Consider a Poisson Point Process of intensity one in the two-dimensional square of side length $n$. In Baik-Deift-Johansson (1999), it was shown that the length of a longest increasing path (an increasing path that contains the most number of points) when properly centered and scaled converges to the Tracy-Widom distribution. Later Johansson (2000) showed that all maximal paths lie within the strip of width $n^{2/3+o(1)}$ around the diagonal with high probability. We consider the length $L(n, w)$ of longest increasing paths restricted to lie within a strip of width $w$ around the diagonal and show that when properly centered and scaled it converges to a Gaussian distribution whenever $w \ll n^{2/3}$. We also obtain tight bounds on the expectation and variance of $L(n, w)$ which involves application of BK inequality and approximation of the optimal restricted path by locally optimal unrestricted path. Based on joint work with Matthew Joseph and Ron Peled.