$$S = -\frac{1}{4\pi\alpha'} \int\limits_{d\sigma}^{0|\ell} \int\limits_{d\tau} \mathcal{L}$$

$$\text{extended Lagrangian } \overbrace{h{:}X}^{\eta} = \overline{\det h}^{\;1/2}\, h^{\alpha\beta}\, \underbrace{\partial_\alpha X^\mu}\, \eta_{\mu\nu}\, \underbrace{\partial_\beta X^\nu}$$

symmetries

$$\text{diff lical } \begin{cases} \overbrace{\mathsf{b} \ltimes X}^{\nu} & = \mathsf{b}^{\alpha} \underbrace{\partial_\alpha X^\nu} \\ \overbrace{\mathsf{b} \ltimes h}^{\gamma\delta} & = \mathsf{b}^{\alpha} \underbrace{\partial_\alpha h^{\gamma\delta}} - h^{\gamma\alpha} \underbrace{\partial_\alpha \mathsf{b}^{\delta}} - \underbrace{\partial_\alpha \mathsf{b}^{\gamma}} h^{\alpha\delta} \\ \mathsf{b} \ltimes \overline{\det h}^{\;1/2} & = \partial_\alpha \underbrace{\mathsf{b}^{\alpha} \overline{\det h}^{\;1/2}} \end{cases}$$

$$\text{Weyl lical } \begin{cases} \overbrace{X \rtimes \omega}^{\mu} & = 0 \\ \overbrace{h \rtimes \omega}^{\alpha\beta} & = h^{\alpha\beta} \omega \end{cases}$$

$$\text{Poin global } \begin{cases} \overbrace{X \rtimes \lrcorner : \mathsf{L}}^{\nu} & = X^{\mu}{}_{\mu} \lrcorner^{\nu} + \mathsf{L}^{\nu} \\ h \rtimes \lrcorner : \mathsf{L} & = 0 \end{cases}$$