

Blue Devil Design Build (BDDDB) designed the State Fair Transit Center in Detroit, Michigan. This transit center will serve as a transportation hub for Metro Detroit, offering transit by bus and train. The site is located at the southeast corner of the intersection of 8 Mile Road and Woodward Avenue, which held the Michigan State Fair for over a century. The team designed a new transit center building, parking lots and roadways, and restoration of historical structures on the site.

In the Detroit area, transportation options are limited. There is a need for more transportation options that extend into more areas of the community. The team analyzed the project to be conscious of the global, environmental, health, safety, and economic impacts of the project. Potential impacts were kept in mind during all stages of the project to best serve the public.

BDDDB worked as a team to address the structural, geotechnical, transportation, water resources, environmental, and construction engineering aspects of the project. The structural lead was responsible for the layout, load analysis, and structural design of the transit center structure. The geotechnical lead focused on analyzing soil borings to find soil properties and design the footings for the transit center structure. The transportation lead designed the parking lots, roadways, pavement sections, and traffic signals. The water resources and environmental lead conducted an environmental site assessment, created a pipe network, and made a stormwater management plan. The construction lead was responsible for creating a project schedule, estimate, SUE plan, TTC plan, safety plan, and track LEED credits.

Throughout the two semester project, several presentations and written reports were prepared by the team to share the progress of the project. Four presentations were given to the faculty and followed by valuable questions and feedback for the team. Three individual reports and three team reports were completed. Two poster presentation sessions were held for faculty and an advisory board consisting of licensed professional engineers that also provided feedback for the team. Two industry breakout sessions were also held to allow the students to break into groups based on subdiscipline, present specific subdiscipline progress, and ask questions to licensed professional engineers and other professionals.