

$$\begin{array}{cccccc}
 \tilde{A}_{11} & \tilde{A}_{12} & 0 & 0 & 0 & \dots & 0 \\
 \tilde{A}_{21} & \tilde{A}_{22} & \tilde{A}_{23} & 0 & 0 & \dots & 0 \\
 0 & \tilde{A}_{32} & A_{33} & A_{34} & A_{35} & \dots & A_{3N} \\
 0 & 0 & A_{43} & A_{44} & A_{45} & \dots & A_{4N} \\
 0 & 0 & A_{53} & A_{54} & A_{55} & \dots & A_{5N} \\
 \vdots & \vdots & \vdots & \vdots & \vdots & \ddots & \vdots \\
 0 & 0 & A_{N3} & A_{N4} & A_{N5} & \dots & A_{NN}
 \end{array}
 \longrightarrow
 \begin{array}{cccccc}
 \tilde{A}_{11} & \tilde{A}_{12} & 0 & 0 & 0 & \dots & 0 \\
 \tilde{A}_{21} & \tilde{A}_{22} & \tilde{A}_{23} & 0 & 0 & \dots & 0 \\
 0 & \tilde{A}_{32} & \tilde{A}_{33} & k & 0 & \dots & 0 \\
 0 & 0 & k & \tilde{A}_{44} & \tilde{A}_{45} & \dots & \tilde{A}_{4N} \\
 0 & 0 & 0 & \tilde{A}_{54} & \tilde{A}_{55} & \dots & \tilde{A}_{5N} \\
 \vdots & \vdots & \vdots & \vdots & \vdots & \ddots & \vdots \\
 0 & 0 & 0 & \tilde{A}_{N4} & \tilde{A}_{N5} & \dots & \tilde{A}_{NN}
 \end{array}$$