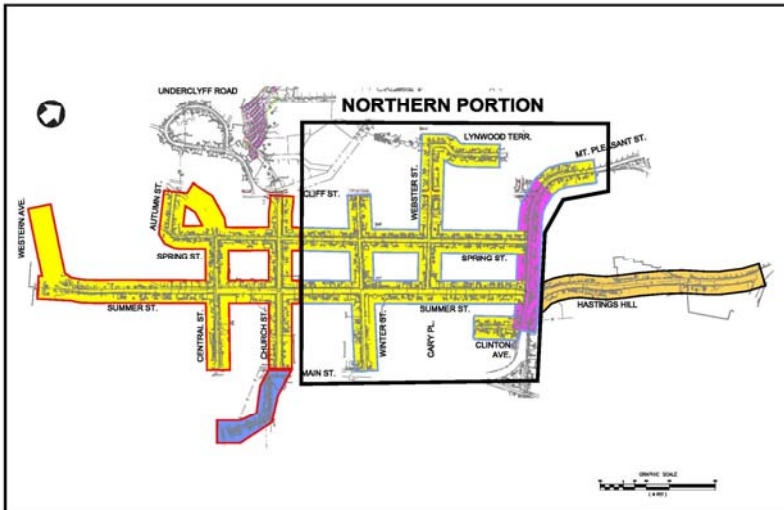


INFRASTRUCTURE IMPROVEMENT- NORTHERN PORTION OF WESTSIDE PROJECT

ST. JOHNSBURY, VERMONT



The Northern Portion of the Infrastructure Improvement Project is the third of three infrastructure improvement projects funded using 70% grant funds provided under the American Recovery and Reinvestment Act (ARRA) by Rural Development of USDA. The project included sewer separation and combined sewer overflow (CSO) elimination work as ordered by the Environmental Protection Agency with recommended water main improvements with complete sidewalk, curb, and roadway reconstruction in a total infrastructure improvement project.

Final design activities were enhanced using Civil 3D® design which allowed for integrated pipe design for water, sewer and stormwater using pipe networks. In addition, the stormwater treatment design analysis was easily performed in Civil 3D® using the storm and sanitary sewer analysis extension. Existing combined sewer was evaluated for use as storm drain using TV inspection. Separate stormwater services were installed to the edge of the right-of-way to allow for homeowner sewer/stormwater separation activities in the future by private landowners.

PROJECT COMPONENTS

- Dufresne Group assisted Town in obtaining **70% grant funds from RD.**
- Dufresne Group estimated construction cost at **\$5,500,000. Low bid was \$5,368,000.**
- DG assisted in obtaining **easements** for project.
- DG created a project homepage for communication of project specifics.
- DG coordinated activities with Four Seasons Neighborhood Organization on design criteria.
- DG completed TV inspection of existing sewers to refine improvements.
- Stormwater system design by DG based on HydroCAD®.
- Water system design by DG based on WaterGEM's®.
- Full depth roadway reconstruction by DG using AutoCAD Civil 3D®.
- Complete sidewalk and curb replacement design by DG using ADA design criteria.
- Temporary water distribution system designed by DG allowed removal of all old water main during construction.
- DG provided coordination with commercial businesses for parking during construction.
- DG designed new stormwater services to edge of ROW.
- Project included 7,900 lf of roadway infrastructure replacement.