

Major Project Constraints

I-40 On-Ramp Country Club Team

- **Limited Space and Right of Way**
 - The first constraint that the team came across is the limited space adjacent to the project site. The client has requested that the team attempt to minimize acquisition of right of way to minimize cost (see Budget/Cost).
- **Drainage and Runoff**
 - As with any civil engineering project, design of a proposed infrastructure must take into account precipitation events that the proposed design must be able to accommodate in order to provide public safety and minimal maintenance of the facility. This project will increase the impervious surface area of the project site, which will increase the amount of stormwater runoff.
- **Capacity**
 - Due to limited space available adjacent to the project site, capacity of the proposed roadway is desired to deliver an exceptional increase in capacity with respect to the current roadway. Design must consider the placement of the proposed roadway while determining the most economical option.
- **Budget/Cost**
 - Finally, the ultimate deciding factor of this project boils down to the available budget that the Arizona Department of Transportation decides to dedicate to this project, provided that the design concept report is determined to be a feasible project. The team has been tasked to minimize cost to the best of the team's judgment. A lower cost combined with implementation of this project will save the Arizona Department of transportation budget resources while improving the performance of the traffic facility.