

$$\underbrace{\left[ \begin{array}{cccccccccccc}
 \dots & 1 & & & & & & & & & & \\
 & & 1 & & & & & & & & & \\
 & & & \ddots & & & & & & & & \\
 & & & & 1 & & & & & & & \\
 & & & & & 0 & & & & & & \\
 & & & & & & 1 & & & & & \\
 & & & & & & & 1 & & & & \\
 & & & & & & & & \ddots & & & \\
 & & & & & & & & & 1 & & \\
 & & & & & & & & & & 0 & \\
 & & & & & & & & & & & 1 \\
 & & & & & & & & & & & \ddots
 \end{array} \right]}_n$$

The diagram shows an  $n \times n$  matrix with a block structure. The top-left  $p \times p$  block is an identity matrix. The top-right  $p \times d$  block is a lower triangular matrix with ones on the diagonal and zeros elsewhere. The bottom-left  $d \times p$  block is a lower triangular matrix with ones on the diagonal and zeros elsewhere. The bottom-right  $d \times d$  block is a lower triangular matrix with ones on the diagonal and zeros elsewhere. The matrix is symmetric.