Top left to right are Local 787 Journeymen Tom Bailey, Ivan Belbeck and John Gidge. Bottom left to right are Local 787 BM Andrew Tarr, CIMCO Manager Shannon Macor, CIMCO Project Director Harold Cooper, CIMCO Construction Manager Ryan Orser and SR Tony Finelli.

Abbreviation Key:
BM Business Manager
SR Special Representative
J Journeyman
Ap Apprentice
LU Local Union
UA Members Are Key To New Maple Leaf Foods Project

In the quiet suburbs around Hamilton, Ontario in Canada, one of the largest refrigeration projects ever undertaken by United Association members got underway in 2009. Now, the facility is about to begin operation, and the UA team involved in the project has every reason to feel proud.

The Maple Leaf Foods meat processing facility at Red Hill Business Park is the largest and most technologically advanced plant of its kind in Canada—and perhaps in the world. UA members with Locals 787, 67, and 853, along with travelers from locals across Canada, performed outstandingly on this project, according to Robert Kaminski, Director of Engineering for Maple Leaf Foods.
The quality of work from the welds to the installation was excellent,” he said. “The UA always got the job done for us, which is important because we are always changing the specs as we go along. I think that in the end, no one is going to build a plant like this for a generation.”

Tony Finelli is the Special Representative for HVACR throughout Canada, and he attributes the success on this project to the fact that the UA is simply the best.

“The reason for the success on this job is the skills of the workers on the project,” he said. “All of them are first rate, and the owners and contractor are very happy with the professional attitude of the UA team.”

UA members performed all the refrigeration, HVAC, plumbing, steamfitting and sprinklerfitting. Members from Locals 787 (refrigeration), 67 (plumbing and pipefitting), and 853 (sprinklerfitting) were all on the job.

“We have about 80 members working on the plant,” said Local 787 Business Manager Andrew Tarr. “Maple Leaf is very happy with the group on site. We have a lot of good guys on the jobsite. They show up and do a good day’s work for a good day’s pay.”

Foreman John Gidge agrees. “The reason this job is going so well is the UA and the training and skills they bring to the job. You’re getting good, quality mechanics to do the job. In fact, they do this all over the world; that’s how good they are.” Local 67 members were also an important part of this effort.

“UA Local 67 is a proud industrial-based membership, which includes a combination of plumbers, steamfitters, welders and metal trades,” says Local 67 Business Manager Mark Ellerker. “Our membership has over 2,100 members located on the southwest corner of Lake Ontario and includes the Niagara Peninsula, Haldimand, Norfolk, Brant, Halton and Hamilton Wentworth regions.”

He notes that the local has had its fair share of challenges with the de-industrialization of steel, paper and manufacturing mills, which include the recent closure of the OPG Coal Fired Power Plant, Petro Canada Refinery and Hilton Works USS Steel Mill. The local knew it had to diversify its focus
Members of the Local 787 team of journeymen, from left: Norm Francis, Paul Murray, Andrew Tarr (BM), Jim Watson, and UA SR Tony Finelli.
and look at all sectors of work opportunities including commercial, institutional, residential and light industrial. “In 2012, Local 67 found one of those opportunities,” said Business Manager Ellerker, when Maple Leaf Foods came to Hamilton. Local 67’s crew numbered more than 220 at peak manpower. They installed more than 340,000 linear feet of pipe, which included: storm drains, office and welfare area plumbing services, fixtures; a hydronic heating system, including boilers, pumps, VAVs and radiation; process areas and sanitation areas; hose stations and equipment; odour control systems; process ingredient piping and connecting equipment, including tanks and pumps; a central utility plant; air compressors, make-up air, exhaust fans, HVAC equipment and gas-fired unit heaters.

The Maple Leaf Foods meat processing plant will process deli meats and hot dogs in about 500,000 square feet supported by 6,500 tons of refrigeration. CIMCO was the supplier of the engineered refrigeration systems for the plant, which will cost nearly $500 million when it’s complete this year. The facility is also designed to be LEED® Silver certified. The plant is the largest industrial refrigeration project in CIMCO’s 100-year history. It will ultimately produce more than 400 different products, from pastrami to bologna and more. It’s also the largest meat processing plant in North America, so it’s no wonder the members are proud to be a part of this project. Meat will be delivered in refrigerated trucks for processing, so keeping the product at the proper temperature is critical every step of the way.

The refrigeration capacity is so huge, it has been described as being equal to seven blocks of ice, each the size of a 747 jumbo jet, cranking out cooling hour after hour—or the combined capacity used to cool 80 ice rinks or air condition 4,200 homes. In other words, it’s a lot of refrigeration!

The plant has 110 different rooms that have to be cooled, many of them with a wide range of temperatures. For example, some are cooled at 4 degrees Celsius, while others require minus 17.8 degrees Celsius. The distance between the Central Utility Plant (CUP) and the various rooms results in pressure drops that raise the coolant temperature as it travels from room to room throughout the building. That means that the coolant itself must be pushed out through the building at a temperature of minus 20.5 degrees Celsius.

In the compressor room, as well as the CUP, UA members with Local 787 fabricated and installed tanks, lines,
The indoor environment is critical in terms of capacity, but energy efficiency was also important to Maple Leaf Foods. The CIMCO-designed control system will analyze 22,000 data points every second and automatically control more than 750 pumps, fans, compressors, and valves. Three hundred custom piping and equipment. The workforce peaked at about 750 building trades members at the height of construction. Given the goal of reaching LEED® certification, one of the most critical and challenging efforts was installing the NH₃ system to deliver anhydrous ammonia for the massive cooling requirement on the project.
control screens, four widescreen touch displays, and a central operator workstation are all present to aid in monitoring plant operations. The CIMCO work alone accounted for 10,000 man-hours to engineer and design the thermal system, and another 100,000 man-hours (equal to one person working full-time for 50 years) to build and weld the piping required to deliver the ammonia used in the chilling process. In all, 25 kilometers of pipe were installed, with related valves and fittings. The design as well as the on-site team made extensive use of computer-assisted drawings to improve line of sight, and make it easier for the crew to coordinate the installations of the various systems throughout the plant.

Scheduling was perhaps the biggest challenge, according to Ryan Orser, CIMCO’s Regional Manager.

The Maple Leaf project included the installation of 32 hygienic air-handling systems on the roof, with extensive associated piping, including 100 evaporators. The Central Utility Plant is massive, and the systems throughout the plant are complex. Modern Niagara provided start-up in the boiler and mechanical rooms, with process air, ammonia piping, steam hot water, compressed air, domestic hot and cold water, condensate piping and high-pressure water. Mike Delray is the Commissioning Manager for Modern Niagara, and he said the UA makes his job easy.

“I come in when a job is nearly complete,” he said. “I assist in finishing the job, with start-up and commissioning of all the building systems. This is a very complicated building, but I always get a big pat on the back because it all just goes off, and everything is good—but the reality is the UA guys hand the job to me on a silver platter. I just show up and press buttons.”

Rob Kaminski of Maple Leaf Foods noted that it is the complexity of this plant that sets it apart, especially since

James Ravin, Ap, LU 787, CIMCO

Daryl Versnick, J, LU 67, CIMCO

Cori Ingelhart, J, LU 67, CIMCO

Steve Lomax, J, LU 527, CIMCO
the plant will ultimately process food for humans.

“There will be round-the-clock sanitation, and in fact, the plant will be fully sanitized every single day,” he said.

The Hamilton meat processing plant is just one part of Maple Leaf’s presence in the city. The company’s Canada Bread facility, which opened in 2011, is right next door.

As the project winds down, Maple Leaf is preparing for start-up. The company estimates that about 670 workers will be needed full-time at the plant, and the plant will add $2 million a year to Hamilton’s property tax base. Given the state-of-the-art technology used in the plant, there is no doubt that the skills of UA members in Local 787 will be needed to keep it up and running safely and efficiently.

“It was a great project for us,” said Local 787 Business Manager Andrew Tarr, “and I’m proud of every single member from every local who worked on this job. We showed them how to get it done!”

“I’m proud of the contribution our sprinklerfitter members made to this project. Their dedication is unparalleled when it comes to protecting the health and safety of the hundreds of people who will work in this facility when it is completed,” said Local 853 Business Manager Greg Mitchell. “This was a great opportunity for us to demonstrate our skills on one of the biggest projects in Canada. Local 853 met that challenge with skill and dedication. We look forward to showing what we can do on future projects as well.”

Local 67 Business Manager Mark Ellerker agrees.

“UA Local 67 members have worked collectively to meet all their contractors’ building schedules and have proven there is nothing that can’t be accomplished through hard work, determination and cooperation,” he said, adding, “Be proud to be UA!”