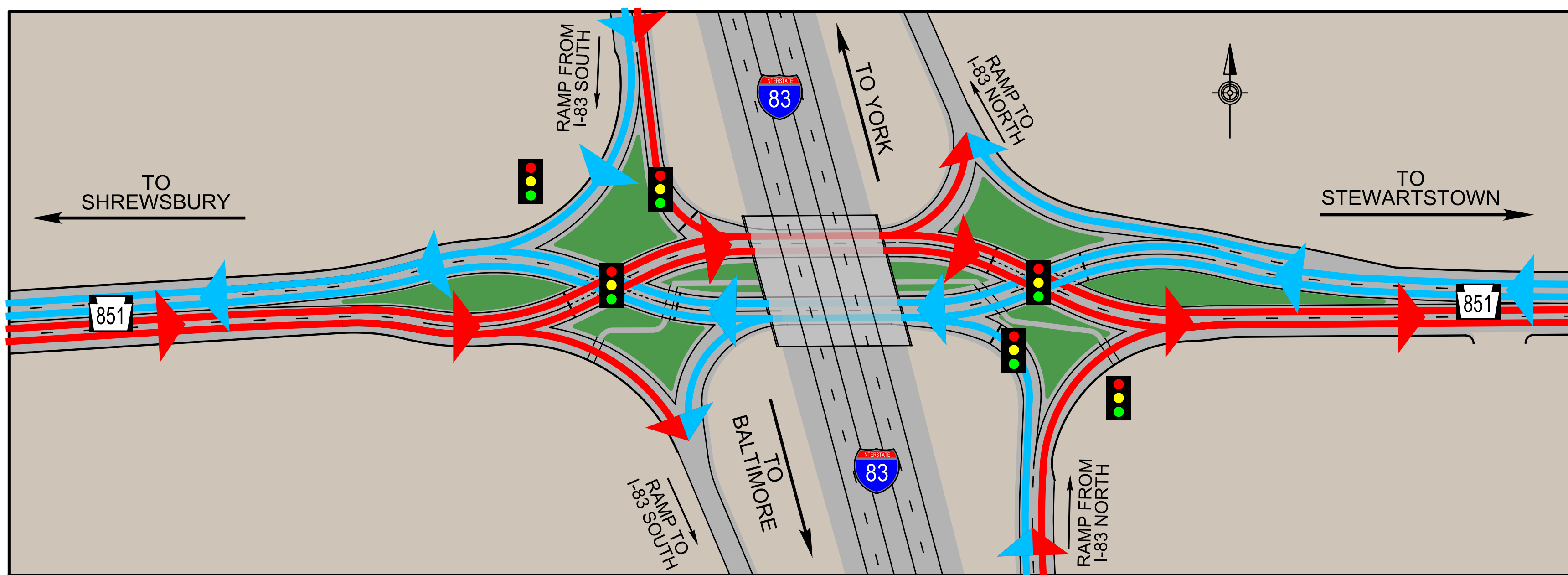


HOW A DIVERGING DIAMOND WORKS

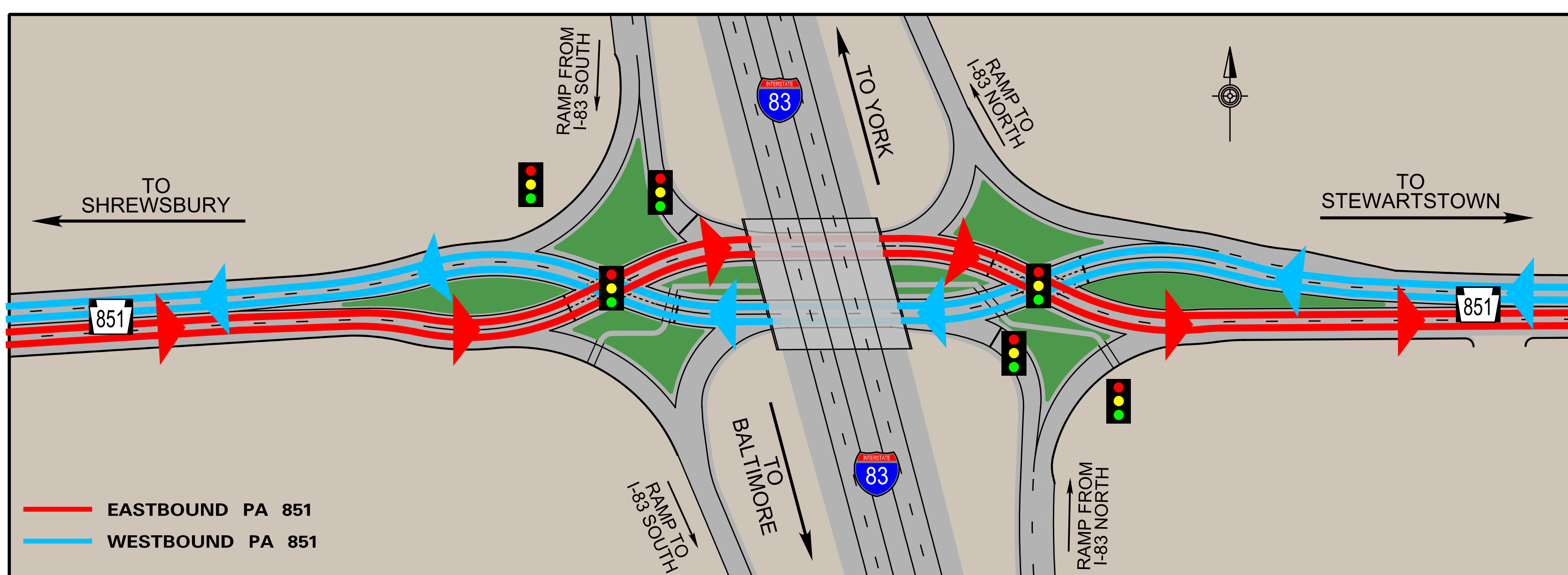
OVERVIEW



A diverging diamond interchange (DDI) is unique from a standard diamond interchange in that the side road traffic (PA 851), crosses over to the left side of the road at a signalized intersection prior to the bridge. This allows direct left turns from the off-ramps to merge and allows for a direct left turn on to the on-ramp. The side road (PA 851) traffic crosses back to the right side of the road at a signal beyond the bridge.

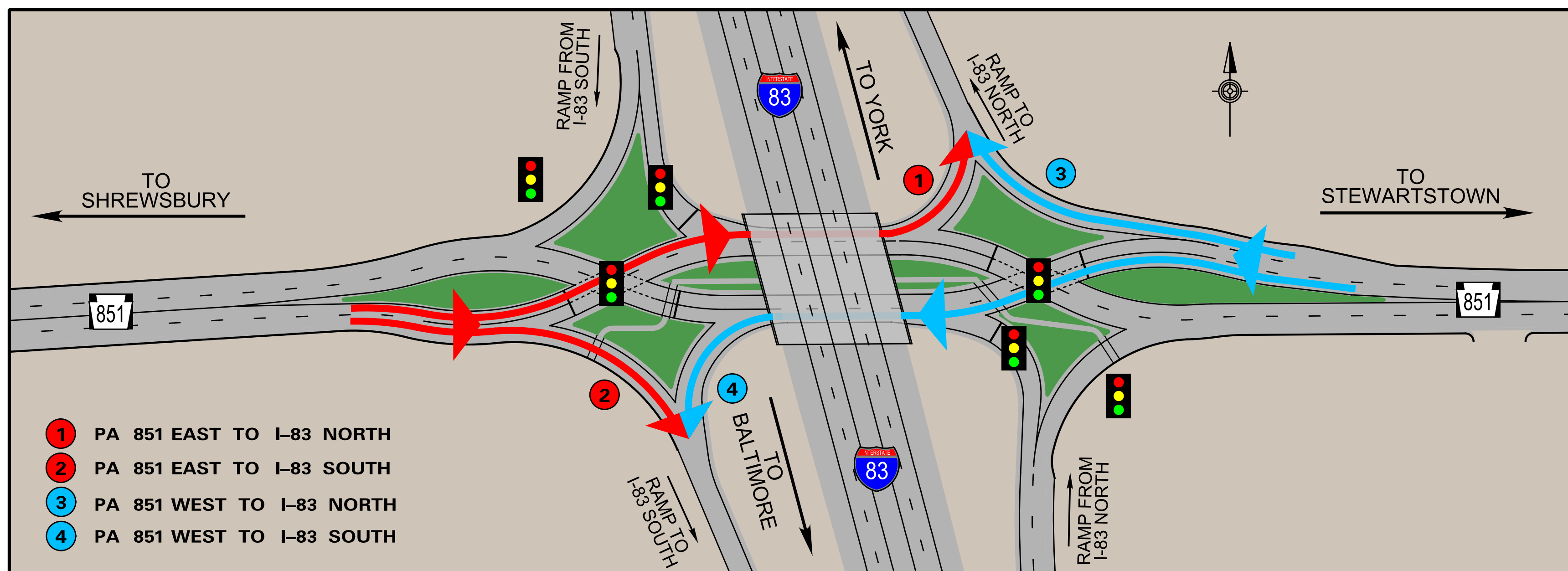
The DDI configuration has an operational advantage over the standard diamond in that it has only 2 phases per signal cycle versus 3 phases. This allows the DDI to provide more green time to traffic alleviating congestion. Additionally, because of the direct left turns, there are fewer conflict points than a standard diamond interchange which reduces the crash rate and crash severity.

PA 851 CROSS TRAFFIC



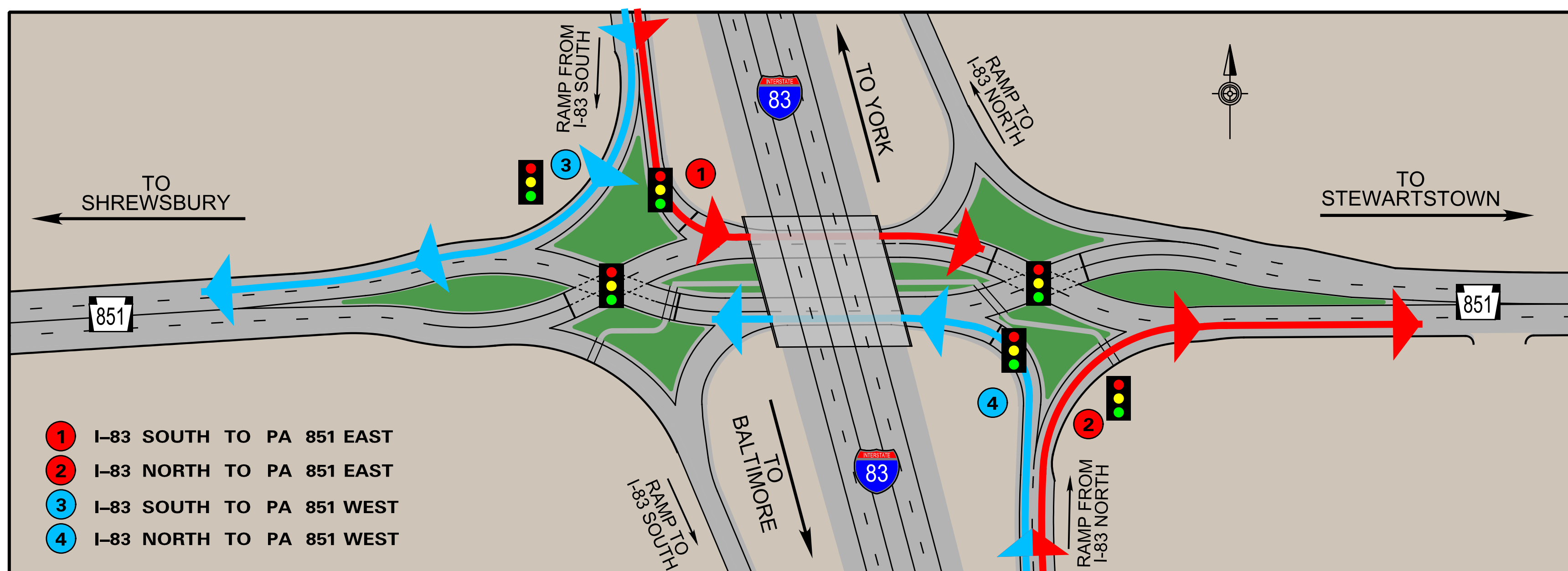
PA 851 traffic crosses over to the left side of the road at a signal prior to the bridge. It crosses back to the right side at a signal beyond the bridge.

PA 851 TO I-83 MOVEMENTS



Traffic from PA 851 can turn right prior to the first signal to enter the on-ramp (movements 2 & 3) or turn left immediately following the bridge (movements 1 & 4).

I-83 TO PA 851 MOVEMENTS



Traffic from the off-ramps can turn right at a signal directly on to PA 851 (movements 2 and 3) or turn left at a signal directly on to PA 851 (movements 1 & 4).