

Project Data Sheet 2

Kirkland Hotel

Kingston, NY 2005 - 2007

20,000 sf before --> 20,000 sf renovated

Scope of work:

Historic renovation of c.1899 Tudor style hotel with State Historic Preservation Office grant requirements, was no off-street parking before, decrepit building - project received multiple awards for preservation such as Excellence in Historic Preservation 2008 - Preservation League of New York State

Insulation/Envelope: standard fiberglass insulation, refurbished single pane windows - continuing improvement - interior first floor storm windows soon over existing single pane as required for historic concerns

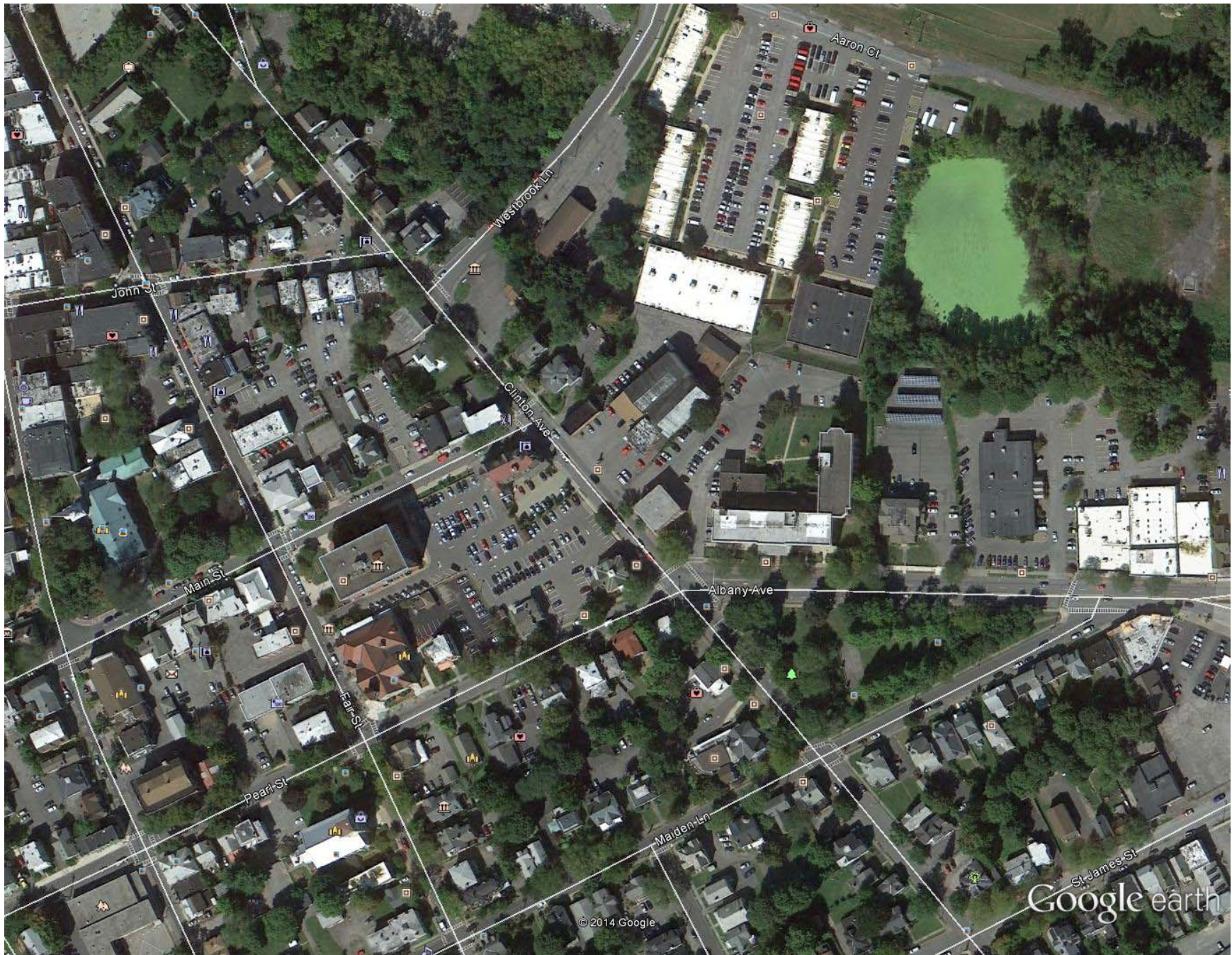
HVAC: geothermal (ground-source) HVAC system with (20) heat pumps and (20) 400' deep closed-loop wells under driveway of permeable pavers - tight site, no space for traditional HVAC units, hydronic feed from geothermal to separate units so only 2" pipes through the historic interior, geothermal as the HVAC solution made the project economically viable

Solar: None, site not suitable

Grants: NYSERDA and others

Cost data: Total utilities per apartment ~ \$65/month
Total costs for building owner ~ \$1000 per month
Total estimated annual fuel savings ~ \$18,000

Builder: RUPCO - Chuck Snyder



Google earth

feet
meters





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A 6435 The Kirkland, Kingston, N. Y.

















Space Available
By Spring 2007

The Historic Kirkland Hotel Building

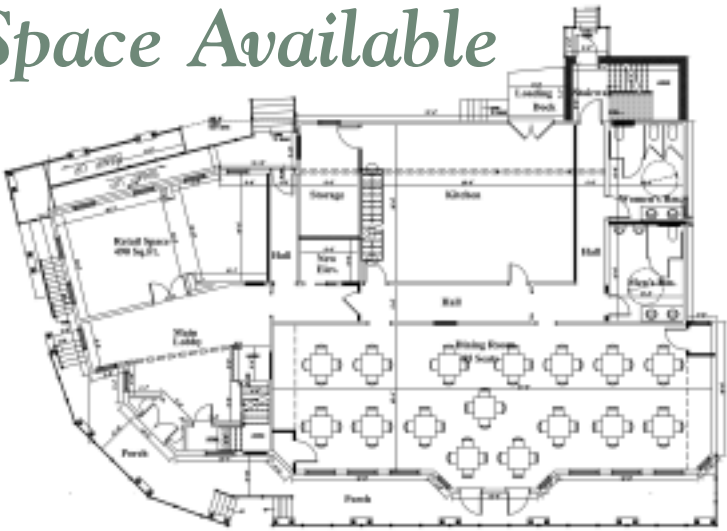
Restaurant Space Available

PREMISES

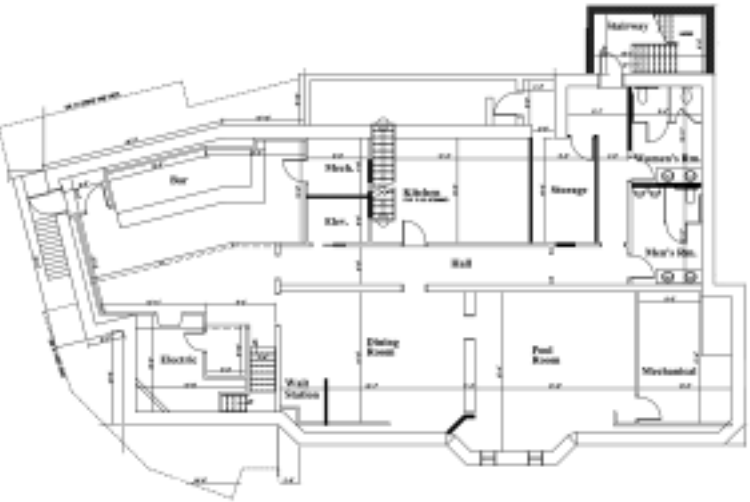
- **First Floor** – 3500 sq. ft.
Restaurant Space, with a potential additional 490 sq ft available
- **Ground Floor** – 2300 sq. ft. Historic Pub, with restored, hand-built wood bar

AMENITIES

- First Floor Restaurant has largest dining room in Uptown Kingston, seating 85
- Pub has historic wood bar, and three dining rooms that lend an intimate feel
- Welcoming wrap around porch on first floor, with potential for al fresco dining
- Modern elevator
- Fully air-conditioned and forced air heat
- High ceilings with ample natural light
- ADA compliant with off-street handicap parking
- Off street delivery area
- Historic lobby
- Excellent frontage on Clinton Ave. – the gateway to the Stockade District
- Potential for signage along Clinton Ave.
- Ample free off-street parking adjacent to building during evenings and weekends.
- Significant potential customer base - located adjacent the Ulster County office building and thousands of occupied office space within a 5 block area



FIRST FLOOR:
Restaurant area with additional space for potential retail/commercial
Also reflects historic lobby area with access to commercial space on upper floors



GROUND FLOOR: Pub area

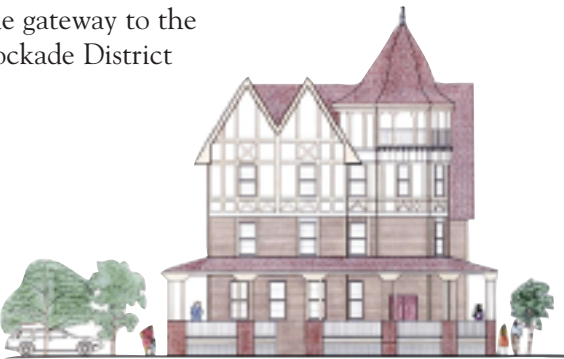
Office Space Available

PREMISES

- **Second Floor**
Up to 3500 sq. ft. available (sub-dividable)
- **Third Floor**
Up to 3500 sq. ft. available (sub-dividable)

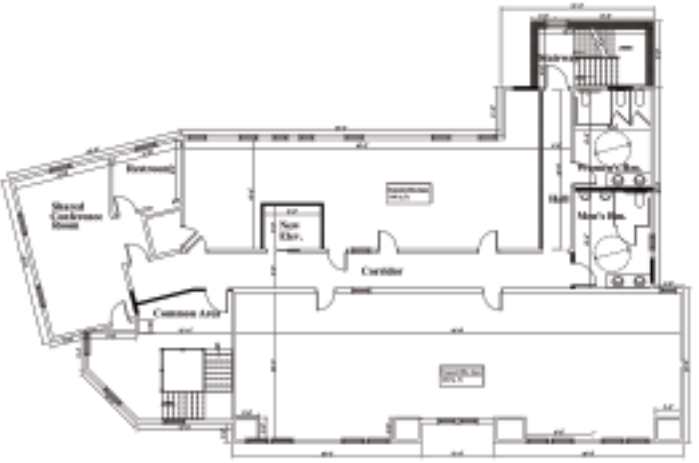
AMENITIES

- Classic Tudor-Revival building with fully renovated modern office space in the stockade historic district
- Modern Elevator
- Building wired for telecom and computer networking/DSL
- Fully air conditioned and forced air heat
- High ceilings with ample natural light
- Possibility of shared conference space
- ADA compliant ; off-street handicap parking
- Historic lobby
- Welcoming wrap around porch on ground level
- Excellent frontage on Clinton Avenue– The gateway to the Stockade District



Clinton Avenue - Side Elevation

SECOND FLOOR:
3500 sq. ft.
sub-dividable office space



THIRD FLOOR:
3500 sq. ft.
sub-dividable office space

AREA DEMOGRAPHICS

- **City of Kingston:**
Population 23,294
- Population of over **45,000** people within a 5 mile radius
- 64% of the population between ages 21 and 75
- Median household income within a 5-mile radius of \$41,338
- More than 35% of the population within the target area having a household income of \$60,000 or more
- Close to **2 million** people reside in the Hudson Valley area within a 50 mile radius

NEARBY LANDMARKS

- Located in Stockade National Historic District
- New York State Senate House State Historic Site
- Oldest corner in America with 4 original Dutch stone houses on each corner
- Uptown shopping district
- 2 miles from NYS Thruway (87)
- Adjacent to Ulster County Municipal Building - site of County offices, UC Motor Vehicle Office and home of Ulster County Legislative Chambers

The Historic Kirkland Hotel



The Historic Kirkland Hotel

Ulster County, Kingston, New York

Background

The Tudor-style Kirkland Hotel, in Kingston, New York, was built in 1899. While it was a landmark at the time, the hotel had been dormant and in disrepair since the 1980s. In 2006, the Rural Ulster Preservation Company (RUPCO) began restoration to return the hotel to its original grandeur.

The Challenge

How can the original charm of an old building, with its single-pane windows and both new and refurbished doors, be maintained while keeping interior temperatures comfortable and affordable? With no available ground space, how can this be done without using large condensers, fuel tanks, or individual, unsightly airconditioning units? The answer: a geothermal heat-pump system.

Geothermal technology has been used successfully for more than 50 years. Recent technology improvements have made geothermal systems more efficient design and installation. A geothermal system transfers energy between the steady temperature of the earth and a building to maintain building space conditions. The relatively constant temperature of the ground, approximately 55°F, makes the energy transfer efficient throughout the year, even during the coldest weather. Rather than creating heat by burning fuel, the geothermal system moves thermal energy between the ground and the building using heat-pump technology.

The Answer

Increasingly popular, geothermal ground-source systems provide energy-efficient heating and cooling. Domestic hot water is produced by individual electric water heaters in the apartments, by a gas-fired water heater for the restaurant, and by individual point-of-use water heaters in the office area restrooms. The innovative geothermal system of multiple closed-loop, ground-source wells was installed under the parking lot, with a permeable paver system to address storm water absorption and runoff. Building manager, Chuck Snyder notes that, "Geothermal is the perfect technology to address the past and future. Without it, this project would not have been economically viable."

With assistance from NYSDERDA's New Construction Program, the installation of a geothermal heat-pump system for the 20,000 square-foot historical restoration eliminated the need for exterior chillers or condensing units. The project provided a cash incentive of \$36,800 and a loan rate that will save the Kirkland Hotel's owners more than \$142,000 in interest over 10 years.



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toll free 1-866-NYSDERDA, locally (518) 862-1090,
or e-mail: info@nyserda.org



The Historic Kirkland Hotel



The System

The geothermal system in the Kirkland Hotel is a closed-loop vertical bore ground heat exchanger. Water in the building loop piping is pumped through a heat exchanger in each heat pump. In the summer, the fluid absorbs heat from the refrigerant and carries it to the ground through the ground loop piping. In winter, it absorbs heat from the earth through the ground loop, and transfers that heat to the refrigerant. A total of 20 400-foot wells are managed by 20 heat pumps with two variable speed drive pumps. In warm weather, each heat pump brings in water at 60 degrees, and sends it back at 65 degrees. In colder weather, water comes in at 50 degrees and is sent back at 45 degrees.

The Savings

The Kirkland Hotel is being heated and cooled without the use of fossil fuels. For an individual apartment, total utilities cost \$65/month in the summer; heat is projected to cost even less as the heat exchanger becomes an air handler in the colder weather. Total costs to the building owner in the first six months of 2008 have averaged \$1,000/month. Total annual fuel savings are estimated to be \$18,000.

Incentives and Results

NYSERDA's cash incentive of \$36,800, as well as a **New York Energy SmartSM** loan of \$706,469, will help RUPCO defray a portion of the implementation cost of the efficiency improvements. With the 3.72% interest rate, these improvements will result in annual energy cost savings of \$142,000 in interest over the 10-year life of the loan.