$$\left[\begin{array}{c|c|c|c|c|c|c} 1 & 0 & -1 & 0 & -1 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & -1 & 0 & 1 & 1 \end{array}\right]$$