$$\frac{\langle S, x : C, x : \neg C \mid U \mid K\rangle}{}\ (\text{Clash}) \qquad \frac{\langle S, x : \bot \mid U \mid K\rangle}{}\ (\text{Clash})_{\bot} \qquad \frac{\langle S, x : \neg\top \mid U \mid K\rangle}{}\ (\text{Clash})_{\top} \qquad \frac{\langle S \mid U \mid \emptyset\rangle}{}\ (\text{Clash})_{\emptyset}$$

$$\frac{\langle S, x : \neg\Box\neg C \mid U \mid K\rangle}{}\ (\text{Clash})_{\Box^-} \quad \text{if } x : \neg\Box\neg C \notin \mathbf{B}^{\Box^-}$$

$$\frac{\langle S, x : \neg(C \sqcap D) \mid U \mid K\rangle}{\langle S, x : \neg C \mid U \mid K\rangle \qquad \langle S, x : \neg D \mid U \mid K\rangle}\ (\sqcap^-) \qquad \frac{\langle S, x : C \sqcap D \mid U \mid K\rangle}{\langle S, x : C, x : D \mid U \mid K\rangle}\ (\sqcap^+) \qquad \frac{\langle S, x : \neg\neg C \mid U \mid K\rangle}{\langle S, x : C \mid U \mid K\rangle}\ (\neg)$$

$$\frac{\langle S, x : \mathbf{T}(C) \mid U \mid K\rangle}{\langle S, x : C, x : \Box\neg C \mid U \mid K\rangle}\ (\mathbf{T}^+) \qquad \frac{\langle S, x : \neg\mathbf{T}(C) \mid U \mid K\rangle}{\langle S, x : \neg C \mid U \mid K\rangle \qquad \langle S, x : \neg\Box\neg C \mid U \mid K\rangle}\ (\mathbf{T}^-)$$

$$\frac{\langle S \mid U, C \sqsubseteq D^{L} \mid K\rangle}{\langle S, x : \neg C \sqcup D \mid U, C \sqsubseteq D^{L,x} \mid K\rangle}\ (\sqsubseteq) \quad x \in \mathcal{D}(\mathbf{B}) \text{ and } x \notin L$$

$$\frac{\langle S, x : \forall R.C, x \xrightarrow{R} y \mid U \mid K\rangle}{\langle S, x : \forall R.C, x \xrightarrow{R} y, y : C \mid U \mid K\rangle}\ (\forall^+) \quad \text{if } y : C \notin S$$

$$\frac{\langle S, x : \neg\Box\neg C \mid U \mid K, x : \neg\Box\neg C\rangle}{\langle S, v_1 : C, v_1 : \Box\neg C, S^M_{x\to v_1}, x : \neg\Box\neg C \mid U \mid K\rangle \quad \langle S, v_2 : C, v_2 : \Box\neg C, S^M_{x\to v_2}, x : \neg\Box\neg C \mid U \mid K\rangle \quad \cdots \quad \langle S, v_n : C, v_n : \Box\neg C, S^M_{x\to v_n}, x : \neg\Box\neg C \mid U \mid K\rangle}\ (\Box^-)$$

$$\text{if } \nexists u \text{ s.t. } \{u : C, u : \Box\neg C, S^M_{x\to u}\} \subseteq S \qquad \forall v_i \in \mathcal{D}(\mathbf{B}), x \neq v_i$$

$$\frac{\langle S \mid U \mid K\rangle}{\langle S, x : \Box\neg C \mid U \mid K\rangle \qquad \langle S, x : \neg\Box\neg C \mid U \mid K\rangle}\ (cut) \quad \text{if } x : \neg\Box\neg C \notin S \text{ and } x : \Box\neg C \notin S,\ C \in \mathcal{L}_{\mathbf{T}},\ x \in \mathcal{D}(\mathbf{B})$$

$$\frac{\langle S, x : \exists R.C \mid U \mid K\rangle}{\langle S, x \xrightarrow{R} v_1, v_1 : C \mid U \mid K\rangle \quad \langle S, x \xrightarrow{R} v_2, v_2 : C \mid U \mid K\rangle \cdots \langle S, x \xrightarrow{R} v_n, v_n : C \mid U \mid K\rangle}\ (\exists^+) \quad \forall v_i \in \mathcal{D}(\mathbf{B})$$