OUR HOUSE IN THE
MIDDLE OF THE STREET

A business one hundred years in the making moves man-made
mountains in the Midwest.

BY KENT BLACK PHOTOS BY JONATHAN KANE

It’s the kind of sight that brings all the neighbors out of their houses.

Snail-driving his customized six-wheel-drive International PayStar® down 3rd Street South in Moorhead, Minn., Tim Thein, 36, from Thein Moving Co., is carting quite a load. Stretching a dozen feet past the sidewalks on both sides of the street and blocking the horizon is a two-story, four-bedroom house with attached three-car garage. It measures 48 feet across and stretches 72 feet behind the rear wheels of his truck. It weighs 101 tons.

A few feet in front of the truck, Tim’s cousin and business partner, Matthew Thein, 39, is darting from one side of the street to the other, checking the balance of the house on the hydraulic lifts and looking ahead for possible obstructions. As Tim nears the intersection of 3rd Street South and 50th Avenue South, Matt casually wraps his arms around a stop sign, rocks it back and forth a few times, and then pulls it out of the ground with the ease of someone pulling a carving knife from a turkey.

Tim makes the turn, and the east corner of the house sweeps over the prone stop sign. “We probably had six inches to spare,” says Matt, whose ready smile epitomizes northern Midwest affability. “But I didn’t want to take a chance on scratching the paint.”

Tim slows his load to a stop while Matt jogs into an adjacent field to talk to a couple of workers about moving their parked truck out of the way. It gives Tim time to reflect on the business.

“Mentally, it can be very challenging,” he admits. “I move houses in the middle of the night when I’m supposed to be sleeping.” Tim is attracted to the historical significance of the industry, though. “It’s the world’s oldest and largest recycling business,” he says. “It’s rewarding to move a beautiful house like this and save it from a landfill.”

A HISTORY OF HAULING

It should be no surprise that the Thein cousins are particularly adept at moving houses. Their great-grandfather, Eugene Thein Sr., founded the business in Clara City, Minn. in 1892, when moving houses meant using draft horses and brute force.

When cousins Tim and Matt joined the company in the late ‘80s, both men felt strongly about the tradition of carrying on a fourth-generation enterprise. “My son is working now,”
says Tim. “He’s 15 and if he gets done with college and decides he wants to do it, great. If he decides to do something else, that’s okay too. It’s a total family business. It can be tough sometimes, but it can also be pretty good.”

House moving itself is an old business. In early 19th-century Concord, Mass. it was considered a “winter sport” because it was easier to move houses over the icy ground. Then, during the boom-or-bust years of late-19th-century western mining, entire towns were disassembled and reassembled at the site of the next strike.

However, the house moving in Moorhead today is all about reclamation. According to Tim, the Red River, which flows north here along the border, separating the community of Moorhead from Fargo, N.D., has had seven “100-year floods” in the past 10 years. Five years ago, the city came up with an innovative plan to buy the threatened homes at market value and then auction them off to licensed contractors who had the expertise to move them to new locations.

Since 2009, the city of Moorhead, with state and local funds, has purchased 217 homes along the river. Some will be moved to new locations, and a continuous levee will be built that, according to city engineer Peter Doll, “will fully button up the city when completed.” Thein Moving Co. estimates it has moved more than 30 homes around Moorhead since the program began.

From their Clara City base, the company will move houses in Minnesota, North and South Dakota, Iowa and Wisconsin.

CLEARING HOUSE

The day before the move, Tim, Matt and their four-person crew showed up at the address on Riverhaven Street in a fleet of Internationals. Tim’s father, Jim, and Matt’s father, Tom, acquired their first International new in 1974. “The 1974 International is a 4x4 with an Allison transmission. That truck has literally pulled thousands of buildings and it’s still going strong,” Matt says proudly, surveying his impressive collection of trucks. “In total, we have nine International trucks in our fleet and each one has its particular purpose.”

A couple of skip loaders move steel beams that will be used to lift the house from its foundation and then cradle it. After locating and severing all attached utility and sewage lines, Tim and Matt carefully measure the house to locate its center of gravity. In the best-case scenario, the crew would excavate around the house to expose the foundation, punch

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holes in it, and thread the beams through it. Here on River- 
haven, though, the house is on a slope toward the river and 
there are too many trees. Matt says that rather than spend-
ing a lot of time putting cribbing in place to raise the house 
away from the foundation, “it’s better to roll it straight off.” 
The Thein crew works with the precision and speed of a 
military unit. Every man knows his job. “We would never be 
such a successful company without these guys,” Tim says. 
Once the bolts that keep the house fastened to the foun-
dation are cut with a reciprocating saw, roll beams are laid 
perpendicular to the beams supporting the house. Small 
devices called Hillman rollers, which act as ball bearings, 
are placed between the beams. The house is so carefully 
balanced that a single skip loader pulls the house into 
what was once the front yard. The crew then places dol-
lies at predetermined points under the house. Matt says the 
hydraulic jacks under the house are calibrated to distribute 
the weight of the load. “The house is riding on three points,” 
Tim says, indicating the hydraulic dollies. “The whole trick is 
making sure that each point is bearing the same weight.”

LOAD ‘ER UP

The next morning, Tim climbs into 
the International PayStar and fires 
it up. It’s show time. The truck 
looks minuscule next to the load it’s about to carry, but it obviously has 
plenty of muscle. On its bed rests a 
2,000-pound concrete slab meant to 
give the rear end extra traction. 
“We worked with Nelson International [in Wilmar, Minn.] and a group of en-
gineers to determine what we needed 
the truck to do,” says Matt. “The 
PayStar was bought new in 2003, has 

plenty of moves under its belt, and has been a great asset for our company.”

Among the truck’s many special features are six-wheel 
drive, an Allison automatic transmission with deep gear 
reduction, a 46,000-pound rear end and a 24,000-pound 
front end. In addition, the Theins equipped the truck with a 
panel of levers that control the hydraulic lifts on their dol-
lies. Should the truck encounter an obstruction that can’t be 
bent, cut or lifted out of the ground by Matt, then Tim can 
manipulate the levers so that the house tilts a maximum of 16 inches up or down, or slides to the left or right a maxi-
mum of a foot and a half.

After the pickup truck is moved from 50th Avenue South, 
Tim drives the home a hundred yards and takes a left onto 
a gravel service road. Up ahead is a nascent development 
with a half dozen new homes scattered around a cul-de-
sac. The original plan had been to set the house on a new 
foundation near the end of the street, but recent rains had 
delayed work on the concrete. Instead, Tim and Matt decide 
to park the house in an open field opposite the new site. 
Before they can reach the spot, one of the dollies dips into 
a marshy rut off the narrow service road. While the PayStar has more 
than enough torque and power to 
pull the house free, slow and easy 
are the bywords for moving such a 
beautiful home.

The crew springs into action, hauling 
2-by-10 elm planks over to the stuck 
wheel. Matt fits them carefully into 
place, and within a few minutes, Tim 
slowly presses the throttle and the 
house moves forward. “Sometimes in 
this business,” laughs Matt, “you have 
to do things old school.”

“That truck has literally pulled thousands of buildings. 
And it’s still going strong.” —MATTHEW THEIN, THEIN MOVING CO.
TIPPING THE SCALES
THE PAYSTAR THROWS UP SOME BIG-TIME STATS ON MOVING DAY.

101
Weight (in tons) of the house being pulled by a single PayStar truck.

48
Width (in feet) of the house being moved. A standard highway lane in the U.S. is 12 feet wide.

72
Length (in feet) of the house being pulled. Standard trailers range from 28 to 53 feet long.

2,000
Weight (in pounds) of the concrete slab used to give the rear end of the PayStar extra traction.

121
Years the Thein family has been moving houses in Minnesota and surrounding states.