



Dufresne Group provided civil/site engineering as a subconsultant to Duncan Wisniewski Architects who worked directly for Twin Pines Housing Trust. This phase of work included concept planning in support of a grant funding application submittals. The project included 36 units on about 8 acres of land with access to Route 4 in Woodstock, Vermont. During this initial phase of design, civil grading, site electrical, water distribution, sewer collection, storm sewer collection and treatment, and parking drawings were developed to about the 25% stage to allow cost estimates for the project. DG was challenged by the schedule as the task to produce the design drawings and cost estimate was authorized on August 19 and the finished product was required on September 16 in order to make the funding application deadline. The submittal included 14 drawings, itemized quantities, and unit price cost estimates for the civil/site, and site electrical portion of the project.

Other challenges included design grading of a soccer field as part of the project, underground stormwater treatment and retention chambers, and grading for buildings in areas where the existing site varied between 15 and 25% grade.

DG identified several crucial issues during this initial phase of work that allowed an increased level of detail in the funding request:

- Town requirement for grinding wastewater from the project site
- Town requirement for providing emergency power at an existing Town wastewater pump station
- State requirement for Stormwater treatment and retention components

DG also identified all the local and state permits required for this project and noted the crucial issues that may affect the permitting process. The project is on hold until the funding is identified.