamma\gamma$	Leptonic ($t\bar{t}H \rightarrow l\nu jjbb\gamma\gamma$, $t\bar{t}H \rightarrow l\nu l\nu bb\gamma\gamma$)	Diphoton	2 γ , $p_T > m_{\gamma\gamma}/2$ (25) GeV for 1 st (2 nd) ≥ 1 e/ μ , $p_T > 20$ GeV ≥ 2 jets + ≥ 1 b-tags, $p_T > 25$ GeV
	Hadronic ($t\bar{t}H \rightarrow jjjjbb\gamma\gamma$)	Diphoton	2 γ , $p_T > m_{\gamma\gamma}/2$ (25) GeV for 1 st (2 nd) 0 e/ μ , $p_T > 20$ GeV ≥ 4 jets + ≥ 1 b-tags, $p_T > 25$ GeV
H → Leptons H → WW H → $\tau\tau$ H → ZZ	Same-Sign Dilepton ($t\bar{t}H \rightarrow l^\pm \nu l^\pm [\nu] jjj[j]bb$)	Dilepton	2 e/ μ , $p_T > 20$ GeV ≥ 4 jets + ≥ 1 b-tags, $p_T > 25$ GeV
	3 Lepton ($t\bar{t}H \rightarrow l\nu l[\nu] l[\nu] j[j]bb$)	Dilepton, Trielectron	1 e/ μ , $p_T > 20$ GeV 1 e/ μ , $p_T > 10$ GeV 1 e(μ), $p_T > 7(5)$ GeV ≥ 2 jets + ≥ 1 b-tags, $p_T > 25$ GeV
	4 Lepton ($t\bar{t}H \rightarrow l\nu l\nu l[\nu] l[\nu]bb$)	Dilepton, Trielectron	1 e/ μ , $p_T > 20$ GeV 1 e/ μ , $p_T > 10$ GeV 2 e(μ), $p_T > 7(5)$ GeV ≥ 2 jets + ≥ 1 b-tags, $p_T > 25$ GeV