BYU | CIVIL & ENVIRONMENTAL ENGINEERING IRA A. FULTON COLLEGE



CEEn-2017CPST- 010

Materials Testing Database and Web Development Project

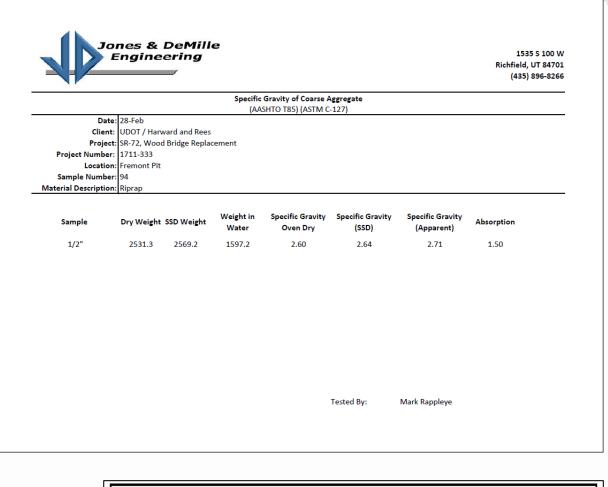
Team members: Micklane Farmer, Riley Vane, and Olivia Sorenson

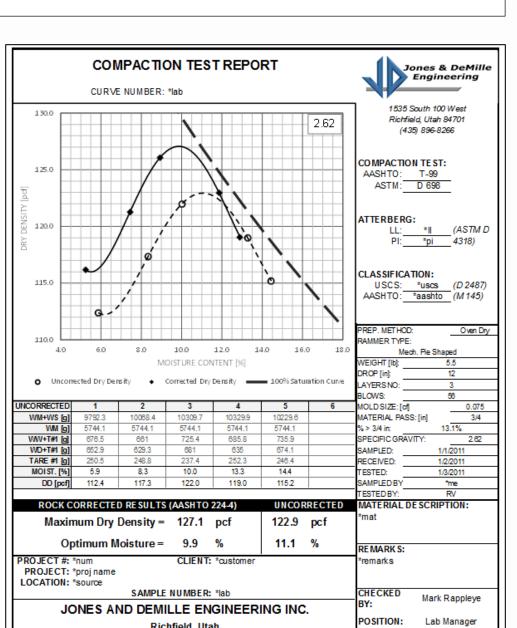
April 18, 2018

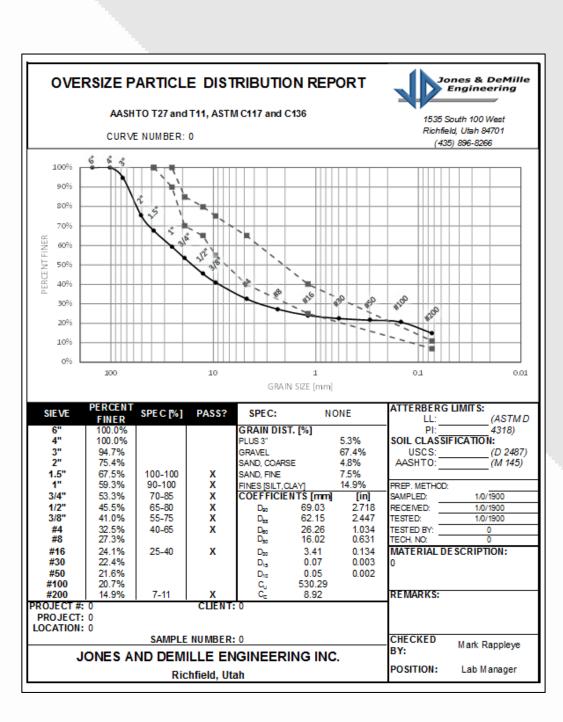
Project Parameters

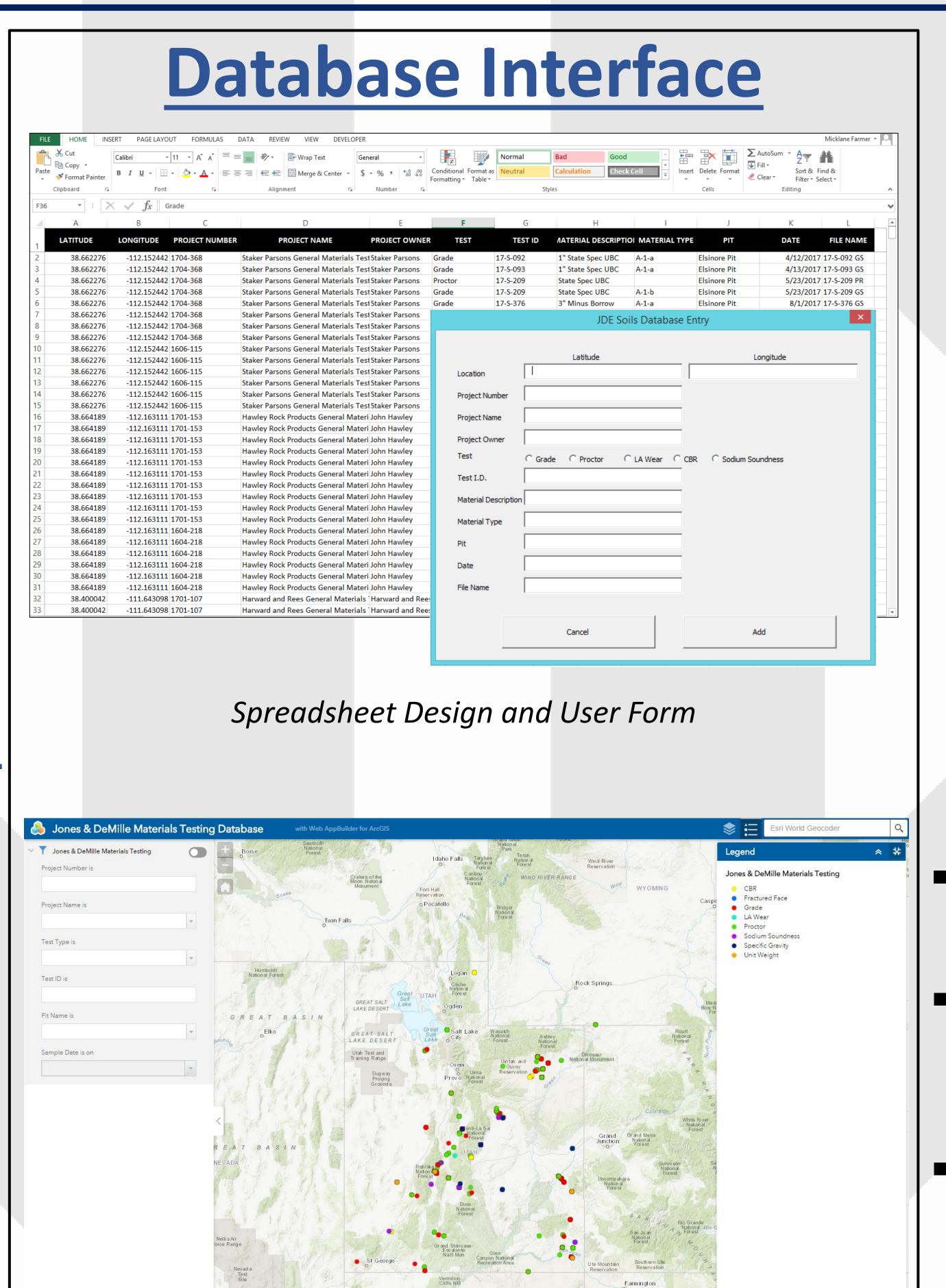
The client, Jones & DeMille Engineering, tasked three of their summer interns to develop a web-based materials testing geodatabase for its materials lab. The database will allow the lab manager to look up different tests performed at certain locations, and construction managers to look up reports in the field. In addition, new lab test spreadsheets were developed for Jones & DeMille's remote labs located throughout the state.

New Spreadsheet Designs

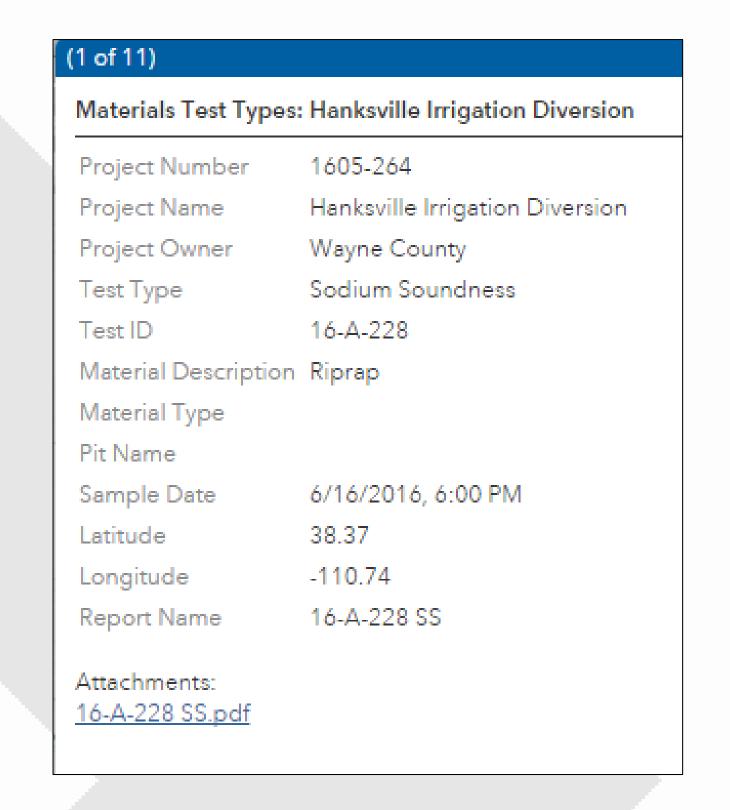








Mapping Interface



User Form on ArcGIS Online

Summary of Tasks Completed

- A database spreadsheet was developed to input test results from previous years
- A user-form was created for the lab manager to continue inputting data correctly into the database
- Using GIS software, the team integrated the test results into a geodatabase on ArcGIS online for a more interactive and visual web-app
- Spreadsheets for proctor, gradation, and specific gravity were redesigned for remote lab locations