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## **FREEPORT LIVING RETIREMENT COMMUNITY – GREYSTONE FREEPORT LIVING, LLC.**

Freeport, Maine

**Project Duration**  
2005 – 2008

**Key Sevee & Maher Engineers, Inc. Staff**  
John Kennedy, P.E.; Brian Pierce, P.E.;  
Mitchell Elliott, P.E.

### **Other Consultants**

- Royal River Survey (Topographic and Boundary Surveys)
- Terrence J. Dewan & Associates (Land Planning)
- Gawron Turgeon Architects (Building and Landscape Design)
- Woodlot Alternatives, Inc. (Wetlands Delineation)

### **References**

Thomas Ryan 212.649.9797

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## **OVERVIEW**

The Freeport Living Retirement Community project involved the development of a 48+/- acre parcel to provide 155 dwelling units of retirement age housing. The project consists of 63 individual dwelling units in a variety of housing styles including stand alone homes, duplexes, and multiplex cottages; a lodge with 62 units for independent living; and a 30 unit building providing assisted living care. Infrastructure to support the retirement community includes access roads, parking, circulation areas, public sewer and water, and stormwater management facilities.

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## **ACCOMPLISHMENTS**

Working with Team members, SME's services involved site design and permitting for:

- A 33,000+/- square-foot independent living building; an 11,000+/- square-foot assisted living building; and 34 cottages;
- 4,500+/- linear feet of streets and sidewalk; parking areas for up to 88 vehicles; and circulation and loading areas for the independent living building;
- 4,600+/- linear feet of gravity collection sewer, a below-ground pumping station, and 900+/- linear feet of force main;



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- 3,800+/- linear feet of water distribution piping, fire hydrants and a water pressure booster pump station;
  - A stormwater management system including eleven under-drained soil filters to provide treatment of surface water runoff; a pond to provide stormwater detention; and 3,950 linear feet of culverts, storm drains, and catch basins for stormwater transport. Stormwater management buffers were also utilized as designated open space with footpaths.

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## **SITE DEVELOPMENT AND DESIGN CHALLENGES**

The project site offered particular challenges for the design of access roads and building sites that would be suitable for a retirement community. The 48 acre site has a 130+/- foot variation in elevation punctuated with areas of very steep slopes and soils that are generally shallow to bedrock having less than four feet of overburden.

SME worked extensively with the project team (land planner, architect, and owner) to review alternate building sites, roadway alignments, and access alternatives. This process consisted of evaluating potential entry points and roadway locations with the goal of providing a roadway design and distribution of building sites that met the project design criteria while minimizing construction cost. The use of SME software (Autocad supplemented with Carlson Land Development for engineering design) allowed SME to efficiently develop a number of optional alignments, earthwork quantity estimates and opinions of cost within a short timeframe. The goal of each design option was to minimize cuts/fills; minimize rock excavation while recognizing its value as a building material; and minimize the overall area of disturbance.