(This is still leaving out initialization-state for simplicity)

$\boxed{\Delta \;\; \mathbf{ctx}}$

$$\frac{}{\cdot \;\; \mathbf{ctx}} \qquad \frac{\Delta \;\; \mathbf{ctx}}{\Delta, \rho \;\; \mathbf{ctx}} \qquad \frac{\Delta \;\; \mathbf{ctx} \qquad \Delta \vdash \sigma \;\; \mathbf{stack}}{\Delta, \alpha_{n,\sigma} \;\; \mathbf{ctx}} \qquad \frac{\Delta \;\; \mathbf{ctx} \qquad \Delta \vdash \sigma \;\; \mathbf{stack}}{\Delta, \ell_\sigma \;\; \mathbf{ctx}}$$

$$\frac{\Delta \;\; \mathbf{ctx} \qquad \Delta, \sigma \vdash \ell_1 \;\; \mathbf{lifetime} \qquad \Delta, \sigma \vdash \ell_2 \;\; \mathbf{lifetime}}{\Delta, \ell_1 <:_\sigma \ell_2 \;\; \mathbf{ctx}}$$

$\boxed{\Delta \vdash \sigma \;\; \mathbf{stack}}$

$$\frac{}{\Delta \vdash \texttt{nil} \;\; \mathbf{stack}} \qquad \frac{\rho \in \Delta}{\Delta \vdash \rho \;\; \mathbf{stack}} \qquad \frac{\Delta \vdash \sigma \;\; \mathbf{stack} \qquad \Delta, \sigma \vdash \tau \;\; \mathbf{type}}{\Delta \vdash \tau :: \sigma \;\; \mathbf{stack}} \qquad \frac{\Delta \vdash \sigma \;\; \mathbf{stack}}{\Delta \vdash \ell :: \sigma \;\; \mathbf{stack}}$$

$\boxed{\Delta, \sigma \vdash \ell \;\; \mathbf{lifetime}}$

$$\frac{\Delta, \sigma \vdash \ell \;\; \mathbf{lifetime}}{\Delta, \_ :: \sigma \vdash \ell \;\; \mathbf{lifetime}} \qquad \frac{\ell_\sigma \in \Delta}{\Delta, \sigma \vdash \ell_\sigma \;\; \mathbf{lifetime}} \qquad \frac{}{\Delta, \ell :: \sigma \vdash \ell \;\; \mathbf{lifetime}}$$

$\boxed{\Delta, \sigma \vdash \tau \;\; \mathbf{type}}$

$$\frac{\Delta, \sigma \vdash \tau \;\; \mathbf{type}_n}{\Delta, \sigma \vdash \tau \;\; \mathbf{type}}$$

$\boxed{\Delta, \sigma \vdash \tau \;\; \mathbf{type}_n}$

$$\frac{\Delta, \sigma \vdash \tau \;\; \mathbf{type}_n}{\Delta, \_ :: \sigma \vdash \tau \;\; \mathbf{type}_n} \qquad \frac{\alpha_{n,\sigma} \in \Delta}{\Delta, \sigma \vdash \alpha_{n,\sigma} \;\; \mathbf{type}_n} \qquad \frac{}{\Delta, \sigma \vdash \texttt{int} \;\; \mathbf{type}_4} \qquad \frac{}{\Delta, \sigma \vdash \texttt{void}_n \;\; \mathbf{type}_n}$$

$$\frac{\Delta, \sigma \vdash \tau \;\; \mathbf{type}}{\Delta, \sigma \vdash \sim \tau \;\; \mathbf{type}_4} \qquad \frac{\Delta, \sigma \vdash \ell \;\; \mathbf{lifetime} \qquad q \;\; \mathbf{qualifer} \qquad \Delta, \sigma \vdash \tau \;\; \mathbf{type}}{\Delta, \sigma \vdash \& \ell \; q \; \tau \;\; \mathbf{type}_4}$$

$$\frac{\Delta, \sigma \vdash \tau_1 \;\; \mathbf{type}_{n_1} \qquad \dots \qquad \Delta, \sigma \vdash \tau_k \;\; \mathbf{type}_{n_k}}{\Delta, \sigma \vdash [\tau_i]_{i \in \{1 \dots k\}} \;\; \mathbf{type}_{n_1 + \dots + n_k}} \qquad \frac{\Delta, \sigma \vdash \tau_1 \;\; \mathbf{type}_n \qquad \dots \qquad \Delta, \sigma \vdash \tau_k \;\; \mathbf{type}_n}{\Delta, \sigma \vdash \langle \tau_i \rangle_{i \in \{1 \dots k\}} \;\; \mathbf{type}_{4+n}}$$

$\boxed{\Delta, \sigma \vdash \ell_1 <: \ell_2}$

$$\frac{\Delta, \sigma \vdash \ell_1 <: \ell_2}{\Delta, \_ :: \sigma \vdash \ell_1 <: \ell_2} \qquad \frac{\ell_1 <:_\sigma \ell_2 \in \Delta}{\Delta, \sigma \vdash \ell_1 <: \ell_2} \qquad \frac{\Delta, \ell_1 :: \sigma \vdash \ell_2 \;\; \mathbf{lifetime}}{\Delta, \ell_1 :: \sigma \vdash \ell_1 <: \ell_2}$$