BRIDGES

DAY 1

BEYOND THE ROAD
Bridges

Bridges are structures that allow people and goods to cross a body of water, open space, or even over other roads to avoid traffic jams.
Arch bridges have a curved design and are made with wood, stone, concrete and steel.
Arch bridges carry the road with an arch that is either directly below the road or is on either side of the bridge deck.
Truss bridges are a structure connected by elements that form triangles.
A truss bridge has exposed metal beams built in triangular configuration.
FS Slab
Beam bridges have a simple design where a horizontal beam rests on vertical piers.
Beam and girder bridges have long parallel beams that are under the bridge deck.
Quick Video Facts

- Texas built 15,000 bridges, which is two bridges per day for twenty years – that is a lot of construction!
- Bridges were built in response to a boom after World War II.
- Better roads and bridges were needed to move more people and goods, since current roads were unsafe.
- More roads meant more traffic, people, and travel.
- TxDOT had to think outside the box to design new bridges and help connect communities.
did you learn from that video
THE TEXAS HIGHWAY DEPARTMENT BUILT

15,000

AND

new bridges
(1945 - 1965)

enough Farm to Market Roads
to cross the U.S. 12 times
(1948 - 1965)
Roads and bridges weren’t always as smooth as they are today.

Texas engineers tried new ideas to build bigger and stronger bridges.

Welding is a way to stick two pieces of metal together using a very hot flame or electricity. This method of construction was a new technique used after the war. It was made possible by many soldiers returning home who knew how to weld from building steel ships and could put their skills to use.

Unfortunately, steel was hard to come by since it was used so much during World War II. Engineers explored concrete construction for new bridges.

Engineers really thought outside the box. They used neoprene pads to cushion bridges – the same material used in scuba suits and Band-Aids!
Let’s try an experiment to understand how concrete works and how it will take on any form you put it in.