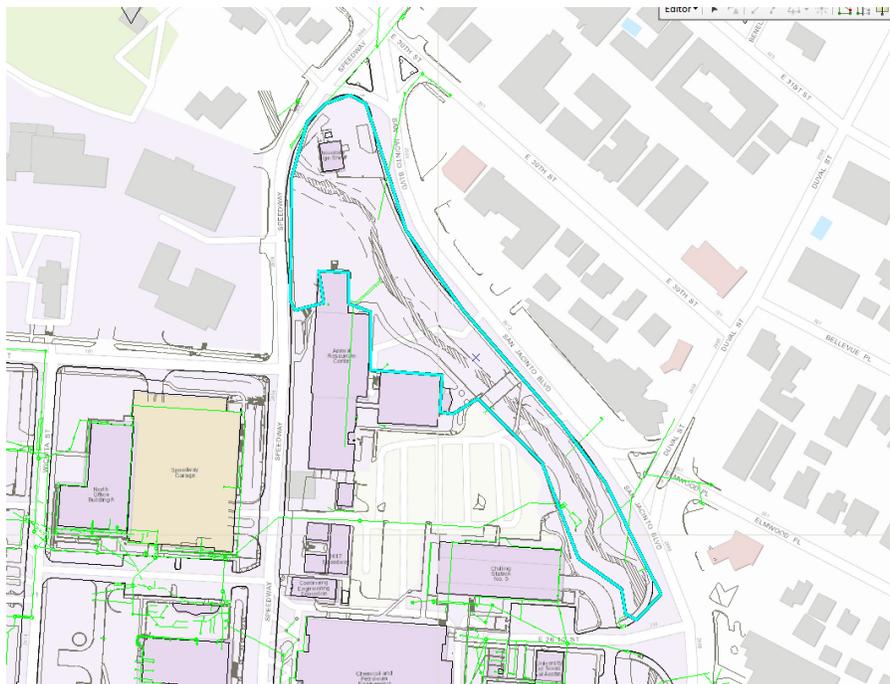


CE 365K Term Project Proposal

Rehabilitation of Waller Creek

Our group is interested in focusing our term project on the section of Waller Creek just north of staff parking lot 53 on the UT Austin campus. We would like to first present several alternatives for clearing the creek, which is highly eroded and partially blocked in areas, and methods that would prevent this type of damage from occurring again. From there, we are interested in designing detention ponds along the creek that would help prevent future erosion and keep storm water runoff from potentially damaging the creek further. We have chosen this site in particular because of the large amount of rehabilitation this portion of the creek needs and to make sure that the downstream flow from this area is more controlled. The map provided below gives a general area of study that we had in mind. However, we are willing to focus on specific areas within this region that would need more work than others.



Prior to the design stage of the project, initial research and data gathering will need to be conducted. We will need to develop a working map of the topography of the area so that we can identify existing drainage features. We will also need to research different methods of preventing erosion and damage along creek beds, including types of vegetation that prevent this and manmade alternatives (netting, retaining walls, etc.) . Before simulating any of our design, we will need to gather data regarding the average rainfall in our design area and the amount of storm water runoff that it contributes to this section Waller Creek. Other information we will need to gather would be potential locations of detention ponds along our design region. Once we have gathered this initial information, we can begin to create our design and simulate storm water runoff into this area of Waller Creek.

Tools that we will use in the project design and simulation:

- ArcGIS- To map the design area of interest
- HEC-HMS- To map the stormwater flow into our design area
- PondPack- To model our stormwater flow and develop detention ponds in our design solution.

To effectively coordinate our project, Rachel will be in charge of the research regarding erosion control and the stormwater runoff in the area, as well as developing our region of interest in ArcGIS. Aurora will develop the model in HEC-HMS and create the storm water simulation needed to develop our design, and Joanne will run the simulations with our new design to determine the effectiveness of our proposed changes.