

Menotomy Minutes



NEWSLETTER OF THE ARLINGTON HISTORICAL SOCIETY

AUTUMN 2022



21st-Century Climate Control in a 1745 House

By *George Parsons*

The iconic Jason Russell House (JRH) was built by an ordinary farmer, Jason Russell, in 1745. It is the site of the bloodiest encounter of the first day of the American Revolution on April 19, 1775. Russell and eleven fellow American patriots died while engaged in battle with British troops who were on retreat from Lexington and Concord. Bullet holes from that battle are still visible in the house. Russell's descendants lived in the house until the 1880s. It was purchased by the Arlington Historical Society in 1923.

The construction of the house is typical of 18th-century houses in New England. The boards that make up the inside

walls of the house are also the boards on the outside of the house. There is no feasible way to insulate the house while preserving its historical character. Heating and cooling the structure with conventional means was a financial impossibility, so the JRH was open to the public from April to October. Temperatures and humidity levels in the house fluctuated with the weather, making it uncomfortably cold to offer year-round visits. The swings in temperature and humidity were detrimental to the preservation of the house and its historical furniture and objects.

In the fall of 2020, the Society contacted the Town of Arlington's energy manager, Ken Pruitt, to see if the town had experience with any geothermal installers, leading to an introduction to EnergySmart Alternatives, of Medford. Dr. Melanie Head, CEO of EnergySmart, provided the Society with a cost estimate for the installation of a geothermal system. Learning from the experience of the Orchard House in Concord, the Society applied for and was awarded a \$250,000 Community Preservation Act (CPA) grant to proceed with the project.

Work on the system began in August 2021 with an archeological survey of the intended area for drilling the geothermal wells, which had been identified using data gathered in a ground-penetrating radar study performed in 2020 by Geophysical Survey Systems, Inc. of Nasua, N.H. This information allowed the drilling area to be sited away from

(Continued on page 4)



Jason Russell House picture courtesy of EnergySmart Alternatives, LLC

A BRAND NEW LOOK FOR THE SOCIETY

By Elisabeth Carr-Jones

One of the nineteen activities identified for the strategic plan at last September's Historical Society Board Retreat was the need for a branding review. Given that 2022 marks the Society's 125th anniversary, and the last branding effort was for the 100th anniversary, the timing seemed right.

Work on this project proceeded with Director Sara Lundberg, me and a committee of volunteers: Society President George Parsons, Vice President Patsy Kraemer, Treasurer Alan Jones, Directors Elaine Ropi and William Lyons; and Chuck Kraemer.

Our first task was to inventory the Society's recent outreach materials and document dominant iconography, colors, and typography. These materials included the recently-opened April 19th *Menotomy – Road to Revolution* exhibit, printed materials, outdoor signage, website, and social media.

When viewed as a package, these materials were instructive. However, it also became clear to us that the threads holding them together should be stronger. What was needed was a clearer package of branding materials, including a versatile logo, to reinforce the Society's identity.

Sara's work with Morgan Kropa, owner of Morgatize LLC of Concord, on branding for the Maynard Cultural District led the committee to invite her to meet with us to discuss the project. After that first positive meeting in late January, the Society's branding project was officially off and running!

The scope of work with Morgatize was aimed at evolving, elevating and refining the brand design of the Society. The timeframe was limited to roughly six weeks, where committee members provided information about the Society and critiqued potential branding materials. All meetings were conducted via Zoom due to Covid.

The process began with a kickoff workshop to explore the mission, key values and the unique role of the Society in Arlington. Morgan asked a series of broad-ranging questions, some multiple choice, others fill in the blank, and recorded committee members' answers.

Sara's masterful work on the *Menotomy—Road to Revolution* exhibit provided strong material for developing colors and typography for the style guide. Yet, a logo felt like new territory. Morgan collected and presented logos of historical societies from around the country to demonstrate the range of graphic representations. This began a conversation on what the Society wants to convey in a logo, what it doesn't, and why.

There was unanimous agreement to visually associate the Society's logo with the Jason Russell House. Yet, it was Morgan's American Primitive interpretation of the house and museum buildings together that snapped the logo puzzle pieces into place.

From that pivotal point, there were several refinements, along with development of the secondary logo designs and a writing style guide. The complete Brand Style Guide document provided us with a versatile, coordinated set of materials for use in various printed and digital formats.

The first of our new materials to be produced was the Jason Russell House Tours sandwich board sign. It has been out on the lawn since early June. More permanent signs using the new branding materials have been reviewed and approved by the Historic Districts Commission. They should be fabricated and installed soon. The Society's annual program, membership mailing, and

MISSION
The Arlington
Historical Society:
Jason Russell House
& Museum
is dedicated to
preserving,
interpreting and
sharing Arlington's
history and the
Society's collections
so that the
community may
engage and interact
in historical
discovery, finding a
sense of place.



Updated Mission Statement, and collage of dominant colors created for the branding inventory.

Facebook page have been updated as well. Look for updates to the website and rack cards to complete the project this fall.

The committee has met regularly this year to work through the many pieces of the rebranding project. We hope that our efforts have resulted in a fresh and positive representation of the Society. ♦

This project was funded in part by Mass Humanities, which receives support from the Massachusetts Cultural Council and is an affiliate of the National Endowment for the Humanities.




Arlington Historical Society

JASON RUSSELL HOUSE & MUSEUM



HISTORIC ARLINGTON

Jason Russell House



& MUSEUM

Site of the bloodiest battle on the first day of the American Revolution

TYPOGRAPHY

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HISTORIC ARLINGTON

Jason Russell House



& MUSEUM

Site of the bloodiest battle on the first day of the American Revolution

arlingtonhistorical.org 

Jason Russell House & Museum



Arlington Historical Society

Top: Logo Set from the Brand Style Guide prepared for the Society by Morgatize.

Middle: Typography from the Brand Style Guide, flanked by wayfinding sign artwork for the Massachusetts Avenue and Jason Street frontages of the Jason Russell House property.

Bottom: Artwork for the proposed sign for the corner of Mass Ave and Jason Street.

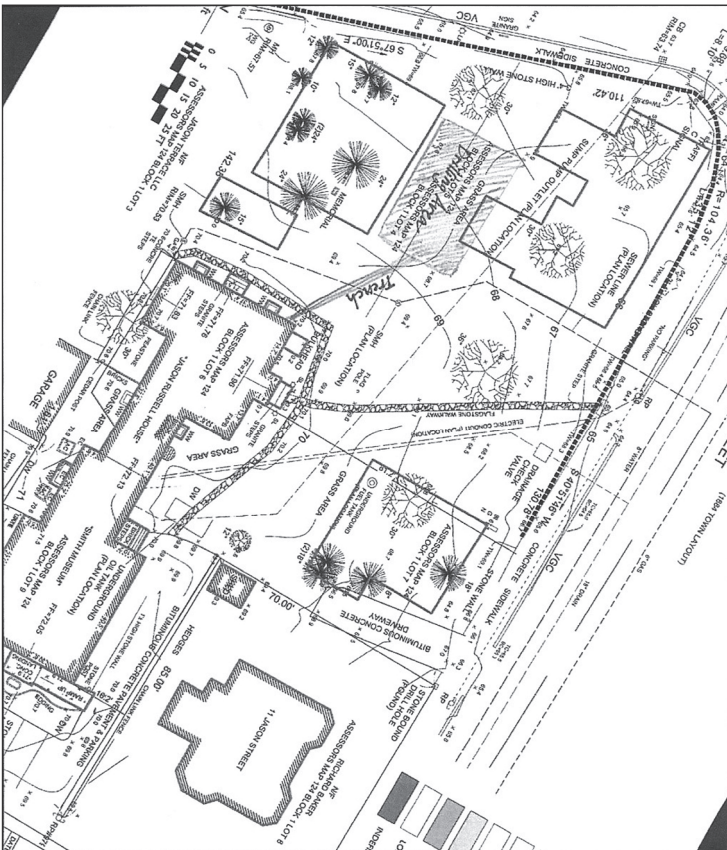
the remnants of foundations of houses that at one time surrounded the Jason Russell House but had been torn down in the 1960s. Professional archeologists from the Public Archeology Laboratory of Pawtucket, R.I., dug ten test pits, and discovered just insignificant fragments of pottery, glass and nails.

Four, 400-foot-deep wells were drilled. Part of the wall surrounding the Jason Russell House had to be temporarily dismantled to allow access to the drilling area by the 70,000-pound drilling rigs. The well holes are 6 inches in diameter and are mostly in solid bedrock. Bedrock is ideal for geothermal systems as it is a good conductor of heat. The rock dust that was taken from the wells was used to line the four-foot-deep trenches that carried the plastic piping from the wells to the house. The plastic piping is a closed loop filled with 350 gallons of a denatured alcohol solution that is continuously pumped from the wells to the water furnaces in the JRH and back down into the wells.

Geothermal systems take advantage of the fact that deep underground rock formations are a constant 50 degrees Fahrenheit and are essentially independent of surface temperatures which typically fluctuate from close to 100 degrees in the summer to near zero in the winter. In the summer, excess heat in the house can be transferred to this relatively cool geothermal fluid raising its temperature a few degrees, pumped through the well, and returned to its original temperature for reuse in the house. In the winter, it is possible to extract heat from this geothermal fluid dropping its temperature by a few degrees, while using this heat to warm the house. Again, the cooled geothermal fluid is pumped back down into the wells to be warmed to its original temperature by the surrounding bedrock.



Well drilling rigs on the lawn of the JRH. Photo courtesy of



Drilling Area Map. Massachusetts Avenue is at the top of the map. The thicker outline of the polygons on this plan indicate buildings that are standing today; the thin lines show the locations of buildings that were removed from the site in the early 1960s to restore the battlefield and open the view of the Jason Russell House from Massachusetts Avenue. Map courtesy of Geophysical Survey Systems, Inc. and EnergySmart Alternatives, LLC.

Water furnaces were installed in the basement and in the attic of the Jason Russell House. These devices are heat exchangers that either cool or warm the air, which is then distributed in the house through a series of conventional ductworks. The geothermal fluid acts either as a heat sink or a heat source depending on the season.

Major electrical work had to be done to power the pumps and fans that move the geothermal fluid and the climate-controlled air in the house. An oil furnace that had been used to heat the caretaker's cottage at the rear of the JRH failed during the installation of the geothermal system and was removed to make room for one of the water furnaces. An electric hot water heater was also installed to provide hot water for the caretaker's cottage. No fossil fuels are burned on site to heat or cool the house.

Four thermostats were installed to control the temperature in the first and second floors of the Jason Russell House and the caretaker's cottage. In addition, a cell phone-based app can be used to monitor and adjust temperatures in all four zones independently. The app also shows energy consumption on a monthly and yearly basis for all four zones.

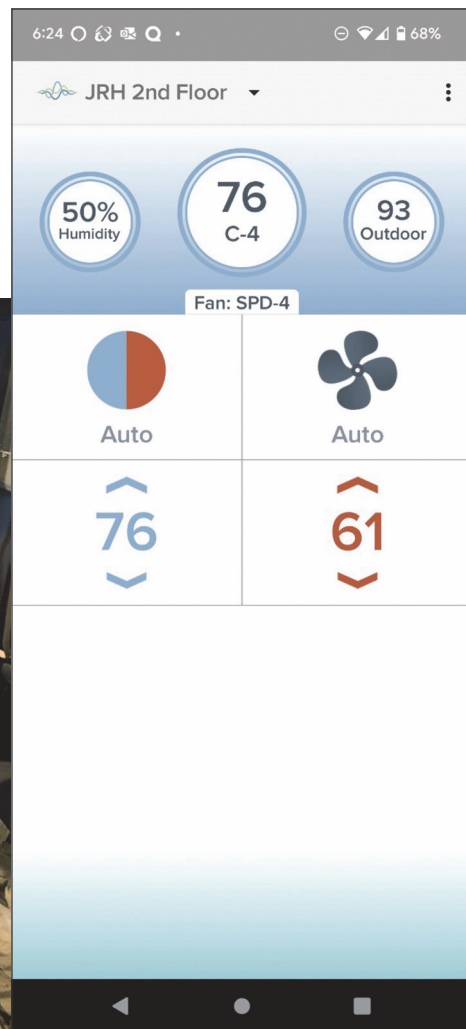
The system was fully operational in March 2022, but the caretaker's cottage had been heated by the geothermal system since late January. Our caretaker, Greg Stathopoulos, reported that the system kept him comfortably warm in February and March. The extreme heat of this August showed



EnergySmart Alternatives, LLC.

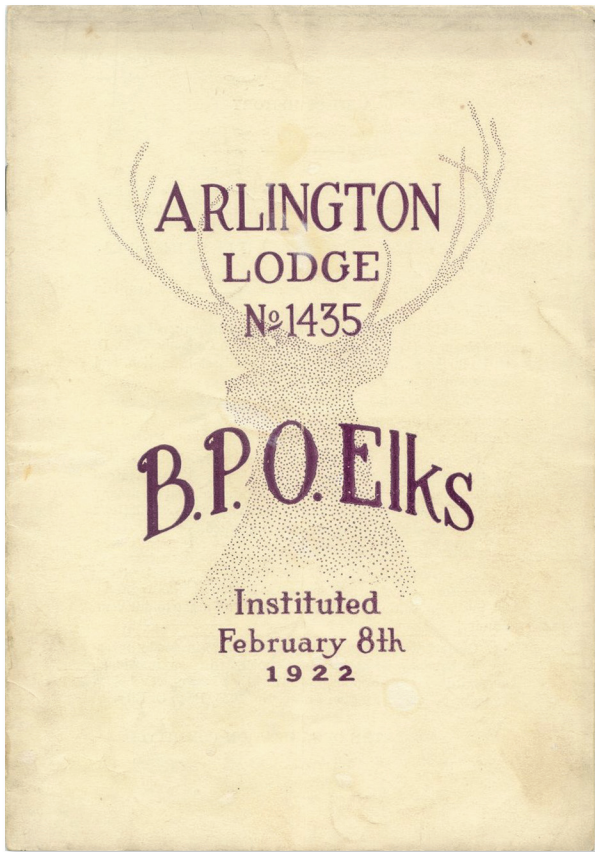
us that the cooling component of the system also worked very well. Even with outside temperatures in the mid-90s, the JRH and the cottage stay in the desired temperature range of the mid-70s. The Society is still gathering data on the costs associated with the system, but replacing the old oil furnace with this geothermal system should be more economical. Apart from quarterly filter changes and the electrical power for the geothermal fluid and air circulation, there are no other costs associated with the system. The only task remaining is additional lawn restoration at the drilling site. This will be done when the weather is more conducive for seeding new grass.

The Arlington Historical Society is profoundly grateful to the Community Preservation Act Committee and to Arlington's Town Meeting for providing the funding to make this project a reality. The climate control system will allow year-round utilization of the JRH and will help preserve this priceless historic treasure and its contents for the benefit of the generations to come. ♦



Left: Water Furnace being installed in the basement of the JRH by Dr. Melanie Head, CEO of EnergySmart Alternatives, LLC. Photo courtesy of EnergySmart Alternatives, LLC.

Right: Screenshot of the cell-phone app used to monitor and control the geothermal climate control system at the JRH. Note the outdoor temperature was 93 degrees Fahrenheit while the temperature on the second floor of the JRH was 76 degrees Fahrenheit. Picture by the author.



Elks Lodge Centennial

by Richard A. Duffy

Arlington's population boom of the 1920s gave rise to "Elkdom's" newest lodge, in the heyday of local fraternal service organizations. One of its enduring precepts from the era: "The TRUE ELK is measured not by good intentions but by good deeds. Not in the amount of his charity, but in the spirit in which it is dispensed."

The Arlington Elks acquired a former boat livery building on the shore of Spy Pond which it operated as "Ye Lantern" social hall, until consolidating all of its lodge operations there in 1948.

Today the Arlington Elks focus on various charities, including Arlington's food pantry and fuel assistance programs, and Sophia's Toys at Boston Children's Hospital. The Elks Father's Day Fishing Derby and the Labor Day cookout are among the community events enjoyed by generations of Arlingtonians. We salute the Benevolent and Protective Order of Elks (B.P.O.E.) on its 100th anniversary in Arlington. ♦

James H. Winkler Fund: Supporting Publications

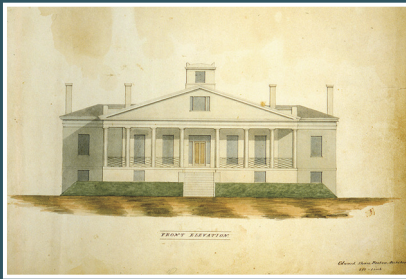
Gifts to the Society from family and friends in memory of James H. Winkler have enabled the recent establishment of a permanent endowed fund dedicated to the development of educational publications of the Society, such as books, monographs, exhibit catalogues, and Menotomy Minutes.

James Winkler, son of Lenore Winkler and former Society President Howard Winkler, died suddenly on December 17, 2021, at age 58. With his siblings, Mitchell and Anne, James grew up in Arlington and was a graduate of Arlington High School. He received his BS in chemical engineering from the University of Rochester and spent over 35 years managing complex engineering and construction projects.

James was no stranger to local history, having assisted his father with projects at the Middlesex Canal Association. The Society is grateful to have the James H. Winkler Fund available to advance its mission of sharing Arlington's history through the lasting medium of publications. ♦



Upcoming Lectures



Tuesday, October 25
7:30 PM at Jason Russell House

CONSTANTS AND CHANGES IN SHARING ARLINGTON HISTORY: A 25-YEAR RETROSPECTIVE CONVEYED IN IMAGES

Richard A. Duffy

By popular demand, an encore presentation of the dynamic lecture that debuted in June 2022 as the capstone to the "My Stories" program series. With new technology tools, keeping local history relevant has never been more exciting.



Tuesday, November 29
7:30 PM at Arlington Town Hall

LAKOTA AT LITTLE BIGHORN AND UKRAINE IN THE DONBAS

William E. Rapp, Ph.D.
Major General U.S. Army (Ret.)

Co-sponsored by Arlington Veterans Services

This talk will discuss the Lakota (Sioux) and Northern Cheyenne in the Great Sioux War of 1876-77 as they fought to retain their lands and way of life against the wave of Euro-American western migration. We will then transition to a similar fight by the Ukrainians to repel the Russian invasion today.

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Arlington Historical Society
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2022-2023 Election

The annual election of the Society was held on June 7, 2022.

We are grateful for the officers, directors, and trustees who continue to serve the Society. We welcome Jonathan Nyberg and William Zuckerman as newly elected directors of the board. On the trustees, we thank Stuart Brorson for his year of service, and welcome Joe Curro, who comes over from the Board of Directors, and Joseph Zona. On the Nominating Committee, Angela Olszewski was elected to a three-year term. The Society thanks Doreen Stevens for her service on the committee.

OFFICERS

President – George Parsons
First Vice President – Robert Brazile
Vice President – Patsy Kraemer
Treasurer – Alan Jones
Clerk – Christine Cronin-Tocci

DIRECTORS

Paul Fennelly • William Lyons
Jonathan Nyberg • Elaine Ropi
Bob Tosi • William Zuckerman

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Peter Howard • Joe Curro
Joseph Zona

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The Arlington Historical Society is a 501(c) 3 non-profit organization. Contributions are deductible to the extent allowed by law.

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PLACE
STAMP
HERE



Photograph of Susanna Adams
Winn's cat, c. 1880.

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