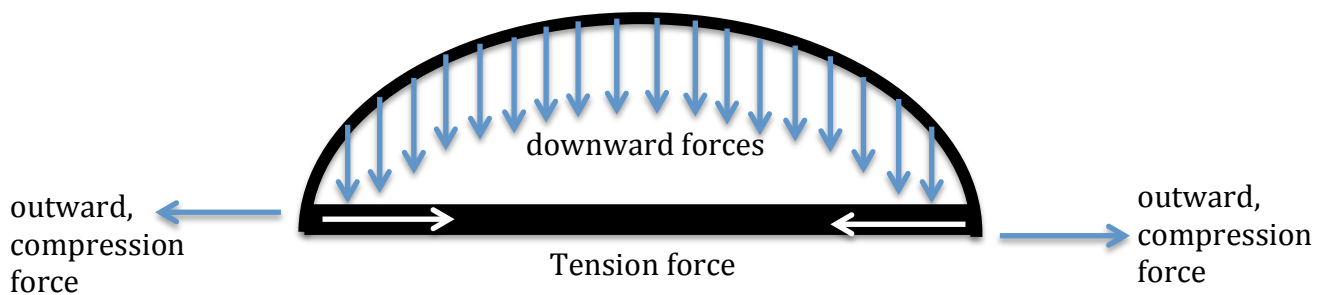


# Tied Arch or Bowstring

Just think of a archery bow and you have a model of a tied arch. Simply connect the bottom edges of an arch and it is a tied arch.

A typical arch would have outward, lateral forces but a tied arch places the **bottom tie in TENSION** to resist those outward forces.



The downward forces on the arch from the cars and traffic on the deck of the bridge cause the arch to want to flatten out which produces the outward force. The bottom tie of the tied arch resists this through TENSION.