Let $A = \{a_1 < a_2 < \cdots \}$ be a set of nonnegative integers, and $hA$ be the set of all sums of $h$ not necessarily distinct elements of $A$. The set $A$ is a \textit{subbasis of order} $h$ if $hA$ contains an infinite arithmetic progression. Furthermore, for any set $P$ of integers, a sequence $B = \{b_1, b_2, \ldots \}$ is defined as a \textit{$P$-perturbation of} $A$ if $b_n - a_n \in P$ for all $n$. Let $\mathbb{Z}_0$ be the set of nonnegative integers. In this paper, we prove that: (i) for any integers $k, l$ with $0 \leq k < l$, every $\{k, l\}$-perturbation of $\mathbb{Z}_0$ is a subbasis of order 2; (ii) for every positive integer $k$, every $\{0, 3k - 1, 3k\}$-perturbation of $\mathbb{Z}_0$ is a subbasis of order 4. This extends a result of John R. Burke and William A. Webb [1]. Related conjectures are also posed in the paper.

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