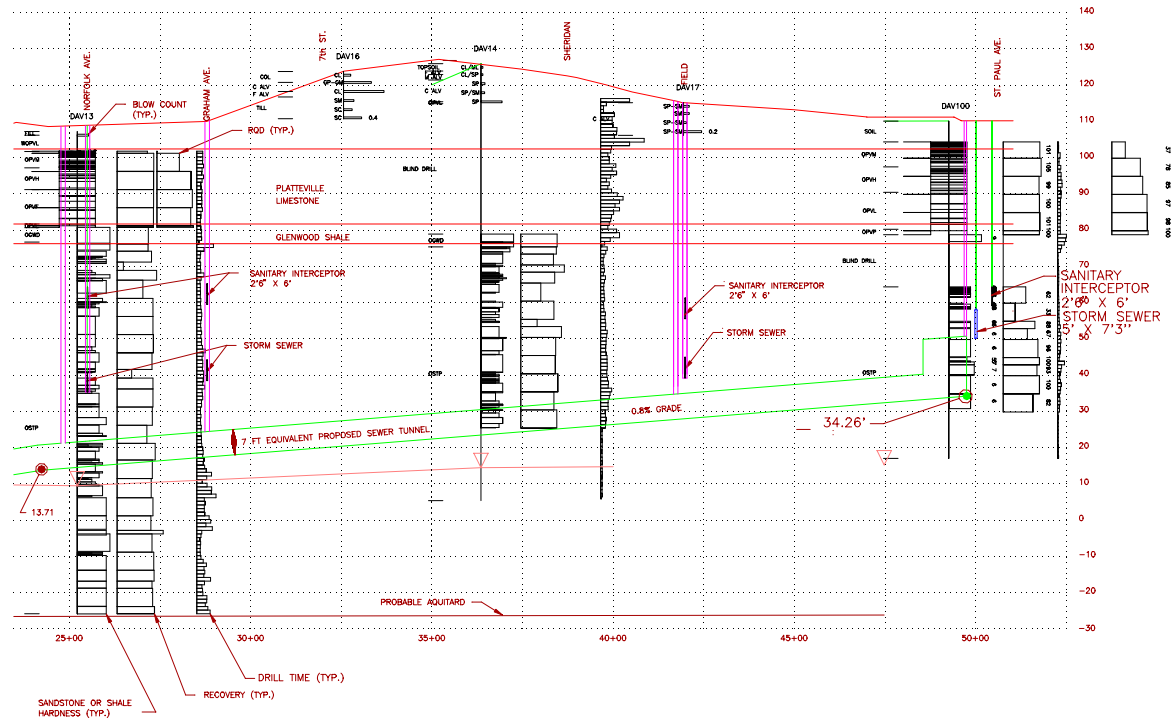


Geotechnical Data Management

CNA organizes the large amounts of geotechnical data from test borings in such a manner to assist our design engineers and the contractor to better understand the geology of the alignment. Display of this information typically takes the form geologic profiles and sections along the alignment, showing soil and origin, blowcounts, water elevations, RQD, recovery and rock hardness.



This process was automated by utilizing CADD programs. First, the information from each boring is entered into a database. Then, a FORTRAN program written by CNA staff converts the database information into DXF files that can be directly used by AutoCad. The conversion program allows the user to choose what parts of the borehole data to plot, and to set variables such as text size, horizontal to vertical aspect ratio, blowcount scale, etc.

The information for each boring is automatically drawn at the correct station and elevation and is annotated with the boring name and offset. Once these files are read into the CADD system, the geotechnical data contained on the test boring logs is graphically displayed and the engineer may add the ground surface, soil layering, pipe elevation and drawing borders.

A portion of the final plot of the test boring data is shown. Each sheet contains the following information: Test boring location and elevation, soil type versus depth, water level elevation, blowcount data bars, ground surface elevation, RQD, recovery, rock hardness, and proposed pipe elevation.