**History of Mimosa Hall & Gardens**

The original 10-acre property was given to John Dunwody by the town founders, Roswell and Barrington King. Like the Cherokee who resided in that area before him, Dunwody, his family, and his thirty slaves lived off the land. The house was constructed from locally-harvested heart pine and bricks made in Roswell. Once the family moved into the house in 1841, everything produced on the property was used to sustain the property. To keep the house warm in the short Georgia winters, the family burned locally-harvested wood in the fireplaces. To keep the house cool in the long Southern summers, the family depended on a breeze from the Chattahoochee River. The house was built a few feet above ground level, allowing the breeze to blow up to the house. The windows on the first floor were specially constructed to maximize the airflow of the breeze through the house. For light, the family used candles made of tallow or beeswax. To travel, the family would use their carriage, as the nearest town with a train station, Marietta, was hours away. Most of the food the family and slaves consumed was produced on the property. The Dunwody family had a flower and herb garden at the west side of the house, where John’s wife grew peaches and quince. On the north side, behind the house, the family had a vegetable garden that produced the main food for the table. The slaves lived in four outbuildings and likely maintained additional gardens. The family also had a stable with horses for riding and a few chickens and cows to provide eggs and milk. The forest stretching north of the house provided the game meat. These settlers who lived at Mimosa Hall relied on the earth for energy; they depended on renewable resources, especially sunlight, to maintain their way of life.

The Industrial Revolution came to Roswell eventually. The first local railway line began operation in the 1880s. Telephone service and electricity were brought to Roswell in the first decade of the twentieth century. Two intersecting highways were built through the historic town square in the mid-twentieth century, bringing traffic and pollution to the otherwise quaint village. Mimosa Hall has not been exempt from industrialization. The property remained a private family home from its initial construction until 2017, when the City of Roswell purchased it. As a private home, it was modernized, receiving electricity in the early twentieth century when architect Neel Reid lived there, a septic tank some time after the house was purchased by cotton merchant Gus Tolson in 1937, and air conditioning after 1947, when the Granger Hansell family occupied the house.

Friends of Mimosa Hall & Gardens would like to see Mimosa Hall return to its original dependence on natural, renewable resources. Like the Dunwody family, the Friends think sunlight is the key to maintaining this beautiful house in a sustainable and environmentally responsible manner. When Cadmus Construction installs its proprietary building integrated alternative energy system, Mimosa Hall will be the oldest electrified house in America to return to its non-polluting roots.

**Unique Opportunity**

Fortunately, to become a Net Zero property, little work needs to be done to Mimosa Hall. The thick masonry exterior walls provide much more efficient energy consumption than typical wood frame historic houses in the area. The home’s orientation is ideal for an East/West building integrated alternative energy system. Mimosa Hall is situated perfectly for solar power!

To maximize efficiency, the roof will need to be tightly insulated. Cadmus will install a synergistic solution that integrates an insulation system that lies above the roof deck but hidden below the roofline, preserving the interior historic timbers in the attic. The building integrated alternative energy system, as designed and engineered by Cadmus, meets all of the City’s Historic District criteria per the Unified Development Code for using alternative energy, as outlined in Section 5.49. This system design and engineering provides an aesthetically sensitive solution for a high profile historic home located in Roswell’s Historic District.

Cadmus’ building integrated alternative energy system is the only system that provides a minimally invasive system. The solar thermal system is completely invisible because it is installed underneath the standing seam metal roof. Since higher temperatures can cause reduced output on photovoltaic (PV) panels, the Cadmus system will route the heat away from the PV panels by using it to supply the home’s hot water.

A solar shading analysis revealed a 99.5% annual tilt and orientation factor. The average annual energy consumption, based on the home’s consumption rates in the year 2016, is 26,260 kWh. A building integrated solar solution comprised of a 22.4 kW DC thin film solar system and a 500 square foot solar thermal solution was designed and engineered to provide an estimated 29,000 kWh annually from PV alone and 80% of the domestic hot water demands. The integration of a battery system will ensure the storage of excess energy production that can be given back to the home at night and during power outages.

Currently, the oldest solar-powered building in the U.S. is Matt Grocoff’s Mission Zero House, dating to 1901, in Ann Arbor, Michigan. Like Grocoff, the Friends of Mimosa want to see more historic houses be retrofitted for solar power. We think that making an antebellum house run on alternative energy will change the way Americans look at historic preservation. We hope to see other preservationists follow in our footsteps. As a Net Zero house, Mimosa Hall will be a trailblazer, embracing the future and honoring the past as an energy-efficient site.