$$\frac{1}{\sqrt{8}}\begin{bmatrix} 2 & 0 & 2 & 0 \\ -\sqrt{3} & 1 & \sqrt{3} & 1 \\ 0 & -2 & 0 & 2 \\ 1 & \sqrt{3} & -1 & \sqrt{3} \end{bmatrix}\begin{bmatrix} {\phi^0}_{i,2j} \\ {\phi^1}_{i,2j} \\ {\phi^0}_{i,2j+1} \\ {\phi^1}_{i,2j+1} \end{bmatrix} = \begin{bmatrix} {\phi^0}_{i-1,j} \\ {\phi^1}_{i-1,j} \\ {\psi^0}_{i-1,j} \\ {\psi^1}_{i-1,j} \end{bmatrix} \tag{1}$$

$$\begin{bmatrix} B_1 \\ B_2 \\ \vdots \end{bmatrix} = \begin{bmatrix} E_1 \\ E_2 \\ \vdots \end{bmatrix} + \begin{bmatrix} k_{11} & k_{12} & \cdots \\ k_{21} & k_{22} & \cdots \\ \vdots & \vdots & \ddots \end{bmatrix}\begin{bmatrix} B_1 \\ B_2 \\ \vdots \end{bmatrix} \tag{2}$$