

# ATLANTIC STRUCTURE MOVERS, INC.

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Atlantic Structure Movers  
to host the New England Association  
of Structural Movers'  
Annual Conference,  
September 9th - 11th, 2005

Begun by Jay Thompson in 1983, Atlantic Structure Movers (ASM) is a family owned and operated business. Mr. Thompson is the Accredited Structure Mover.

The business has grown from Jay Thompson's light hauling with his pickup, to hauling construction & heavy machinery with two larger trucks, to a fleet of over 10 trucks, assorted trailers, dollies, cranes, excavator, and approx. 200 tons of steel beams. With a staff of 6-10 individuals, Jay moves, raises, rotates and shores commercial and residential structures and monuments of wood, masonry, or steel. ASM also provides rigging services and light crane work. The scope of their work ranges from moving and relocating commercial buildings, intricate historical structures and monuments, roof systems, residential dwellings, garages or equipment, to raising and shoring structures of any size or description. ASM utilizes a state-of-the-art, double-acting unified jacking system designed by Jahn's Structure Jacking System, the manufacturer of the system used to raise the Cape Hatteras Light House. ASM's equipment was the first production model to incorporate features and innovations developed for the Cape Hatteras Project. This system assures a smooth, even lift, and prevents the torque, twisting, rocking or racking associated with other equipment.

Since 1998, co-owner Tina Mueller has devoted a full time effort to ASM, affording the company the opportunity to further expand the business.

ASM has moved structures for Historical Preservation, soil remediation, foundation replacement, structural repairs, sub-divisions, and occasionally "just because". ASM relocates structures on site, over public roadways, and by barge across



*House moved over public roadways.*

water. Their crews are highly trained and dedicated exclusively to structural moving. Each project receives individual, on-site supervision. This combination of factors – technology, skill and supervision - contributes to their impeccable safety record. Atlantic Structure Movers is licensed and fully insured as a Structural Mover. No project is too intricate or insignificant.

ASM is an active Member of the International Association of Structural Movers and of the Northeast Association of Structural Movers.

At the 2005 Conference of the International Association of Structural Movers, held in Vancouver, British Columbia, Canada, Jay Thompson, owner of Atlantic Structure

Movers (ASM) was honored "In Recognition of Outstanding Achievement" for the "Widest Structure Moved," for the Montrose, New York, Hendrick Hudson High School project.

This project involved raising a 150' diameter dome roof of Hendrick Hudson's athletic auditorium, totaling 22,937 square feet, a distance of 4'1". The dome roof was raised off its masonry walls and supported to enable the construction of an additional 4' high, steel supported, clerestory around the entire athletic auditorium. The walls of the auditorium could not be used or compromised. Supporting mechanisms and beams could not be placed on the outside edge of the perimeter of the dome – the area originally designed to support the load. Steel workers and glazers required unobstructed access to the edge location. All ASM's equipment and rigging needed to remain free and clear of the 4' space created by the raise. Jay needed to design and fabricate an innovative lifting mechanism to secure, raise, anchor and subsequently lower the dome onto its new clerestory wall.

In order to prevent possible drift, leave the walls untouched, and provide unobstructed access, Jay Thompson employed the



*Hendrick Hudson High School Dome interior.*



*Hendrick Hudson High School jacking posts set in place*

use of 24 custom jacking/shoring posts devised by ASM. Designed for ease of use, versatility, and safety, each jacking post accommodates 60 inches of travel and will lift its load from either the top or from the bottom toe using a standard 15-ton hydraulic crib jack. Workers perform all jacking and resetting for subsequent lifts while standing at ground level, a benefit enhancing both the safety and efficiency of the ASM system.

Without access to or use of the perimeter load bearing edge, the dome presented no flat, level surface from which to support and jack. The twenty-four custom fabricated lifting posts were installed around the perimeter. To further complicate the project, the exposed framing of the dome remained an aesthetic design element that could not be marred, hence, the design and fabrication of a separate "anchor head" connecting the jacking equipment to the dome with minimal impact.

If this roof were to be raised in a traditional manner, Thompson knew that once it was disconnected from the walls of the building the dome could drift or be caught by air currents or gusts. The dome raising took place during hurricane season, making drift a particular concern. In order to maintain the arch of the dome in relation to the center compression ring, an equally distributed upward force needs to be exerted and sustained at all times. No temporary openings in the auditorium walls were permitted. The securing support mechanism had to accommodate the arch of the roof. The custom fabricated mechanism to secure and raise the roof, more importantly, had to anchor it be-

fore, during, and after it was raised. Thompson devised a system of guying the dome with ratchet strapping to provide a lightweight, portable system for anchoring and preventing drift. In addition, the anchoring mechanism had to negligibly impact the auditorium's newly poured, reinforced concrete floor.

Use of ASM proprietary jacking and shoring equipment impressively cut time and cost. At-

lantic transported all materials, equipment and personnel (replete with a week's personal gear for each employee) in a 24' box truck and an 11' flatbed tool truck with a 24' tag along trailer in tow. Jay required only one to no more than three workers on any day, and no cribbing, to successfully execute the project. The lift was completed in 6.5 days (251.5 work hours) at prevailing wages, completing the project while keeping the entire crew on solid ground throughout the lift. After setup, it took only 90 minutes to raise the roof 4'1" off the structure's perimeter walls. The walls remained untouched, and an unobstructed space was maintained for new construction. Once the steel workers and the general contractor completed their work, ASM lowered the dome. As a result, the entire project cost the client a fraction of what the cost would have been utilizing more traditional means and methods. The 6.5-day project schedule included set up, breakdown and clean up. After significant preplanning, the final execution of the project proceeded expeditiously and successfully.

In comparison to the

conventional crib pier approach, the same lift would have required 6 to 8 laborers, 1,700 pieces of 6" X 6" X 4' oak cribbing, at 65+ pounds each, four semi-trailers, a tool truck and a pickup truck. It would have taken an estimated 14 days to complete the project, and the crew would have had to work from scaffolding at a height of seven to eleven feet. The cost to fabricate 24 custom-fitted roof brackets, needed to work with conventional crib piers, would have equaled or exceeded the cost to fabricate the 24 jacking posts.

### **Other recent projects completed by Atlantic Structure Movers:**

The relocated 3-story, masonry-lined Lippincott-Stow House, c.1820, weighed 165 tons with eight fireplaces and four massive multi-flue chimneys. The house was moved down a hillside knoll located in Moorestown. It is listed on the New Jersey Historic Registry.

The Home & Garden TV Network (HGTV) featured ASM on their program "Renovations" (Episode REN-411). HGTV filmed the preservation and relocation of the historic Lippincott-Stow House. Major utility cables were temporarily relocated and the move route traversed a county Road.



*Historic Lippincott-Stow House*

Relocated a two-story house with brick fireplace/chimney & porch across Barnegat Bay by tugboat barge. Shored and set the house on top of 10-foot high piling foundation.

This winter ASM moved a two-story house by tugboat-barge from Long Beach Island, NJ, across Barnegat Bay to the mainland. Deep-water at the loading dock and destination dock required ASM to work with the tides and load and off load the house live. Steel spuds were set to anchor the barge.



*Southern Regional High School Bus Garage*

Atlantic moved a three-bay bus garage for Southern Regional High School, Manahawkin, NJ. ASM moved the 50'5" X 65'6" steel Multi-Bay Bus Terminal Garage approximately one mile, traversing private and township roads.

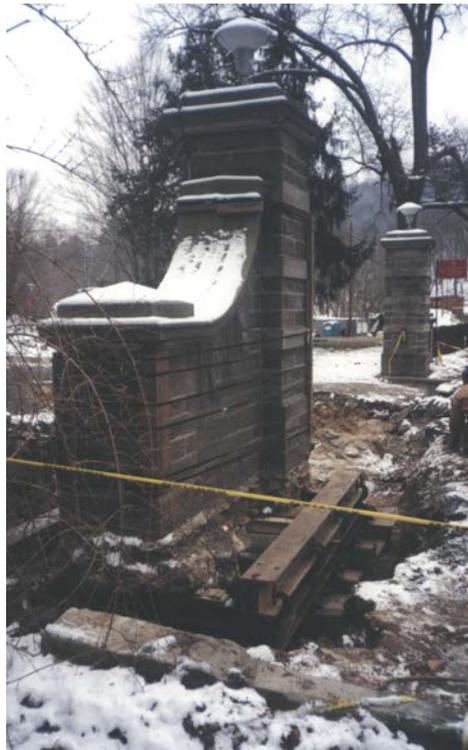


*House moved by barge.*

For the River Terminal Development Company, ASM relocated an historic c. 1920, brick and concrete "Railroad Scale House" building a half-mile. This small structure weighed a full 110 tons. "Railroad Scale-House" building in S. Kearny, NJ - Historic Preservation – Relocated and rotated 180° this 110-ton, c. 1920 brick "Scale House", with its monolithic 12" concrete floor & 44" deep masonry footings intact.



*Railroad Scale House*



*Brookville Methodist Church*

Raised and temporarily moved the historic Brookville Methodist Church, Brookville, NJ. ASM raised and moved the Brookville Methodist Church (c. 1825) with steeple, to a temporary location to enable foundation reconstruction and structural repairs to the floor system.

Roadway expansion precipitated moving the Chestnut Hill College Entrance Monument for historic preservation. At Chestnut Hill College, in Philadelphia, PA, ASM relocated their landmark Entrance Monument. Comprised of locally mined, hard, indigenous stone, the masonry monument was constructed with just over four-foot deep footings. A decision was made to move the monument without the footings. It took considerable time to chisel through the footings and free the monument.

*Chestnut Hill College Entrance Monument*



*Cape May House*

A residence in Cape May, NJ was relocated for a lot subdivision. This c.1910, 32' x 55'4" house, exemplifies impeccable historic condition, with 2 massive fireplaces/chimneys, plaster & lathe walls throughout, and balcony & porch.

Rotate a Moorestown, NJ c.1920, 3-story colonial estate house with slate roof and fireplace to enable construction of a new south wing addition. A recent project involved repositioning a slate roofed, colonial-style estate house with a fireplace. ASM rotated this 180-ton, 54'X78' colonial 90° and repositioned the 3-story house on site to allow for the construction of a new south wing. The house was rotated on soaped beams. Time staking care was involved in maneuvering the structure around large, mature trees, an in ground pool, an original masonry-piered, arched arbor and a carriage house.



*Colonial Estate House*

*Atlantic Structure Movers is available to move structures in New Jersey, New York, Pennsylvania and the Greater Delaware Valley.*

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