Let $S$ and $T$ be strings. Let $n$ and $m$ be such that

$n, m: 0...\leftrightarrow S+1 \land n \leq m$

Design a notation and axiom for a string expression that means a string like $S$ except that the substring of $S$ from index $n$ to index $m$ is replaced by string $T$. If $n=m$ then it is insertion of $T$ at index $n$. If $T=nil$ then it is deletion of the substring from $n$ to $m$. If $n=m=\leftrightarrow S$ then it is appending $T$ to the end of $S$. If $n=m=0$ then it is prepending $T$ to the front of $S$.

This is a generalization of $S<n i$, so I'll use the notation $S<n; m T$. The axiom could be

$S; T; U \leftrightarrow \leftrightarrow S ;.. \leftrightarrow S + \leftrightarrow T \rightarrow V = S; V; U$

or it could be: for $0 \leq n \leq m \leq \leftrightarrow S$

$S<n; m T = S_{0...n}; T; S_{m...} \leftrightarrow S$