US 10 Over North Oconee River
Team Members: Avni Patel, Grant Clarke, & Nawoo Hong
Faculty Advisor: Dr. Chorzepa

Existing Bridge

The above pictures show the existing conditions of the bridge. The bridge was created in 1937 and then expanded in 1975 which is why there are two different types of intermediate bents in the bridge. Due to wear on the bridge it is estimated the bridge has about 5 years before it becomes unstable. The existing bridge has several incidents of pedestrian accidents due to the narrow lanes and the lack of continuous sidewalk for pedestrians.

Stakeholders

This bridge is a vital part of Athens as it is located in downtown Athens. The bridge not only helps Bulldawg fans get to the stadium but also provides access to the Greenway Trails, Nu’ci’s Restaurant, and the River Apartments and the Flats at Carrs Hill. The team is working to improve the bridge and add sidewalks to the bridge as the bridge has a lot of pedestrian traffic.

Solution

ANW Engineers have designed a replacement bridge and outlined a staged construction approach. Initially, the bridge will be divided down the median, with the older half demolished and rebuilt first. Upon completion, traffic will be rerouted onto the new half while the remaining original half is replaced. Once both halves are rebuilt, they will be joined, restoring normal traffic flow with two lanes in each direction. To accommodate the traffic shift, speed limits will be reduced in advance, with two speed reductions implemented before merging onto the new half of the bridge: first to 35 mph after the Oak Street and S Poplar Street intersection, and then to 25 mph before lane mergers. The design also includes sidewalks on both sides of the road as well as expansion of the lanes to increase safety.

Vicinity Map

Sponsor/Client: Gresham Smith/ Brendon Mack