

CASE STUDY

QUANTIFYING DRILL AND BLAST NEEDS WITH DYNOCONSULT

BACKGROUND

PROJECTING BLASTING REQUIREMENTS FOR A PIPELINE REROUTING PROJECT

A planned 42-mile pipeline rerouting project in Wisconsin needed a way to accurately quantify and plan their drill and blast needs. A pipeline operator for the project had experienced budget deficits and missed deadlines in the past due to greater than anticipated blasting requirements. To avoid similar issues for this project, the operator contracted DynoConsult to provide projected lengths and locations along the planned path of the pipeline that would necessitate trench and/or overburden blasting.

PROJECT GOALS

PROVIDING ACCURATE DATA FOR REDUCED BUDGET DEFICITS AND DELAYS

The goal for this project was for DynoConsult to assess the pipeline project and quantify accurate drill and blast needs by providing data about the areas around the pipeline that would require greater volumes of rock removal. An accurate report would help mitigate delays and budget deficits for the pipeline project.



The Pipeline Project

TECHNOLOGY APPLIED

SURVEYING, DATA COLLECTION, AND CALCULATIONS BY THE DYNOCONSULT TEAM

To execute this pre-work survey, Dyno Nobel traversed the entire planned length of the pipeline observing geology, topography, and road cuts and conducted interviews to identify areas where blasting would be anticipated. The field notes were cross-referenced to geological maps, soil maps, and available borehole sampling to further define and confirm these areas.

Once the locations and lengths were determined, the volumes of rock removal were calculated and provided a degree of confidence rating for the data. The engineer and field supervisor on the project provided information on anticipated needs, including manpower, equipment, explosives, materials, and scheduling. A trench blast design that would match the desired excavation extents was also created within this process.

VALUE ADDED

IMPROVED BUDGETING AND SCHEDULING

The final report detailed areas where additional controls with regards to fly rock and blast induced vibration may be needed. Recommendations were given on what these controls could be and how to implement if used. The customer was pleased with the final report and its value in assisting their planning process in order to control costs, set construction schedules, eliminate unplanned work, and having strategies provided to safely blast in areas of elevated risk.

Knowing this information prior to start of project provided several benefits to the client. This includes a more competitive and efficient procurement process, better budgeting, a more accurate project schedule (which is important with work being scheduled around time constrained, environmentally-sensitive areas), and advance notice of blasting areas with elevated risk profiles.