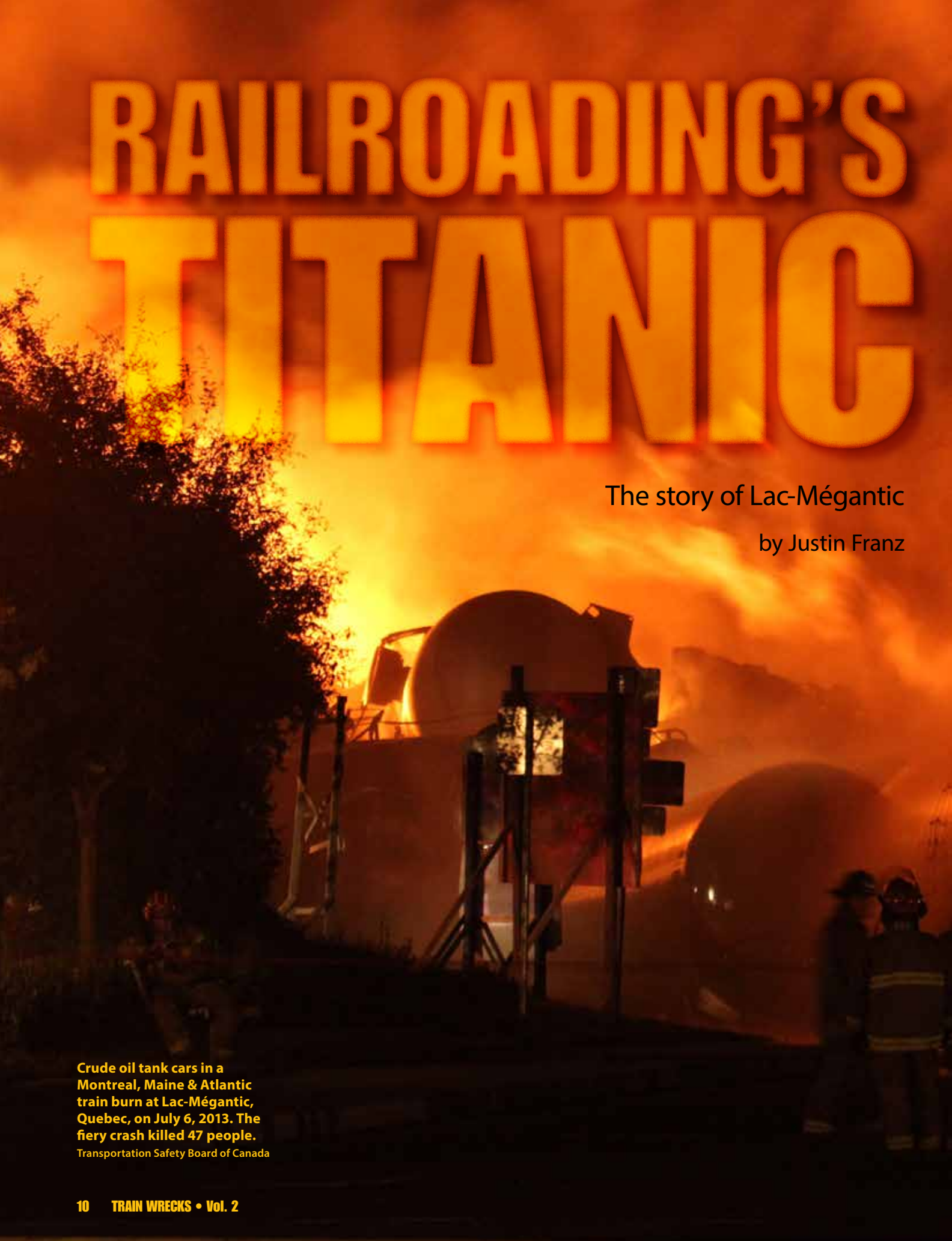
RAILROADING'S TITANIC

The story of Lac-Mégantic

by Justin Franz



Crude oil tank cars in a Montreal, Maine & Atlantic train burn at Lac-Mégantic, Quebec, on July 6, 2013. The fiery crash killed 47 people.
Transportation Safety Board of Canada

Just before 11 p.m. on July 5, 2013, Montreal, Maine & Atlantic Railway train No. 2, an eastbound oil train, pulled to a stop at the east end of the Nantes siding, 7 miles west of Lac-Mégantic, Quebec. Locomotive engineer Thomas Harding, a 33-year veteran of the railroad, who first hired out on the Canadian Pacific in 1980, emerged from the cab of General Electric C30-7 locomotive No. 5017 into a warm July night.

The 74-car train with five locomotives stretched into the darkness along Route 161 and, with the exception of the idling locomotives, all was quiet. Harding began to walk along the train and apply handbrakes on five locomotives, a buffer car, and a remote control caboose placed between the first and second locomotives. He then shut down the trailing four locomotives and did a brake test. At 11:05 p.m., Harding called the dispatcher in Farnham, the division point to the west where he had started his workday 10 hours earlier, to ask for a taxi to take him to his hotel.

While waiting for the taxi, Harding called another dispatcher in Bangor, Maine, headquarters of the MM&A, to talk about issues he had with the lead locomotive throughout the day. Harding reported that the engine had been losing momentum throughout the trip and that he was unable to maintain power as he guided the loaded oil train over the Sherbrooke Subdivision's roller-coaster profile. He also noted that when he had arrived at Nantes the locomotive was spewing black-and-white smoke. The dispatcher and Harding agreed to leave the engine as it was and have the next crew, who would take the train from Nantes to Brownville Junction, Maine, deal with it in the morning. Shortly after ending the conversation, the taxi from Lac-Mégantic arrived.

As Harding put his grip in the cab, the driver asked about the smoking locomotive that was spewing oil on the vehicle's windshield. "The engine's busted," Harding said as he climbed in.

Two hours later, the same train that Harding had parked at a remote siding in Quebec's Eastern Townships would be at the center of the worst railroad accident in modern Canadian and U.S. history.

The derailment of MM&A train No. 2 resulted in the death of 47 people and leveled buildings in the heart of downtown Lac-Mégantic, changing the small lakeside community forever. But the incident also had impacts far beyond Lac-Mégantic and they continue to impact the rail industry five years later. In many ways, the derailment and explosion in Lac-Mégantic on July 6, 2013, changed the rail industry in the same way the sinking of the R.M.S. Titanic a century earlier impacted maritime transportation.

SMOKE AND FLAMES

Ten minutes after Harding left the siding at Nantes in the taxi, a nearby resident called 911 to report that the train in Nantes was on fire. Smoke and flames were pouring out of the stack of the train's lead locomotive due to a build up of oil. Sûreté du Québec, the provincial police, called the MM&A dispatcher in Farnham to inform him that the train was on fire. The dispatcher told police that it was loaded with crude oil.

The dispatcher called the operations manager to advise him of the fire. They decided that an MM&A employee from Marston, Que., just south of Lac-Mégantic, should go inspect the train. The dispatcher called twice but was unsuccessful in reaching the former locomotive engineer and mechanic. Meanwhile, the Nantes Fire Department arrived at the scene, boarded the locomotive and shut down the engine using the emergency fuel cut-off switch in order to put out the fire.

Just before midnight, a track worker from the Lac-Mégantic area called the Farnham dispatcher and told him that he had been contacted by the Nantes Fire Department about the blaze. The track worker told the dispatcher that the fire was out but that someone should be sent to the siding to check on the train. A track foreman from Lac-Mégantic was called to check it out.

After talking to the track worker, the dispatcher called Harding at his hotel in Lac-Mégantic and told him that the train No. 2 had caught fire and that the lead locomotive, No. 5017, was shut down. Harding said that was the only engine he had left running and then asked if he should go back to the train to start another engine. The dispatcher told Harding that another employee was heading to the site and that the engines would be restarted in the morning.

UNBEKNOWNST TO THEM, THE AIR BRAKES HAD BEEN SLOWLY RELEASING EVER SINCE THE ENGINE HAD BEEN SHUT DOWN.

At approximately 12:30 a.m. on July 6, the track foreman who had been dispatched from Lac-Mégantic arrived at the train and met with two firefighters. He was told by firefighters that the fire was out and that the locomotive had also been turned off to prevent it from reigniting. The MM&A employee relayed the information back to the dispatcher who told him to leave the train as it was. The track foreman left the scene at approximately 12:44 a.m.

While the train appeared to be stationary to the MM&A employee and the firefighters, unbeknownst to them, the air brakes had been slowly releasing ever since the engine had been shut down. At 12:58 a.m., train No. 2 began to roll toward Lac-Mégantic.

Within 10 minutes the train was already halfway to Lac-Mégantic and reaching speeds of 25 mph on the downgrade. One of the firefighters from Nantes was on his way home when he approached a railroad crossing just west of town. The firefighter later said that he saw the train roll by with no lights on.

Seven minutes later, its speed had doubled. A minute after that it was moving

An aerial image shows a cleanup crew working in a burned-out Lac-Mégantic, Quebec, on July 9, 2013, three days after the disastrous derailment that killed 47 people. Canadian Press via Associated Press

at 65 mph as it passed the Catholic church on the edge of downtown and rounded the curve over the Rue Laval crossing. As the train entered the Lac-Mégantic yard and rounded the curve, the locomotives uncoupled from the buffer car and continued to roll east. The buffer car and the first few tank cars rolled off the tracks and on to their sides. The other cars began to accordion into a pile over the west switch of the yard. A fire started almost immediately and massive explosions filled the sky over downtown Lac-Mégantic. Burning oil began to run down the streets.

Within a matter of minutes half of downtown Lac-Mégantic was on fire. Near the epicenter of the inferno was Musi-Café, a local music venue along the tracks that was packed that Friday night. Survivors later told newspapers that they felt a rumble and then seconds later saw the orange reflection of a fireball on the buildings across the street. One survivor told the Globe and Mail newspaper that it was "brighter than the middle of the day, a blinding, lively orange." Everyone ran for their lives. The Quebec Coroner's office later determined that those who were not able to get out of the bar in the first few moments of the fire most likely died of asphyxiation. The fire from the derailed train was so massive that it sucked all the oxygen from inside the building and the windows and doors imploded.

The first 911 call came 2 minutes after the train derailed. Twelve minutes after that Sûreté du Québec called the MM&A dispatcher in Farnham and told him that there was a fire in the rail yard at Lac-Mégantic and that they believed it was the train that had been sitting at Nantes. The dispatcher told the officer that an MM&A employee would be on scene as soon as possible.

Michael Harding

Meanwhile, the explosions had rattled Harding, the locomotive engineer, out of bed at his hotel. At 1:48 a.m., Harding called the Farnham dispatcher to tell him that downtown Lac-Mégantic was on fire. However, there was confusion as to what started the blaze because there were no hazardous material cars in the yard and the only two trains in the area, MM&A Nos. 1 and 2, were parked east and west of town, respectively.

Or so they thought.

During the next 50 minutes, MM&A employees frantically tried to figure out what had exploded in the yard and, according to a Transportation Safety Board of Canada report, there were multiple phone calls made starting at 1:50 a.m. Soon after, the dispatcher received a report that a train had been seen rolling into Lac-Mégantic earlier in the night. The dispatcher sent the track foreman who had checked train No. 2 an hour earlier back to Nantes to check on

An eastbound Montreal, Maine & Atlantic freight train holds the siding at Nantes, Quebec, in March 2010, on the 1-percent grade where the July 2013 runaway began. Timothy Franz

it again. At 2:39 a.m., the track foreman called the dispatcher in Farnham and told him that the eastbound oil train was no longer at Nantes.

From the time of the explosions until about 3:30 a.m., Harding remained in contact with the dispatcher in Farnham using a pay phone from a nearby gas station. An hour after the dispatcher had found out what really had happened, Harding had called to give him an update. According to audio recordings, the engineer was talking for about a minute when the dispatcher interrupted him.

"It's worse than that, my friend," the dispatcher said.

"It's your train that rolled down."

"No!" Harding replied.

"Yes sir," the dispatcher said.

"No, RJ... Holy [expletive]."

A 'WEAK SAFETY CULTURE'

Forty-seven people died when train No. 2 derailed and exploded. The fire was so intense, law enforcement and investigators say, that five bodies were never recovered.

Among the victims was Éliane Parenteau-Boulanger, a 93-year-old woman who lived alone in a house near the railroad tracks. Her family said she loved to garden and her strawberry-rhubarb pies were legendary. Geneviève Breton, 28, was an aspiring singer who was spending the summer back home with her parents. Her first album was released posthumously, and the proceeds went toward a nonprofit organization that promotes music within the community. Talitha Coumi-Begnoche, 30, and her two daughters, 9-year-old Bianka and 4-year-old Alyssa, were all sleeping in their apartment when the train derailed. The girls' father was just down the street when the train derailed, and when he heard the explosion, he started to run toward the apartment but he was halted by a wall of flames.

It took hundreds of firefighters from Quebec, Ontario, and Maine nearly two days to put the fire out. When the smoke cleared, approximately 30 buildings were gone, and the twisted remains of dozens of tank cars sat charred in the heart of town.

The MM&A hired workers to begin the cleanup but within days it ran out of money and the contractors threatened to walk off the job, forcing the city and province to pick up the tab. The 510-mile MM&A was owned by former Wisconsin Central veteran Ed Burkhardt's Rail World Inc. and was created with the 2003 purchase of Iron Road Railways. A month after the derailment, on Aug. 7, 2013, the MM&A filed for bankruptcy in Maine and Quebec. A court-appointed trustee was tasked with selling the crippled railroad and in January 2014, it went up for auction. Nearly 20 companies showed an interest in the MM&A but in the end, only three bids were submitted. Railroad Acquisition Holdings, an affiliate of Fortress Investment Group, purchased the embattled railroad for $15.85 million, significantly less than the $50 million Rail World paid a decade earlier for the former Bangor & Aroostook and Canadian Pacific lines. Fortress closed the deal on May 15, 2014, and a few days later assumed operations under the name Central Maine & Quebec.

In August 2014, the Transportation Safety Board of Canada issued a report that stated 18 different factors contributed to the derailment, including a "weak safety culture" at MM&A. The report offered that trouble started months earlier when the lead locomotive on the train, C30-7 No. 5017, had received a shoddy repair. That repair began to fail in the days before the wreck.

Ed Burkhardt

The safety board also determined that the engineer had failed to apply enough hand brakes on the train prior to leaving for the hotel. Harding tied down seven hand brakes, including the brakes on the five locomotives, the remote control caboose, and the buffer car. However, according to the safety board report, the train would have needed 18 to 26 hand brakes applied to have remained stationary without the air brakes. Investigators also found that Harding conducted a brake test while the air brakes were still applied, giving the false impression that the train was secure.

Safety board investigators also criticized federal regulators, such as Transport Canada, for not paying close enough attention to companies such as the MM&A and ensuring that it was following the rules. "This was about more than hand brakes and what the engineer did and did not do," said TSB chair Wendy Tadros during a news conference in Lac-Mégantic. "In all, there were 18 factors that caused this accident and you take

MM&A NOS. 1 AND 2, WERE PARKED EAST AND WEST OF TOWN, RESPECTIVELY. OR SO THEY THOUGHT.

LAC-MÉGANTIC WRECK JULY 5-6, 2013

any one of them away and this might not have happened."

On May 12, 2014, engineer Harding, manager Jean Demaître, and dispatcher Richard Labrie were each arrested and charged with 47 counts of criminal negligence causing death in provincial court. Harding had been arrested by a SWAT team at gunpoint in his backyard in Farnham because police were concerned about the presence of weapons at his house. The three men were detained until they made a court appearance the following day in a makeshift courtroom in Lac-Mégantic.

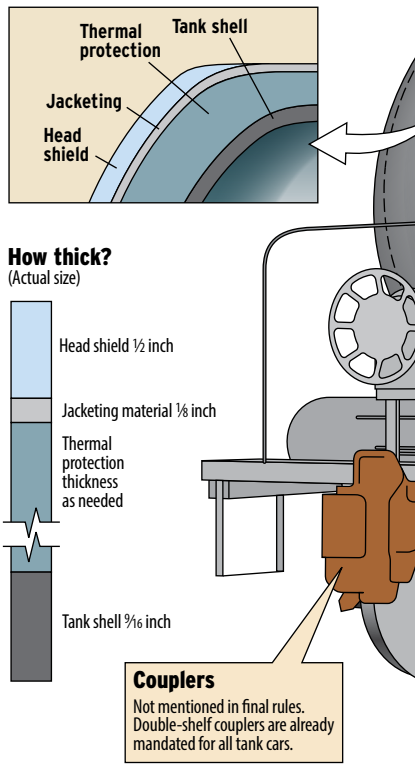
The criminal trial began in October 2017 and lasted for more than four months. During the trial, held in nearby Sherbrooke, government prosecutors argued that the three men were directly responsible for the derailment. But defense attorneys countered that the three men were merely bit players within a failed system and that it was the railroad's safety culture and lack of government oversight that actually led to the derailment. A 12-person jury deliberated for nine days before finding the three men not guilty.

After the criminal trial, Harding said, "I cannot find the words sufficiently to express my sympathies. I am deeply sorry for my part of responsibility in this tragedy."

Three weeks after the criminal trial concluded, Harding and five other former MM&A employees all pleaded guilty to violating federal Railway Safety and Fisheries acts in a case separate from the provincial criminal trial. Robert Grindrod, CEO and president; Lynne Labonté, general manager of transportation; Kenneth Strout, director of operating practices; Michael Horan, assistant director of operations; Jean Demaître, operations manager; and Harding all pleaded guilty to not ensuring that enough brakes were applied to the doomed oil

A tank car involved in the Lac-Mégantic wreck displays fire and crash damage, including a rail through the tank's shell. Transportation Safety Board of Canada

DETAILS OF THE DOT-117 TANK CAR



train. Harding was sentenced to six months probation while the other five each paid a $50,000 fine that was put into a fund for the community. The MM&A was also fined $1 million for violating the same Fisheries Act by polluting a nearby river and lake with thousands of gallons of fuel.

NEW RULES

The Lac-Mégantic wreck put rail safety on the front of nearly every newspaper and newscast in North America in 2013 and 2014. Overnight, railroaders, regulators, and the public were asking a tidal wave of questions about what happened in the small lakeside town: Why did the tank cars rupture in such spectacular fashion? Why did the fire burn so intensely? And what could be done to prevent it from happening again?

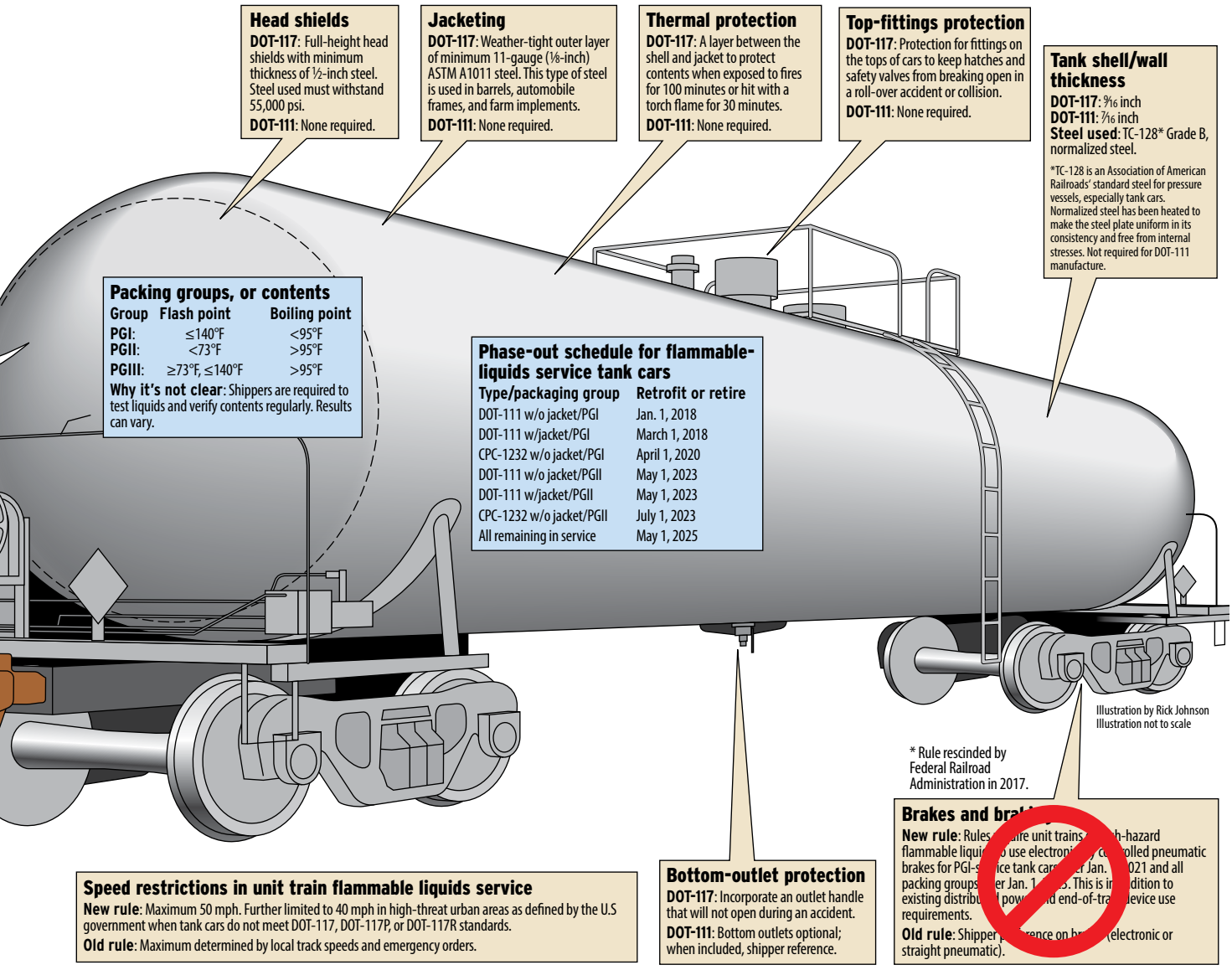
There was also a sense of urgency to the questions thanks to the dramatic spike in crude oil moving by rail, thanks in large part to the Bakken oil boom in North Dakota. With advances in hydraulic fracturing, which helped release oil that had previously been trapped in the tight shale rock below the surface, the Bakken became the epicenter of the American energy sector. In 2005, the Bakken Formation produced less than 3,000 barrels of oil a day; seven years later it was producing 547,000 barrels per day. Pipelines out of the region quickly filled to capacity, so the oil and gas industry turned to railroads to ship their product to refineries in nearly every corner of North America. In 2008, North America's Class I railroads moved just 9,500 carloads of crude oil. By 2013, it was moving more than 400,000 carloads annually.

"IT'S WORSE THAN THAT, MY FRIEND," THE DISPATCHER TOLD THOMAS HARDING. "IT'S YOUR TRAIN THAT ROLLED DOWN."

Politicians were quick to react following the Lac-Mégantic oil-train wreck. Some believed the MM&A's use of one-person crews was partially to blame. The argument was that if a second person had been present, additional hand brakes could have been applied to the oil train. A month after the wreck, U.S. Rep. Mike Michaud, D-Maine, who then represented the congressional district the MM&A ran through, introduced the Safe Freight Act, a bill requiring at least two people in the cab of every freight train. "To me it's common sense that having another person on that train is going to be better than just one," Michaud said. Since then, the Safe Freight Act has languished in Congress. In 2017, U.S. Rep. Don Young, R-Alaska, reintroduced the bill and in 2018, U.S. Sen. Heidi Heitkamp, D-N.D., introduced a Senate version of the legislation.

Although the bills have bipartisan support, the industry, specifically the Association of American Railroads, has railed against it, noting that there is no conclusive evidence that two people aboard a train would make it any safer.

Public officials were also critical of government regulators for not doing enough to safeguard the movement of crude oil. Karen Darch, Barrington, Ill., village president, likened the DOT-111 tank car, the type of car that was involved with the Quebec oil train disaster, to the Ford Pinto, an automobile prone to catch fire due to the placement of its fuel tank that was later recalled. Darch accused the U.S. government



of knowing for years that the DOT-111 was prone to rupturing during a derailment but not doing anything about it.

Regulators on both sides of the border quickly began to act. On July 23, 2013, just two weeks after the Lac-Mégantic wreck, Transport Canada issued an emergency directive in regards to the movement of crude oil by rail. The new directives required two crew members aboard any train with one or more tank cars loaded with hazardous materials; that no oil train be left unattended on a main line; that the cab of all unattended locomotives on a main line be locked; that reversers be removed from any unattended locomotive; and that a sufficient number of hand brakes be applied to all parked oil trains. Two weeks later, on Aug. 7, the Federal Railroad Administration issued its own emergency directive with similar rules for the movement of oil

First responders don hazardous materials suits and haul a toolbox to the site of a simulated derailment at the Security and Emergency Response Training Center in the Transportation Technology Center near Pueblo, Colo. Shawn P. Burress

trains. In late summer 2013, the FRA and Transport Canada began to look at long-term regulations to prevent more incidents such as Lac-Mégantic.

Meanwhile, oil-train derailments continued to make headlines across North America, although none matched the tragedy of Lac-Mégantic. On Nov. 8, 2013, an Alabama & Gulf Coast oil train derailed and exploded near Aliceville, Ala., releasing about 750,000 gallons of oil from 26 tank cars. On Dec. 30, 2013, a BNSF Railway oil train collided with a derailed grain train near Casselton, N.D., igniting thousands of gallons of fuel and forcing the evacuation of more than 2,000 residents. On Jan. 7, 2014, a Canadian National oil train derailed and exploded near Plaster Rock, New Brunswick, forcing the evacuation of 150 people. On April 30, 2014, a CSX Transportation oil train derailed and exploded near downtown Lynchburg, Va., spilling nearly 30,000 gallons of oil into the James River. On Feb. 14, 2015, another CN oil train derailed in northern Ontario. Less than two months later, yet another CN oil train derailed and exploded on the same route just 23 miles away near Gogama, Ont. On Feb. 16, a CSX oil train derailed along the Kanawha River, burning a nearby house to the ground. On March 10, 2015, a BNSF oil train derailed near Galena, Ill., sparking a fire that lasted for more than two days. On May 6, 2015, a BNSF oil train derailed near Heimdal, N.D., spilling 60,000 gallons of oil. On July 16, 2015, a

Canadian Pacific ES44AC No. 8767 and AC44CW No. 8504 lead an empty unit crude-oil train near Harrowby, Manitoba, bound for a terminal in Saskatchewan in 2016. David Maiers

BNSF oil train derailed near Culbertson, Mont., spilling 35,000 gallons of fuel. On Nov. 7, 2015, the derailment of a Canadian Pacific oil train forced the evacuation of dozens of homes in Watertown, Wis. And on June 3, 2016, a Union Pacific oil train derailed and exploded in Mosier, Ore., filling the scenic Columbia River Gorge with thick back smoke.

Railroads also began to implement their own rules for the movement of oil. In March 2015, BNSF told customers that it was implementing a self-imposed speed restriction of 35 mph on oil trains moving through large municipal areas with populations of more than 100,000 people. The railroad stepped up the number of track inspections on its lines that had oil trains. The railroad also announced that it would no longer accept the older DOT-111 cars within three years and even started to charge oil shippers $1,000 every time they used an older tank car to ship crude.

On May 1, 2015, U.S. Secretary of Transportation Anthony Foxx and Canada's Minister of Transport Lisa Raitt announced a series of new regulations to safeguard the movement of flammable liquid by rail. Federal officials called for the replacement of both DOT-111 and CPC-1232 cars with new DOT-117 cars. The new cars included a nine-sixteenths-inch tank shell, thermal protection shielding, pressure relief valves, and half-inch shields on either end of the cars. All new tank cars built after Oct. 1, 2015, had to be built to DOT-117 standards.

Residents stand on the tracks at the site of the 2013 derailment in Lac-Mégantic on July 5, 2014, just a year after the incident. Canadian Press via Associated Press

A view of downtown Lac-Mégantic looking to the northeast in this spring 2017 image. The village is mostly unrecognizable compared with before the disaster. Village of Lac-Mégantic

Federal officials also called for enhanced electronic-braking systems that theoretically could stop a train faster, to be installed on all oil trains by 2023. In 2017, President Donald Trump's administration repealed the electronic-brake system requirement. The DOT also ordered all oil trains to travel no faster than 50 mph, or 40 mph if there were any DOT-111 tank cars within the consist. Railroads were also required to share oil-train-route information with state and local agencies to help first responders prepare for an oil-train-related incident. Lastly, the government agencies called for more frequent cargo sampling to ensure that all unrefined petroleum-based products were properly labeled.

"Safety has been our top priority at every step in the process for finalizing this rule, which is a significant improvement over the current regulations and requirements and will make transporting flammable liquids safer," Secretary Foxx said during the announcement in Washington. "Our close collaboration with Canada on new tank car standards is recognition that the trains moving unprecedented amounts of crude by rail are not U.S. or Canadian tank cars — they are part of a North American fleet and a shared safety challenge."

Federal agencies were not the only ones to try and regulate the movement of crude by rail. States and municipalities made attempts to level fines against railroads for the movement of certain hazardous materials, although critics note that neither a state nor a city has the power to regulate interstate commerce. Once such example was in Spokane, Wash. A grassroots environmental group called Safer Spokane put forward a ballot initiative in 2017 that called for the city to levy a tax against railroads that moved oil or uncovered coal within city limits. The group argued that the bill was about keeping the community safe from oil-train derailments and coal dust, but opponents to the effort, including the mayor and the county sheriff, said it was unenforceable and would have had a negative impact on the economy. The initiative failed at the ballot box in November 2017.

In the years following Lac-Mégantic, railroads intensified their efforts to train first responders on how to deal with an oil-train wreck. The industry, led by railroads such as BNSF, UP, and CSX Transportation, spent millions of dollars to train thousands of first responders from across the country on how to douse crude-oil fires. Firefighters were frequently sent to the Transportation Technology Center near Pueblo, Colo., for multiday courses on hazardous-material spills. Railroads also began using specialized training tank cars and trains to take the courses to as many fire departments as possible. The BNSF training tank car, for example, helped firefighters and emergency responders learn about the different types of tank car caps and leaks that they could run into.

Nikki Burgess, a regulatory specialist with more than 30 years experience in the industry, says looking back at the years following the Lac-Mégantic wreck, it is amazing how quickly government regulators and the industry responded. "Regulatory change traditionally moves at a glacially slow pace. Proposals have to be made, comment periods have to happen, revisions are made, it takes a long time. So when you have these headline-making incidents, like Lac-Mégantic, it moves a lot quicker," Burgess says. "The pace of change in this case was remarkable."

UNITED IN REBUILDING

Five years after MM&A train No. 2 derailed and exploded in Lac-Mégantic, the rebuilding has only just begun. The cleanup effort began almost as soon as the fires were out and it took nearly two years to remediate the oil-contaminated soil. Although approximately 30 buildings were destroyed in the initial derailment, just as many had to be demolished in the months after, because of contamination. In the end, about 30 acres were wiped clear.

In the aftermath of the wreck, the municipality established a Bureau of Reconstruction to help spearhead the town's rebirth. Once the cleanup was complete, roads, sidewalks, and water and sewage infrastructure were built. In 2017, some of the first new buildings were built and even more were expected to be erected in 2018,

including a mix of commercial and residential buildings. The town is also encouraging developers to build environmentally friendly buildings. Businesses that build to the latest energy efficiency standards do not have to pay property taxes for the first five years.

Sonia Dumont, director of communications and marketing for the bureau, says despite the tragedy, Lac-Mégantic is becoming a great place for people who want a new beginning.

"We're dedicated to the reconstruction of Lac-Mégantic and we're not just talking about a physical reconstruction, we're rebuilding a people and a community," she says. Dumont says city officials and developers have worked hard to ensure that community members play an important role in how the downtown is rebuilt.

One thing local residents asked for during a number of public meetings was green space and so a park connecting the downtown to the lake is being constructed. "People are ready to move ahead, to move forward. They want a downtown where life takes place," she says.

There will also be a place to remember those killed in the tragedy five years ago. Dumont says in early 2018, the city finalized plans for a memorial to remember the 47 victims. The details of the memorial are expected to be released around the fifth anniversary in July.

But more than park space, residents want the railroad that caused the disaster gone. Not long after rail service returned to town in December 2013, community members began to call for a rail bypass around the town.

A study looked at three different bypass designs and the most popular would take the rails on a 7-mile detour north away from downtown and through farmlands. In January 2018, Minister of Transport Marc Garneau said the Canadian government would contribute "a substantial sum" to the building the bypass in partnership with the Province of Quebec. An official plan was expected to be released later this year.

Executives with the current operator of the railroad through town, the Central Maine & Quebec, have said in the past that they would support whatever was best for the people of Lac-Mégantic.

"SOME PEOPLE IN THIS COMMUNITY ARE STILL TRAUMATIZED BY PASSING TRAINS, EVEN THOUGH THEY SEE AND HEAR THE TRAIN EVERY DAY,"

Prime Minister Justin Trudeau announced in May 2018 that government officials selected a 6.8-mile route around the town that would take the rail line through nearby farmland. The Canadian and Quebec governments will split costs of the $133 million bypass 60:40 and expect to open the line by 2022.

There's an old saying in transportation: the rules are written in blood. Perhaps the most memorable example of this old adage is the sinking of the R.M.S. Titanic in 1912. Within weeks of the ship's sinking, inquiries into the tragedy began in both the United States and Great Britain that would drastically alter maritime law over the next few years. The most famous example were new laws requiring passenger ships to carry a sufficient number of lifeboats. While the Titanic was in compliance with the laws of 1912, the 16 lifeboats it had were not nearly enough to save the lives of the more than 2,000 people aboard the ship. Other changes included the establishment of a North Atlantic ice patrol, which continues to warn ships of ice fields more than a century after an iceberg sank the Titanic.

There are stories — often tragic — behind every rule in shipping. The same goes for railroading. Usually, rulebooks are written by piecemeal, but every once in a while, an event happens that changes everything, be it the sinking of a ship or the derailment of a train. On the night of July 5, 2013, as people filed into Musi-Café for an evening of music and dancing and as Thomas Harding guided an oil train east toward Lac-Mégantic, few could have guessed what was about to happen.

Few could have guessed that a town and an industry were about to change, and change forever. TW