**Testimony of John A. Nadalin, Ph.D., MBA on House Bill 186**

Good day and thank you for the opportunity to speak to you regarding House Bill 186, and specifically, the need for two persons in the locomotive cab. That would be an engineer and a conductor.

My name is John Nadalin and I am an Adjunct Professor of Management and Leadership at Franklin University here in Columbus. While I just began my 20th year with Franklin on September 5th, I also had the privilege of working as a locomotive engineer with CSX Transportation for 42 years.

During that time, I witnessed many changes in the industry as did my father and my brother, who both worked in that same capacity. When I began my career in June of 1968, many yard crews in switching (classification) yards had seven members on their crew. On over the road freight trains, there were five. Today we see remote control operations in yards with only one or two workers doing the job. For over the road trains the national average is 2.2 crew members. While some changes were warranted, many others were undertaken solely for change sake. Productivity has declined and rail carriers refuse to take responsibility for their own mismanagement. As a stockholder of my former employer, I am very attentive to their annual reports and strategies for future earnings.

Corporate arguments often focus on their cost of capital and operating margins, and we understand that companies must remain profitable to stay in business. However, making changes that put employees and the general public at risk should never be allowed. I see this as the Corporate Social Responsibility of the railroads to make safety their number 1 priority.

These decisions are part of a recent shift to what is known as Precision **Scheduled Railroading (PSR). PSR is a railroad strategy which uses departure schedules and point-to-point delivery methods to achieve low operating ratios and consolidate railroad networks. While rail workers should celebrate any action that would lead to a more predictable work schedule, the fact is that PSR** means doing less work and making less money. My father used to say that the railroads would spend dollars to save pennies and that ultimately, they would save themselves out of business. In fact, these departure schedules require trains to leave on-time, whether the customer’s freight is present on the train or not. This frequently interrupts the supply chain in an era when just in time delivery is paramount to the success of other rail dependent or rail/truck dependent industries.

If you have been stopped at a crossing while in your car recently, you may have noticed that trains on America’s rails are getting ever longer. With railroads increasing the length of trains to as much as 14,000 feet, this creates many safety problems, mechanical and logistical, like an inability to maintain adequate brake pipe pressure, which is needed so a train can safely slow and stop.

As trains get longer, incidences of them breaking apart are far more frequent due to in-train forces at work (draft and buff), and a crewmember cannot monitor an entire two-mile-long train by looking out the window. How will a single individual who experiences a problem with train separation and subsequent emergency braking application be able to walk the length of that two-mile-long train, estimated to be at least one hour in each direction, without causing a safety issue to both the individual and the public? Picture yourself walking along the street with one foot on the curb and the other on the street for two miles and you will understand how it feels to walk alongside a train on rail ballast which is sloped away from the track and often loosened.

Crossings that are blocked mean emergency vehicles must find another way to the scene of an accident or a fire, often going miles out of their way to help. Only with two persons on board can the train be backed up or separated to assist first responders. And what of single employees forced to work alone in high crime areas where criminals will know when they spot an easy target? Employees have been shot at and I myself have been hit in the right temple by a kid who threw a large piece of blacktop at my train while I was stopped on an overpass near Ohio State.

In my job at Franklin University, I have had the opportunity to teach many students from the undergraduate to the doctoral ranks about managing a business. It would be silly for me to sit before you today and state that the nation’s rail carriers are not making arguments about their bottom line, about how technology (such as positive train control - PTC) has eliminated or will eliminate the need for two persons in the locomotive cab, and how their proprietary data shows no correlation between crew size and rail safety. That is because no data exists on single person and no person train operations in America. You can make the same claim about autonomous planes, buses, trucks and automobiles. There is no data that proves these forms of transport are safer being operated autonomously because virtually none have operated autonomously.

When PTC is fully implemented it will cover about 40 % of our nation’s mainline track. PTC prevents some head-on collisions and over-speed situations. It doesn’t prevent rear-end collisions. It can’t cut a road crossing. It can’t spot a terrorist. It can’t back up a train. It can’t make an air test, nor can it secure a train or safely perform a host of other things two qualified crewmembers can and do accomplish every day.

Today we are talking specifically about trains operating on the rail lines that pass through the communities you represent. These trains take a skilled crew to handle safely. The need to have two experienced professionals to act quickly during times of emergency cannot be swept aside as irrelevant. One must have operated a locomotive after getting called to work at 2 am and without proper rest because you stayed up to see your wife and children, or because you attended to mounting chores that had gone undone due to your erratic work schedule to really understand.

The evidence regarding the effect of our circadian rhythms cannot be diminished because of rail carrier testimony that crew members are to report to work and be ready for whatever that 12-hour shift is likely to throw at them. Fatigue, trespassers, drivers who fail to obey lowered crossing gates, and even a midnight jogger that I witnessed running through one of those crossing gates with his hands in the air as if he had just won the Boston Marathon, are but a few of the challenges crew members face every day.

Although I have been retired since May 1, 2010, I still remember these challenges of getting proper rest as do my wife and son who remind me of the many times I could not participate in family events as I tried to sleep during the day to be prepared for another trip. And regardless of federal or company rules requiring operating crews to get their proper rest, there is still an ongoing battle for rail crews who are on call 24/7 and who get a 2-hour notification to report for work to assume a 12-hour tour of duty. Fatigue is the largest safety issue which exists in the railroad industry. The fatigue issue will be exacerbated by eliminating the second member of the operating crew.

Rail carriers envision a future where there is no need for any crew member on the locomotive, or at most, a minimum wage employee hired to hit a big red panic button when their technology fails them. I recall being told that in the future there would be three things on the locomotive. The first would be a computer, the second a dog, and the third, an engineer. The job of the computer would be to run the train. The second would be an engineer to feed the dog. And third, would be a dog who would be trained to bite the engineer if he touched the computer.

As funny as that sounds, we cannot take a passive approach to safety. We need the experience that only two crew members can bring to safe rail operations. If the engineer or conductor becomes incapacitated, who will be there to help them through a medical emergency? If there is a derailment and a chemical spill into a nearby stream or river, who can be there to guide first responders and move as much of the remaining train as is possible, out of their way? When you hit and kill a motorist or trespasser, who will provide assistance to law enforcement to extricate the locomotive (and perhaps the trespasser) from that vehicle or locomotive?

And who can forget the movie “Unstoppable” which was based on a real event in which the engineer and conductor were ready to take a train from Toledo to Columbus, but were called into action to chase down a runaway train? I worked with both the engineer and the Conductor who actually stopped that train and were declared Ohio heroes as a result. Thankfully this was a learning event for the industry and for the rail workers involved to ensure no reoccurrence. Legislation and regulation are the reasons why!

The railroads have already shown that they do not care about anything but profits. The terrible tragedy in Lac-Megantic, Quebec on July 6, 2013 which cost 47 lives and nearly destroyed the town involved a single crew member, working alone, who had his 72 car train of crude oil roll away on a steep grade because that was the only stretch of track without a rail/highway crossing to cut. A second crew member to place sufficient hand brakes on the train would have prevented this disaster.

In sum, legislation requiring a crew of at least two individuals has been made law in seven states and is being considered in many others. This is a matter of public safety. At all hours, day and night, trains up to two miles long or longer, and carrying cargo and hazardous materials roll through our communities. Only you, our elected officials, can stop the insanity of these short-sighted operating practices.

I am proud that my Congressman, Steve Stivers, supports federal legislation to ensure that every over the road train operating in America has a minimum of two persons on board. And I urge this Committee and the House and Senate of the State of Ohio to move in favor of this legislation and all of its component parts. I would be happy to take any questions you may have and thank you for your time.