happy to form a Corridor Coalition to address this problem in a coordinated fashion, just contact the Acton Selectmen's office to indicate your interest.

We are enclosing the packet of information that we presented to the FRA on August 24, 1995 at a meeting arranged by Sen. Ted Kennedy. If you wish more information please feel free to contact the Selectmen's Office or Garry Rhodes in the Town Manager's office.

Sincerely,

Nancy E. Tavernier

Nancy E. Tavernier
Board of Selectmen

TRAIN WHISTLES

The effectiveness of their use at grade crossings and the impact of that use on the local residents.

Town of Acton

August 1995

Nancy E. Tavernier, Board of Selectmen

Garry A. Rhodes, Town Manager's Office

508-264-9632

TRAIN PACKET

Table of Contents

Response to FRA Study

Response from the Town of Acton
Garry A. Rhodes

Trains have been a part of this country since the 1830's. The population of the United States has grown from fifteen million then to two hundred and fifty million people today. We must learn to coexist with trains and take steps to do so.

When whistles were first blown, we were a country of horse drawn carriages. Train whistles were the only provision to warn "motorists" of the on coming train. As the country became more populated crossing shanties were constructed at busy grade crossings. Men would physically lower gates when trains were approaching. Today we have passive and active warning devices.

When whistles were first blown, they were steam driven, today the regulations (49 CFR 229.129) require whistles be sounded at a minimum of 96 dB at 100 feet from the crossing. Today's whistle intensity is substantially higher than in the 1830's. The automobile manufacturers are striving to make vehicles more and more soundproof. Are we to expect the train whistles will get louder and louder?

The 1995 Nationwide Study of Train Whistle Bans (NSTWB) refers to whistles as an "inconvenience to residents near the railroad right-of-ways." It is not apparent that the study evaluated the impact of the noise on these abutting properties. An article in TECHNOLOGY REVIEW vol. 92 (Nov.-Dec. 1989) discusses the impact of noise on people. "With the first exposure to high noise levels, especially if the onset is sudden and unexpected, the human body experiences a surge of adrenaline that mobilizes it for any contingency. Heart rate, blood pressure, and muscle tone increase, peripheral blood vessels constrict and respiration quickens." The Commission on Disabilities for Acton alerted me to the fact that many people have hearing aids that were not around in the 1800's. These hearing devices magnify sound and can cause ear pain. The FAA limits the average noise level to 65 dB for residential properties next to airports because of health concerns. There is no indication in the NSTWB that any consideration was given to the health effects of this noise on residents near the whistle crossings. The only stated objectives were to establish the number of grade crossings subject to whistle bans and what the safety risks were of those bans. (Pg. 11)

The NSTWB reports that more than fifty percent of the accidents happen at crossings equipped with active warning devices (gates). At all pubic crossings in the United States only 16.7% have gates. The report suggests that "perhaps the motor vehicle operators in these accidents do not cross railroad tracks often enough to be familiar with the warning devices designed for their safety, or perhaps they become careless about heeding the warning." I have provided two plans that indicate vehicle movements both with gates and without. You will observe that, when a vehicle decides not to obey the law, it takes substantially more time to maneuver a crossing with a gate than without. The longer a vehicle is in the crossing the greater the time an accident can happen. Two of the

accidents in Acton in the last 11 years were the result of people driving around down gates.

Warning devices are used to alert motorist at grade crossings. In Acton, as in other areas of the country, trains are no longer running on all existing tracks. For economic reasons certain lines are no longer profitable and have been discontinued. When these lines are discontinued the warning devices are sometimes not removed. I have included two pictures of crossings in Acton that show this. When a motorist sees enough of these discontinued crossings with warning devices still in place they may become complacent when crossing an active crossing.

The real question is whether grade crossings are safe. In trying to put this in some perspective I have included, based on Statistical Abstract of the United States (1994) the probability based on statistical death counts in 1991 of dying in an accident.

Motor vehicle accident	(43,536)	1 in 5,739
Accidental falls	(12,662)	1 in 19,744
Accidental drowning	(3967)	1 in 63,020
Accidental firearms discharge	(1441)	1 in 173,490
Grade Crossings	(608)	1 in 411,184

Acton has recorded traffic volumes at all grade crossings and on all major roads in town. Utilizing that data, I have prepared a chart showing the probability of an accident (not necessarily deaths involved) at several intersections in town. It should be noted that these intersections are typical and I suspect they are typical for many towns.

TRAFFIC INTERSECTIONS IN ACTON

	Vehicles/wk.	Vehicles/Yr.	Vehicles/3Yrs.	Accidents/3Yrs.	Frequency	**Frequency**
Kelley Corner	221,200	11,502,400	34,507,200	69	1/15.9 days	**1 in 500, 104 vhs.**
27/Newtown	174,300	9,063,600	27,190,800	39	1/28.1 days	**1 in 697,200 vhs.**
2A/Nagog Park	140,000	7,280,000	21,840,000	21	1/52.1 days	**1 in 1,040,000 vhs.**
Harris/Main	70,000	3,640,000	10,920,000	18	1/60.8 days	**1 in 606,667 vhs.**
Piper/School	56,000	2,912,000	8,736,000	18	1/60.8 days	**1 in 485,333 vhs.**
TOTAL			103,194,000	165	1/6.6 days	**1 in 625,418 vhs.**

By utilizing traffic counts and passenger train schedules (freight traffic data is not available) and police records (11 years) we are able to provide probabilities of accidents at grade crossings in Acton.

GRADE CROSSINGS IN ACTON

	Vehicles/11yrs.	Trains/11yrs.	Accidents11yrs.	**Frequency**
Parker St.	14,414,400	114,400	2	**1 in 7,207,200 vhs.**
Martin St.	13,613,600	65,208	0	**0**
Richardson Crossing	32,032,000	65,208	2	**1 in 16,016,000 vhs.**
Mass Ave.	56,056,000	65,208	1	**1 in 56,056,000**
Arlington St.	16,016,000	65,208	0	**0**
Hapgood Crossing	20,820,800	65,208	0	**0**
TOTAL	152,952,800	440,440	5	**1 in 30,590,560 vhs.**

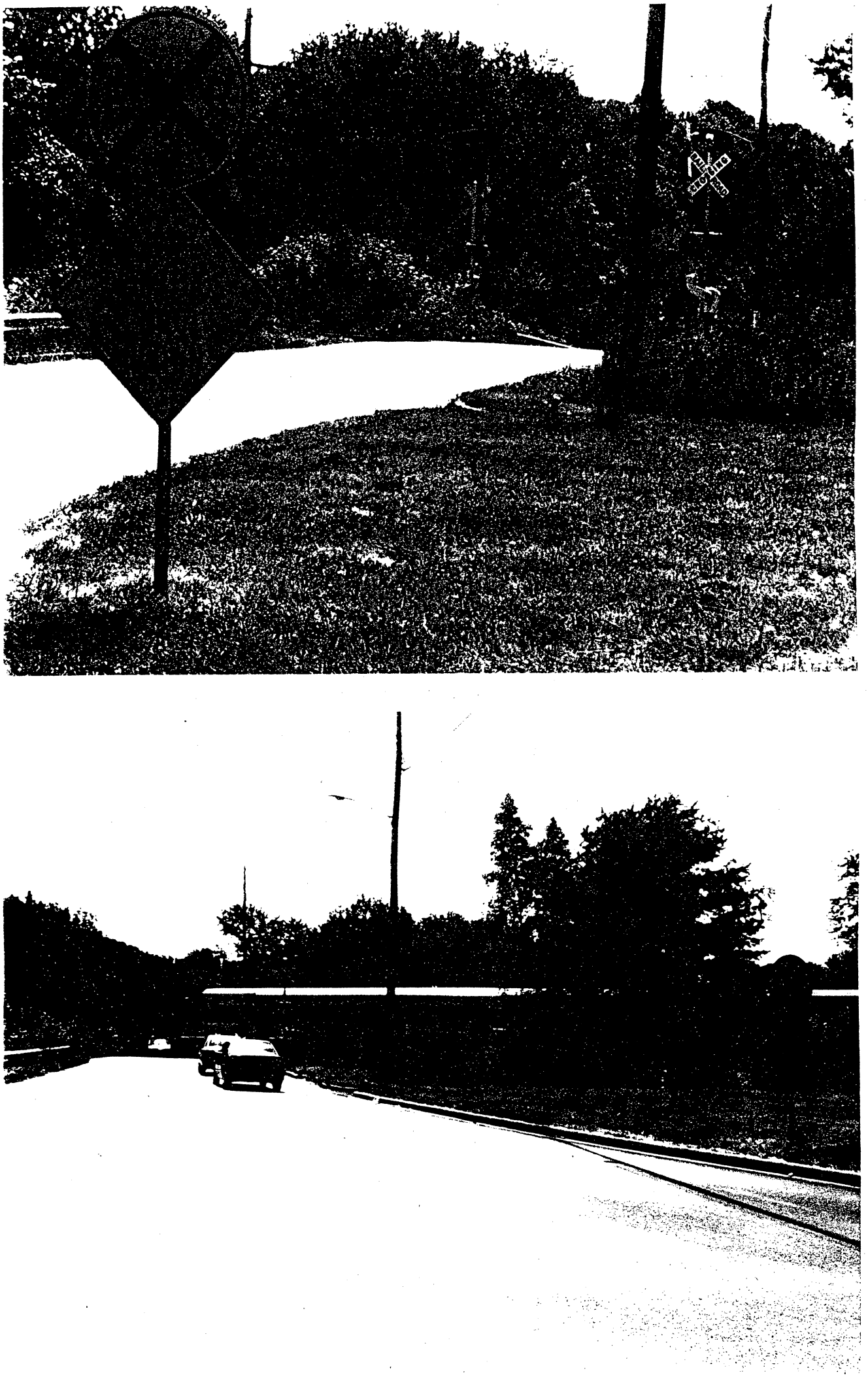
I recognize that I have mixed accidental deaths with accidents that may not involve deaths. The probability of a motor vehicle accident at an intersection or grade crossing without a fatality is greater than with a fatality. The NSTWB reports that whistle ban crossings average 84% more accidents than crossings without bans. This by itself does not indicate that grade crossings are not generally safe. A look at the probability provides a good comparison. 1 in 5,739 people die in motor vehicle accidents. The chance of dying on a pedalcycle is 1 in 312,500. Most people do not take winning megabucks seriously (1 in 1,947,792). Over a three year period five intersections located in Acton had one accident for every 625,418 vehicles. In Acton, over the last 11 years, only one accident has occurred for every 30,590,560 vehicles crossing grade crossings none resulted in a fatality.

In Massachusetts (General laws Ch. 90 s. 15) proceeding over a grade crossing with activated warning devices is against the law. Acton has the optimum active warning devices, gates, flashing lights, bells, overhead street lights, speed limit of 25 mph, pavement markings and signs warning that whistles are not blown. I have included pictures of two crossings in Acton. As compared to other probabilities the grade crossings are safe. The fact that whistle ban grade crossings are 84% more likely to have an accident means little when only 1 in thirty million have accidents.

I strongly suggest that the issue of a whistle ban (Swift Rail Development Act of 1994) be reconsidered for several reasons.

1. Evaluate the impact of noise on residential abutters.
2. Evaluate if the current gate system is adequate (50% of all accidents occur at 17% of all gated crossings.
3. Is the Federal government micro managing where a problem does not exist? The decision should be left up to the municipal government to evaluate if a safety problem exists.

DISCONTINUED GRADE CROSSINGS



A TYPICAL ACTON GRADE CROSSING

How Noise Affects People

To the individual developing a noise-induced hearing impairment, it sounds as if people are not speaking clearly. That's because high-frequency hearing—which is necessary to hear the consonant sounds that carry the meaning of speech—goes first, and is most severely damaged. Thus, the individual with noise-induced hearing loss can hear the voices of others but has difficulty understanding what has been said.

People often believe that because noise doesn't hurt, they're "getting used" to it and the sound is not harmful. But noise-induced hearing loss is insidious. Tiny sensory cells in the inner ear are steadily worn down, damaged, and eventually depleted, never to be restored. Early signs of trouble are ringing noises in the ears (called tinnitus) and a temporary dullness of hearing after an intense noise exposure. If the noise source is not controlled or if the individual is not protected, permanent hearing impairment (and often permanent tinnitus) results.

In addition to hearing loss, noise can produce other kinds of damage. With the first exposure to high noise levels, especially if the onset is sudden and unexpected, the human body experiences a surge of adrenalin that mobilizes it for any contingency. Heart rate, blood pressure, and muscle tone increase, peripheral blood vessels constrict, and respiration quickens.

Even though people can try to "adapt" to noise that they know does not require a response, some of these physiological changes persist, most notably elevated blood pressure and heart rate, as well as changes in blood chemistry. When Ernest Peterson and his colleagues at the University of Miami investigated the effects of noise on rhesus monkeys in 1978, they found that protracted exposure to levels of 85 to 90 dB caused a chronic elevation of blood pressure that did not return to normal after the noise stopped.

People who live near noise sources, especially intermittent ones like airports, wake up frequently and experience changes from heavier to lighter sleep stages. These changes impair the normal pattern of sleep and can produce fatigue and even affect performance the next day. In a large survey of the residents around Amsterdam's airport in 1977, Dutch scientists found greater use of sleeping medications and drugs prescribed for cardiovascular disorders than in an equivalent population exposed to less noise.

On the job, noise can lead to accidents by interfering with speech or masking warning signals. Noise levels above about 95 dB can degrade job performance, especially when the tasks are complex and involve mental and motor skills. Performance is particularly affected when the noise is unpredictably intermittent and when the listener has no control over it. The same pattern also disrupts performance even after the noise has ceased. Laboratory studies have shown that people who are exposed to noise, especially unpredictable and uncontrollable sounds, tend to be less helpful to others and sometimes become antisocial. Workers who must habitually shout above high noise levels can also develop vocal-cord problems that require rest or even surgery.—*Alice Suter*

noise violations. The latter amounts to an average of $18 per citation—hardly a significant deterrent.

OSHA's reluctance to press citations and prosecute violations may reflect the fact that employers have been increasingly inclined to contest these complaints. The stipulation for feasible engineering controls used to be interpreted as *technically* feasible, but the courts have begun to require an economic test as well. The first of these cases occurred in 1976, when a court ruled that OSHA must take economic feasibility into account when citing Continental Can Co. for failing to use engineering controls to reduce noise. Although the courts have not yet explicitly defined economic feasibility, later decisions have upheld the idea that OSHA must consider the cost of engineering controls.

Department of Labor lawyers also hesitate to litigate such cases because economic feasibility is much more difficult to prove than technical feasibility. In 1987, companies contested nearly one-fourth of all noise-related citations, even though many of the hearing-conservation amendment's provisions carry no penalties. When penalties are assessed, court settlements often reduce the dollar amount and extend compliance times.

Dealing with Noisy Neighborhoods

Away from their jobs, some 60 million people are exposed to noise from city traffic that exceeds EPA's "safe" level, determined by a measure called the "day-night sound level," or DNL. This is the average 24-hour noise level, with sounds occurring after 10 p.m. and before 7 a.m. measured as if they were 10 dB higher. EPA's noise office has determined that a DNL greater than 55 dB begins to affect public health and welfare. The agency defines this criterion quite broadly, including individual well-being as well as the absence of disease.

Environmental noise sources can induce hearing loss, although that is not as common or as severe as occupational hearing loss. Probably the most frequent environmental cause is sport shooting. Most gun clubs now advocate that their members wear hearing protectors, but few hunters do so. Noisy power tools are also a potential hazard. Manufacturers of such products seldom warn consumers when noise levels could be hazardous to hearing.

EPA's noise office had made significant progress in dealing with such problems before it was closed. The agency had established noise standards for existing fleets of trucks, buses, and railroad cars, and for new

Manufacturers of power tools seldom warn consumers when noise levels could be hazardous to hearing.

air compressors, medium- and heavy-duty trucks, motorcycles, and garbage trucks. Regulations for buses, wheel tractors, and crawler tractors have been proposed, and regulations for other noise makers such as lawn mowers, jackhammers, and rock drills were in the pipeline. The office had also begun the process of requiring manufacturers to specify the noise levels of their products, and to rate the effectiveness of items sold to abate noise. EPA's only regulation under this program requires that labels indicate the effectiveness of hearing-protection devices, but this regulation is not being actively enforced.

In 1974 the agency published a landmark treatise describing potentially hazardous levels of environmental noise. Some 260 reports generated by the noise office can be found on various library shelves, and most are still available from the National Technical Information Service. EPA also set up a "Buy Quiet" program to encourage federal and state officials to purchase quiet lawn mowers and road construction equipment, and to stimulate manufacturers to develop them.

In 1979, another congressional effort addressed a weakness at EPA—the absence of funding and directives for technical assistance to states and municipalities. Senator John Culver (D-Iowa) sponsored a bill called the Quiet Communities Act to provide the needed grants and training, as well as programs for senior citizens and a clearinghouse on noise information.

All these activities have ceased. However, EPA officials have had to figure out what to do with the regulations. After all, once something is identified as a major source of noise it is difficult to change this designation. EPA finally decided to remove products from the list of major noise sources "temporarily." The only regulation actually rescinded was the standard for garbage trucks. The others remain on the books, unenforced.

Because of cutbacks, state and local noise programs, which had flourished with technical assistance from EPA, have gone from a maximum of about 1,100 to a low of 15 today. Many communities still have noise ordinances, but few are actively enforced. The alleged virtue of returning responsibility for controlling noise to the states and localities—the basis for closing EPA's noise office—has worked about as well as "trickle-down" economics. And federal rules remain on the books to preempt state and local programs, as stipulated by the Noise Control Act, even though EPA standards may be long out of date.

The FAA and Aircraft Noise

Some 15 million people must endure regular aircraft noise above 65 dB, the DNL level the Federal Aviation Administration (FAA) uses to make zoning and planning decisions. Many airport neighbors feel that the DNL scale is inadequate because it averages the noise

Product-liability lawsuits could be a powerful incentive for manufacturers to design quieter products.

from all flyovers rather than describing single events: a jet overhead at 1,000 feet can measure an ear-splitting 103 dB on the ground.

Aircraft noise seems to bother people more than road noise, probably because flyovers can disrupt conversation completely and the sound has an annoying high-frequency component. A recent study of three medium-sized airports in residential communities—the Burbank-Glendale-Pasadena Airport, the John Wayne Airport in Orange County, Calif., and the Westchester County Airport north of New York City—showed that 50 percent of the people became "highly annoyed" at 65 dB levels. The FAA would have projected 15 percent.

Concerned about such effects, in 1968 Congress instructed the FAA to take action, and the agency established limits on noise emissions from new aircraft. The FAA has made the noisiest aircraft, labeled stage 1, obsolete. Stage 2 planes, including Boeing 727s, 737s, and older 747s and McDonnell Douglas DC-9s, comprise the bulk of today's fleet, with stage 3 representing the latest generation.

Unfortunately, gains from such efforts have been offset by increases in air traffic: the number of passengers has doubled over the past decade. And the FAA has not vigorously pursued other options for controlling noise, even though further advances in designing quieter engines seem unlikely.

For example, the Aviation Safety and Noise Abatement Act of 1979 prompted the FAA to set up a fund to finance noise-control efforts, such as soundproofing and purchases of houses near airports. Fed by taxes on airline tickets and fuel, the fund now contains a $6 billion surplus, and is presumably being used to reduce the federal deficit. Airport operators complain of long delays in getting their noise-reduction programs approved, and the FAA rejects many applications from mid-sized airports because their noise problems are supposedly not yet serious enough.

Despite FAA footdragging and in response to irate citizens, airport operators have been taking the lead in managing noise. About 300 airports are imposing restrictions on stage 2 aircraft, and others have begun to assign airlines a "noise budget" that they can allocate among their fleet. In Palm Beach, Fla., owners of the noisiest aircraft pay higher takeoff and landing fees, which are then used to control noise in the nearby community. Many airports also require noise-abating flight procedures, such as throttle and flap manipulations during takeoff and landing, and reroute aircraft over more sparsely populated areas. However, if these restrictions become too rigorous, the FAA sues operators for impeding interstate commerce.

The Airport Operators Council International has recommended phasing out stage 2 planes by the year 2000, at a cost the airline industry puts at $90 billion. And the European Community wants to prohibit member nations from adding stage 2 planes after 1990. Such a regulation could either stimulate the FAA to take more vigorous action with the U.S. fleet or turn the U.S. market into a dumping ground for noisy—but cheap—aircraft.

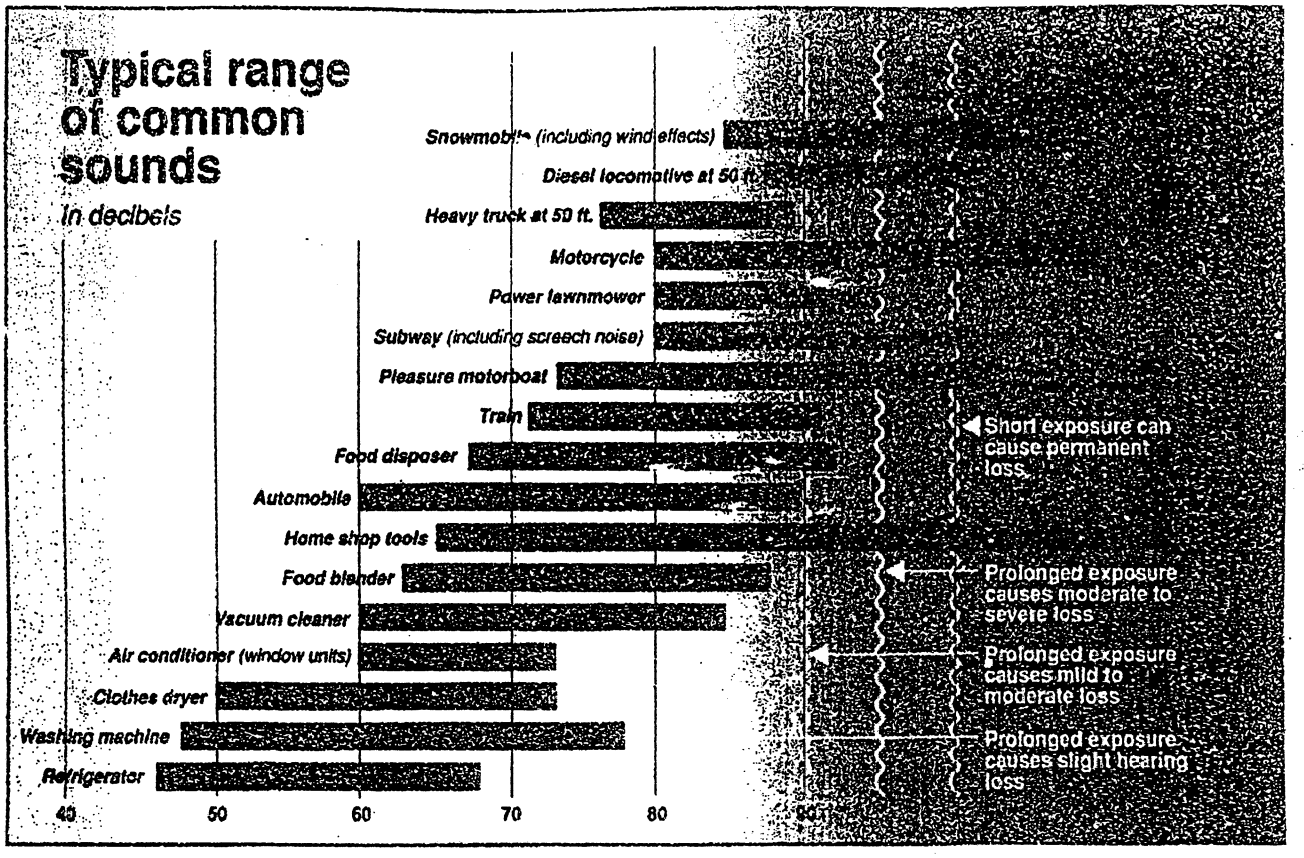
The most promising solution to controlling aircraft noise is to develop "wayports": airports in less populated areas specifically for passengers who need to change planes en route to their final destination. A bill in Congress would fund four to six wayports with money from the Airport/Airway Trust Fund.

Finding Effective Remedies

With federal enforcement efforts stalled, noise levels have risen as the number of major sources—aircraft, trucks, buses, cars—have grown. As Charles Elkins, EPA's deputy assistant administrator for noise abatement and control, said in 1979: "If EPA is vigorous in its implementation of the Quiet Communities Act, we may be able to hold the line on noise exposure. Of course, without a Federal program, the situation would be much worse."

Can anything be done to improve the situation? Worker-compensation awards, which are generally administered by the states, could provide an incentive for companies to protect employees against noise-induced hearing loss. More employees are filing claims for such loss, and the size of awards is increasing.

However, the average payment for hearing loss is only about $3,000, and many states make compensation difficult or even impossible to obtain. They may require that workers be away from noise for up to six months to make a claim, forcing them to quit or retire before filing. Most states use an old American Medical Association formula for calculating hearing loss that fails to include high-frequency hearing, the earliest and most severely damaged. Some states subtract a standard amount for aging from hearing loss, even though such an adjustment is already built into the formula. And some also restrict the time that can elapse between when a worker first notices a hearing impairment and when he or she files a claim, even though the individual may still be working in noise. These rules mean that only



a small fraction of the total that is due to employees is paid out.

Still, worker-compensation claims as well as OSHA inspections, even when only threatened, can encourage employers to find ways to run equipment more quietly. Noise can be controlled at the source, such as by adding a muffler to a noisy power tool or damping a saw blade. The noise path can be interrupted by installing acoustical materials along walls or ceilings or around noisy machines. Or people can operate noisy machinery from within a soundproofed control room, a common recourse in power plants. However, some industrial processes require operators to work close to their machines, and equipment such as forge hammers, paper corrugators, cigarette-making machines, and fly-shuttle looms can be difficult if not impossible to modify.

Obviously, the best way to control noise is for manufacturers to design equipment to run more quietly from the beginning. At a 1979 EPA symposium on machinery and construction noise, a panel of experts from industry, academia, and consulting firms expressed confidence that they could design quieter products "provided *that the proper economic incentives were available.* Without incentives, both positive and negative, there can be no technological development, and present incentives for noise control are weak, absent, or uncertain." The panel then drew up a list of some 100 machines for which R&D was needed to bring noise to reasonable levels.

In a 1980 OSHA report, J. Ronald Bailey, Franklin Hart, and Noral Stewart, three acoustical engineers from North Carolina, found that the costs of noise control are seldom excessive, even in the most difficult cases. For example, manufacturers could quiet welding equipment by 5 dB simply by modifying existing vision and spark shields and by relocating the power supply. Redesigning parts in the impact devices used in mining and construction, such as jackhammers and other pneumatic tools, can reduce deafening noise levels of 110 to 120 dB to 95 dB with only minor losses in productivity.

As the EPA panel pointed out, without incentives from OSHA and EPA few manufacturers are applying these techniques. But product-liability claims against equipment manufacturers could provide a powerful incentive to do so. Although civil suits for noise-induced hearing loss lag far behind asbestos suits, they are gaining in popularity. For example, 4,000 Mississippi shipyard workers are suing the manufacturers of pneumatic tools for damaging their hearing.

A similar development could produce significant changes at EPA. John J. Ross, Jr., an attorney in Jackson, Tenn., is suing the EPA administrator and the secretary of transportation for abrogating their duties under the Noise Control Act as amended by the Quiet Communities Act. The plaintiff decided to sue when, disturbed by truck noise, he found that the agency in charge of abating truck noise had gone out of business. He believes the value of his property has been diminished and the quality of his work impaired. Such efforts could convince officials to enforce laws that could prevent workers from losing their hearing and community residents from losing their sanity.

The 1965 amendment rewrote subparagraphs 1 through 3, revising the manner of giving hand signals so as to conform with the national standards of the uniform vehicle code.

The 1979 amendment rewrote the first sentence of the first paragraph, clarifying the provisions as to use of signaling mechanisms.

The 1988 amendment rewrote the second paragraph to provide that violations of uniform hand signals "shall be punished by a fine of not less than twenty-five dollars for each offense", rather than the former fine gradations for first and subsequent violations.

Code of Massachusetts Regulations—

Motor vehicle regulations, 540 CMR §§ 2.01 et seq.

Total Client-Service Library® References—

5 Mass Jur, Criminal Law § 33:69.

7A Am Jur 2d, Automobiles and Highway Traffic §§ 193, 257, 268.

8 Am Jur 2d, Automobiles and Highway Traffic §§ 890-894.

3A Am Jur Pl & Pr Forms, Rev, Automobiles and Highway Traffic, Forms 961, 977.

7 Am Jur Proof of Facts 81, Left Turns.

24 Am Jur Proof of Facts 559, Right Turns.

35 Am Jur Proof of Facts 2d 405, Negligent Left Turn of Motor Vehicle.

Annotations—

Automobiles: liability for U-turn collisions. 53 ALR4th 849.

CASE NOTES

Failure to signal for turn is some evidence of negligence. Gouras v Barchi (1977) 5 Mass App 845, 364 NE2d 213.

Instant section was referred to in case involving intersection motor vehicle collision in which it was found that plaintiff operator was guilty of contributory negligence, in connection with finding that plaintiff operator initiated left turn without giving any signal indicating his intention of making left turn. Miller v United States (1961, DC Mass) 196 F Supp 613.

§ 15. Precautions at Railroad Crossings.

Except as hereinafter otherwise provided, every person operating a motor vehicle, upon approaching a railroad crossing at grade, shall reduce the speed of the vehicle to a reasonable and proper rate before proceeding over the crossing, and shall proceed over the crossing at a rate of speed and with such care as is reasonable and proper under the circumstances. Every person operating a school bus, or any motor vehicle carrying explosive substances or flammable liquids as a cargo, or part of a cargo, upon approaching a railroad crossing at grade, shall bring his vehicle to a full stop not less than fifteen feet and not more than fifty feet from the nearest track of said railroad, and shall not proceed to cross until it is safe to do so. The operator of a school bus, in addition to bringing his vehicle to a full stop, as aforesaid, shall open

the service door, ascertain if he may cross safely and thereupon close said door before proceeding. Every person operating any motor vehicle, upon approaching at grade a railroad crossing protected by red lights which flash as a warning, shall bring his vehicle to a full stop not less than fifteen feet and not more than fifty feet from the nearest track of said railroad and shall not proceed to cross until said lights stop flashing. Every person operating any motor vehicle, upon approaching at grade a railroad crossing protected by a lowered automatic gate, shall bring his vehicle to a full stop not less than fifteen feet and not more than fifty feet from the nearest track of said railroad and shall not proceed to cross until said automatic gate is raised. Every person operating any motor vehicle, upon approaching at grade a railroad crossing protected by a railroad employee waving a red flag or white lantern, shall bring his vehicle to a full stop not less than fifteen feet and not more than fifty feet from the nearest track of said railroad and shall not proceed to cross until said railroad employee signals that it is safe to do so. A railroad train approaching within approximately one thousand five hundred feet of a highway crossing shall emit a warning signal audible from such distance. Whoever violates any provision of this section shall be punished by a fine of not less than one hundred nor more than two hundred dollars.

History—

1917, 246, § 3; 1932, 271, § 5; 1933, 26, § 1; 1951, 557; 1961, 248; 1971, 132; 1982, 142; 1987, 501, § 1; 1991, 201, approved Sept 13, 1991, effective 90 days thereafter.

Editorial Note—

The 1951 amendment rewrote the first sentence.

The 1961 amendment rewrote the second sentence.

The 1971 amendment added the requirement that the operator of a school bus open the service door after coming to a stop at a crossing.

The 1982 amendment rewrote the second sentence, inserting "or when a crossing is protected by a railroad employee waving a red flag or lantern," after "or such gate is lowered,", and deleting "he is satisfied that" from after "shall not proceed to cross until".

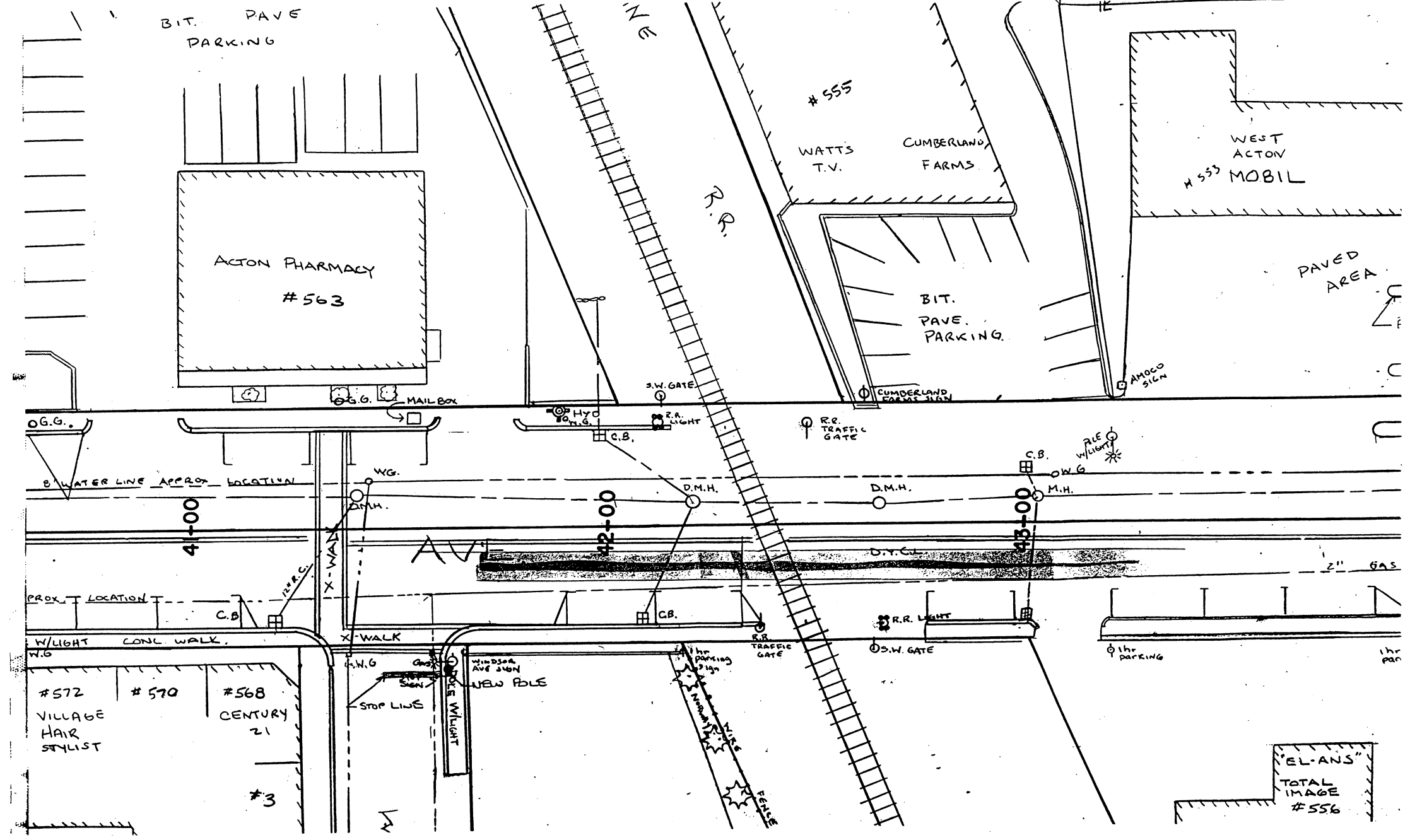
The 1987 amendment increased the minimum fine from $10 to $100 and the maximum fine from $50 to $200.

The 1991 amendment rewrote the section, substituting "flammable" for "inflammable" and deleting language regarding stopping at crossings in the second sentence, and adding the fourth through seventh sentences.

Cross References—

Warning signals at railroad crossings, ALM GL c 160 § 138.

Liability for damages in collision at railroad crossing, ALM GL c 160 § 232.


BIT. PAVE PARKING
ACTON PHARMACY #563
#555
WATTS T.V.
CUMBERLAND FARMS
WEST ACTON #553 MOBIL
PAVED AREA
BIT. PAVE. PARKING.
R.R.
AMOCO SIGN
CUMBERLAND FARMS SIGN
S.W. GATE
R.R. LIGHT
R.R. TRAFFIC GATE
MAIL BOX
O.G.
HYD M.G.
C.B.
W.G.
D.M.H.
M.H.
O.W.G
R.R. W/LIGHT
B" WATER LINE APPROX LOCATION
4+00
42+00
43+00
D.T.C.
2" GAS
12" R.C.
PROX LOCATION
X-WALK
W/LIGHT
CONC. WALK.
S.W.G
STOP SIGN
STOP LINE
WINDSOR AVE SIGN
NEW POLE
POLE W/LIGHT
1 hr PARKING SIGN
WIRE
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1 hr PARKING
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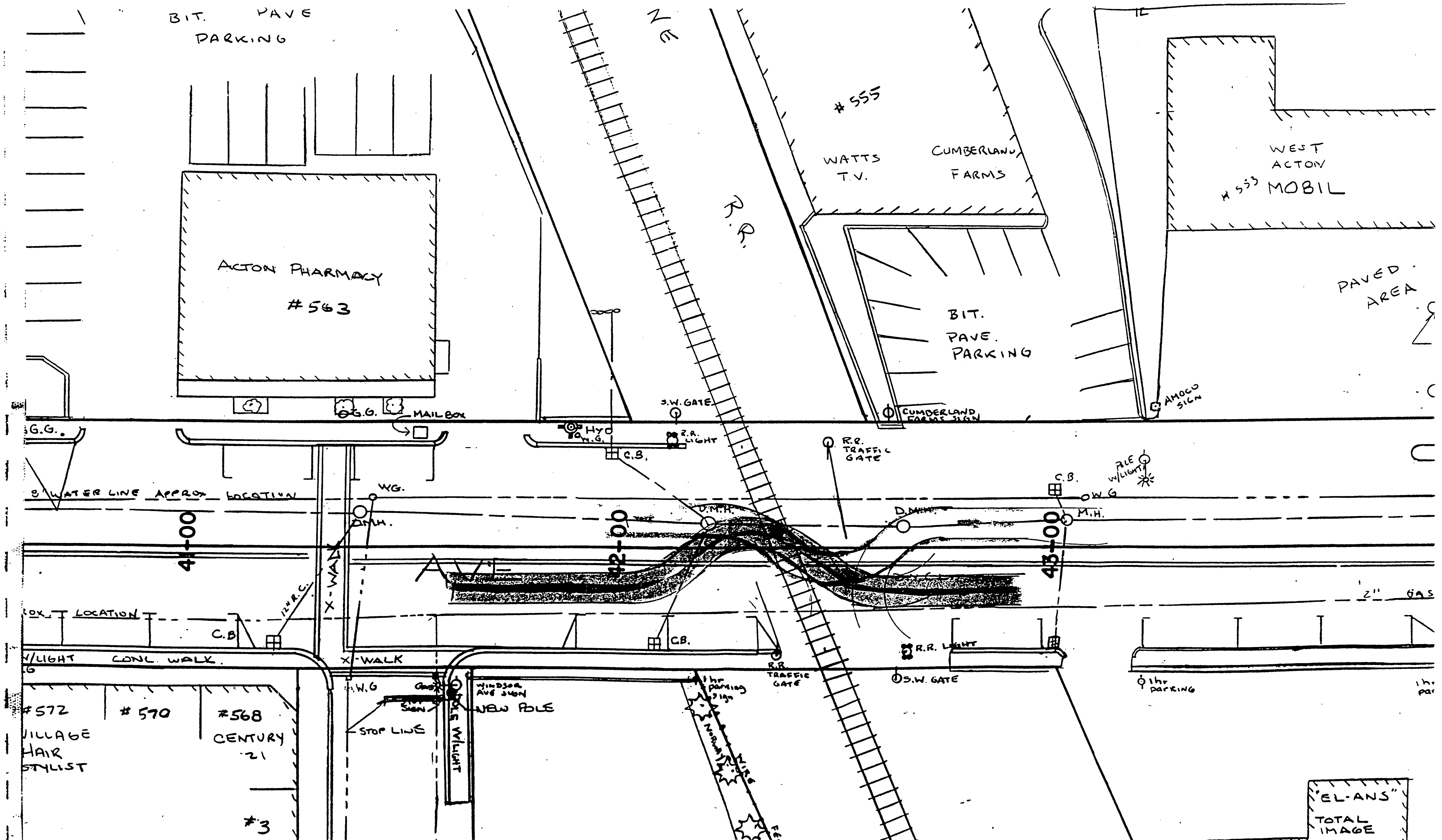
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BIT. PAVE. PARKING
PAVED AREA
AMOCO SIGN
CUMBERLAND FARMS SIGN
S.W. GATE
R.R. LIGHT
MAILBOX
G.G.
HYD
C.B.
R.R. TRAFFIC GATE
POLE W/LIGHT
W.G.
D.M.H.
M.H.
WATER LINE APPROX LOCATION
41+00
42+00
43+00
X-WALK
12" R.C.
BOX LOCATION
2" GAS
CONC. WALK
W/LIGHT
#572
VILLAGE HAIR STYLIST
#570
#568
CENTURY 21
STOP LINE
WINDSOR AVE SIGN
NEW POLE
POLE W/LIGHT
1hr parking sign
1hr PARKING
"EL-ANS"
TOTAL IMAGE
#3

Statement of Acton Board of Selectmen to D.P.U. 9/7/89

STATEMENT OF NANCY E. TAVERNIER
Chairman, Board of Selectmen
Town of Acton

Department of Public Utilities Hearing
Discontinuance of Whistling of Locomotives at 4 Grade Crossings
September 7, 1989

We appreciate this opportunity to present the views of the Town of Acton on the issue of the sounding of trains horns at four grade crossings.

The Acton Board of Selectmen petitioned the Department of Public Utilities, in April of this year, asking them to order the discontinuation of whistling by locomotives at four grade crossings in the Town of Acton. The Selectmen took this action as a result of numerous complaints received over the years by residents who live near these four crossings and who have found the locomotive horns to be disruptive and annoying. The Board of Selectmen has voted unanimously in support of the cessation of all train whistles in the town of Acton.

Acton has six public grade crossings located within its boundaries. These crossings are located at Parker Street, Martin St., two on Central St., Massachusetts Avenue and Arlington St. All six of these grade crossings are protected by automatic gates, flashing lights and bells. At the present time, all trains passing through Acton sound their horns at all of the crossings except for the Mass. Ave and Arlington St., both of which are in West Acton Center. In 1956, the DPU ordered the discontinuance of whistling at these crossings.

On each weekday from 6:30AM to 1AM, 32 trains pass through the Parker St. crossing and 18 trains pass through the rest of the crossings. On weekend days from 6:51AM to 1AM, 20 trains pass through Parker St. and 12 continue through the rest of the town. The South Acton Train station is either the end or the beginning point for 86 trains a week which explains the difference in numbers. Recently, the MBTA announced its intention to place a second parallel track (which had been removed many years ago) from South Acton west to Gardner in order to increase train service beyond the South Acton station. The Board of Selectmen strongly supports these plans, this would relieve a major parking problem at our train station. However, the prospect of 86 more train trips per week moving through all of our grade crossings also translates into 86 more horn blowings a week and we are concerned about that impact on the abutting neighborhoods.

Since the Town's petition was filed, the town's Municipal Properties department and the train company, with some input from the DPU, have examined each crossing in order to determine what measures, if any, were needed to improve visibility. Much work has been done to clear brush and undergrowth and to cut down trees not only to improve visibility but also in anticipation of the laying of the second track in the future.

Going from East to West, the first crossing encountered is:

PARKER STREET IN SOUTH ACTON.

1. It has flashing lights, bells and gates installed in 1947.
2. Passenger trains travel at 60mph and freight trains at 40mph. We would like to see the speed limit restricted to 30mph.
3. Visibility - sight distance from south, 200ft. east and 800 ft. west; sight distance from north, 500ft east and 400ft west
4. 60 people live within 500ft of this crossing.
5. In past five years 6.5 million cars have crossed the Parker St. crossing at rate of 3600 cars per day
6. In this same five year period, there has been one accident involving a car and a train. A Fort Devens resident in 1987 attempted to go around the down crossing gates and was struck in the rear. He was uninjured and charged with motor vehicle violations.

MARTIN STREET CROSSING

The second crossing occurs just west of the South Acton Train station at Martin Street.

1. Flashing lights, bells were installed in 1928 and gates installed in 1984.
2. All trains are restricted to 30 mph at crossing.
3. The town and the railroad cleared brush from the crossing area. Sight distance is now much improved.
4. While only 35 people live within a 500ft radius, many homes are only 50-60 feet from the track.
5. In the past 5 years, 6 million cars (3400 per day) have passed over this crossing and not one accident has occurred.

CENTRAL STREET - RICHARDSON'S CROSSING

1. Flashing lights, bells and gates installed in 1957
2. All trains travel at 30mph
3. 130 people live within 500 ft of this crossing. A decibel level of 100 for the train horns was recorded from homes near this crossing.
4. Regardless of the approach, a car has 500ft. of visibility in either direction
5. In the past five years, 14.5 million cars have crossed here at a rate of 8000 a day.
6. There has been one accident. In 1988 a Littleton resident, driving without a license, failed to see the down crossing gate, slid under it and struck a train. The whistles obviously did not prevent this accident.

MASSACHUSETTS AVENUE AND ARLINGTON STREET

These two crossings in West Acton Center do not have train whistles blown.

1. Flashing lights, bells and gates installed in 1952 at both
2. Trains travel at 30mph
3. Mass. Ave is the busiest crossing in Acton with 25.5 million cars passing over in the past 5 years (14,000 a day)
4. There was one accident at Mass. Ave. in the last five years. In 1985, a chemical trailer truck was left unattended, while the driver went for a cup

of coffee, with its rear end parked on the tracks. The truck was struck by a passing train causing a chemical release. The driver was cited for several violations.

CENTRAL STREET - HAPGOOD'S CROSSING

1. Flashing lights, bells and gates
2. Trains travel 30mph
3. 65 people live within 500 ft. radius
4. Visibility 500ft from all directions.
5. 7 million cars in 5 years, no accidents.

In summary:

1. 300 people live immediately adjacent to 4 crossings where up to 180 whistle blowing trains cross each week.
2. In the past 5 years, 35 millions cars crossed the 4 whistled crossings and 30 million more crossed the two non-whistled crossings. In the same time period, 52,000 trains travelled through Acton and only 3 accidents occurred.
3. The vehicle crossing speed limit at all of the crossings is 25mph.

The Board of Selectmen would like to point out that between here and Boston to the east, trains travel through 6 communities. In only one area, West Concord, do the trains blow their whistles and then only at two crossings in one direction only. Nowhere else between West Concord and Boston is the train whistle sounded. We would like to be given the same consideration that the other communities of Concord, Lincoln, Weston, Waltham, Belmont, Somerville and Cambrdige receive.

We believe that adequate safety measures are in place at all of the grade crossings in Acton. We request that the Department of Public Utilities require the MBTA to discontinue the sounding of train horns in Acton.

Chronology of Acton Whistle Ban

TOWN OF ACTON
DISCONTINUANCE OF TRAIN WHISTLE BLOWING
A CHRONOLOGY
1989-1995

JULY 1989	Town of Acton petitioned the Dept. of Public Utilities (DPU) to order the discontinuance of train whistles in Acton.
SEPTEMBER 1989	DPU held Public Hearing in Acton where dozens of citizens testified in support of the petition. MBTA opposed petition.
FEBRUARY 1990	DPU held evidentiary hearing in Boston.
APRIL 1990	DPU held second evidentiary hearing at the request of the MBTA so they could withdraw their opposition to the petition, stating that gates, lights and bells are "optimum safety" and whistles are only back-up.
OCTOBER 1991	DPU issues a denial of Acton's petition.
NOVEMBER 1991	Board of Selectmen asks Rep. Pam Resor to file legislation which would not require the sounding of whistles anywhere in the state at crossings with gates, flashing lights and bells.
MARCH 1992	H3428 was heard by Joint Committee on Public Safety and was given an unfavorable reporting because the House Chairman Rep. Paul Caron was not supportive. This bill was dead.
APRIL 1993	Annual Town Meeting voters (1000+) authorized the Board of Selectmen to petition the General Court to enact a special law relative to discontinuing the sounding of train whistles at railroad crossings in Acton.
MAY 1993	Legislation filed by Rep. Pam Resor. Not acted upon by end of session, refiled for 1994.

APRIL 1994	Testimony for H4278 heard by Joint Committee on Transportation. Bill received favorable report and went to House.
AUGUST 1994	H4278 engrossed by House and Senate and sent to Governor Weld.
SEPTEMBER 1994	Governor William Weld signed Home Rule petition into law.
OCTOBER 1994	DPU must notify MBTA and all other railroad corporations of the provisions of the law within 30 days of the signing.
NOVEMBER 1994	Whistle Ban takes effect. PEACE AT LAST!

Nancy E. Tavernier
Acton Board of Selectmen
8/24/95

Legislation Authorizing Whistle Ban

HOUSE . . . . . No. 4278

By Ms. Resor of Acton, petition of Pamela P. Resor and Robert A. Durand (by vote of the town) for legislation to authorize the discontinuance of soundings of train whistles at railroad crossings in the town of Acton. Transportation. [Local approval received.]

The Commonwealth of Massachusetts

In the Year One Thousand Nine Hundred and Ninety-Four.

AN ACT RELATIVE TO THE SOUNDING AT CERTAIN WARNING DEVICES IN THE TOWN OF ACTON.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. Notwithstanding the provisions of chapter one hundred and sixty of the General Laws or of any other general or special law to the contrary, no railroad corporation including any locomotive engine operated by or on behalf of the Massachusetts Bay Transportation Authority shall permit a locomotive engine passing on its railroad in the town of Acton to sound whistles at any grade crossing which has the following safety features: flashing lights in each direction which are automatically activated by the approaching train; two gates, one on each side of the crossing, both of which are automatically lowered by the approaching train and both extend across approximately half the width of the lanes of traffic so that the entire width of the lanes of traffic is blocked when the gates are lowered; a bell that is automatically activated by the approaching train; overhead street lights; signs posted before the grade crossing in each direction warning motorists and pedestrians of the crossing ahead; posted speed limits for traffic of not more than twenty-five miles per hour; and not more than two lanes of vehicular traffic in each direction at the grade crossing. Notwithstanding the provisions of this paragraph, a train is required to sound its whistle in the event of an emergency.

SECTION 2. The department of public utilities shall require that whistle markers on the railroad right of way on the approach to each crosing shall be replaced with bell markers within ninety days of the effective date of this act.

SECTION 3. The department of public utilities shall notify the Massachusetts Bay Transportation Authority and all other railroad corporations operating locomotive engines in the town of Acton of the provisions of this act within thirty days of its effective date.

SECTION 4. This act shall take effect upon its passage.

Letters from Citizens

TOWN OF ACTON
COMMISSION FOR THE HANDICAPPED
COMMISSION FOR
THE HANDICAPPED
P.O. Box 418
Acton, MA 01720

October 17, 1990

NOV 2 - 1990

Margaret Lynch
Hearing Office, DPU
Saltenstall Building
100 Cambridge Street
Boston, MA 02202

Dear Ms. Lynch:

A serious problem has been brought to my attention regarding the train whistles in Acton and their effect on individuals with hearing problems. Several people in the area near the West Acton crossing are hearing aid users and the sound of the whistles are magnified by their aids and can cause ear pain. When the whistle is first detected, the person has to turn their aid lower to lesson the effect. For children on playgrounds near the crossing, two school and one town, the sound can be painful and scary. The damage is done before the aid can be adjusted.

Please consider this problem when making a decision on the continuance of train whistles in Acton. As this is not a problem only in Acton, please consider the one or two other towns where the whistles are sounded as well.

Thank you.

Sincerely

Walter Kiver, Chairman

Reg. D.P.U. 89-160

cc Nancy Tavernier
for Acton Selectmen

CC: BOS
GARRY RHODES

Christine B. Treat
10 Martin Street
Acton, MA 01720

August 10, 1995

To Whom it May Concern,

This letter is in regard to the Federal proposal to start blowing train whistles at all crossings.

I am a person who has lived both with and thankfully without the train whistles in Acton, Massachusetts. I do not live as close as some but it was something that had a great negative effect on my family and my neighbors' quality of life. People who have not lived with the whistle simply cannot have any concept of what it is like to have a whistle at all crossings. We are not talking about a quaint little "toot-toot" before a crossing. We are talking 4 deafening blasts that can last up to 30 seconds and occur before, during, and after the crossing and can be heard for up to 4 and 5 miles. The loudness and length of the blasts depend on the conductors' whim and were definitely becoming louder with time. No matter how many times one called "T" customer service line to ask that the decibels be kept down, nothing was <u>ever</u> done. There are guidelines regarding the loudness and length of whistles that are not followed by conductors and it also seemed that certain conductors really got their jollies blasting as loud and long as they could. Imagine this at crossings in cities which are heavily populated and already too noisy as well as in thousands of quiet peaceful suburbs and rural areas - it's just not fair.

People who drive around closed crossing gates are breaking the law. "Accidents" (quote) are not even the end result - these are purposeful illegal acts. People living near crossings should not have to be subject to deafeningly loud train whistles to protect people who are purposely breaking the law. If the government is so concerned about crossing safety they should spend money to build gates that cannot be driven around. <u>Everyone</u> should have to pay not just people living in these areas. (I put in money for inner city programs, etc. in my taxes which is something that may not affect me, for example, so people who will not be affected by this should also contribute in the form of tax money.) It is not fair that this shortsighted "solution" be implemented just because it doesn't cost

anything per se. It will cost millions of neighborhoods dearly not only by causing increased stress, hearing loss, and a depressed quality of life but it will also decrease property values. Conductors can use their discretion with the whistle with existing laws at crossings that are unsafe or if there are people on the track, it is not fair to blanket every crossing, it's just too much loud noise.

Since the cessation of the whistle in Acton my quality of life has improved 100% NO EXAGGERATION!! The removal of that one, huge, daily stressor has freed me and my small children from seething anger against the conductors, freed us from cringing and having to cover our ears in our own peaceful yard, freed us from the stress of deafening noise levels in our small community. I cannot measure the improvement in our lives, I'm sure I speak for thousands and thousands of others too who have no idea how this will add stress and depression to their lives. Please do not let this happen, there are other solutions and it is just plain and simply not fair.

Sincerely

Christine B Treat

Press Clippings

TRAIN WHISTLE BILL PASSES

Silent nights and days in December

PAT SILLS

In a classic case of "David and Goliath," Acton Selectman Nancy Tavernier and a number of Acton residents took on the Department of Public Utilities in a five year battle to stop the sounding of train whistles at Town crossings that are protected by warning devices.

On Friday, September 16, Governor Weld signed a bill into law signaling the victory of this committed group. The bill will become Chapter 141 in General Laws and will halt the whistles in Acton 90 days from the date of signing.

After optimum safety features, including flashing lights, bells, and automatic fail-safe gates were installed at the Town crossings, residents thought that the DPU would direct the MBTA to stop sounding the whistles. When this did not happen, the Town of Acton petitioned the DPU, in July, 1989. Hearings were held in September, February and April, of 1989 and 1990, at which Acton residents, and members of the DPU and MBTA testified. Two years later, the DPU denied the petition based on studies done in Florida.

During this period, the 300 people living within a 500 foot radius of the crossings continued to suffer from the whistles as often as 17 times a day. Ann Forbes, a 19 year resident of Martin Street recalls one upsetting experience. "I was walking along the path next to the tracks, when a train went by and blew its whistle next to me. I didn't cover my ears in time and my hearing in the ear nearest the train was impaired for the following 24 hours." Ann credits the unflagging efforts of Nancy Tavernier for the eventual passage of the law.

Members of the citizen's group, many who have been residents for well over a decade, shared feelings of relief upon learning of the signing of the bill. Pat and Bob Gyorgak moved into their home on Nash Road in 1975. Bob participated in neighborhood efforts to stop the whistles as early as 1978. They recall the day a chimney cleaner was working in their home with his head in the flue when a train went by and sounded its whistle. "He thought it was an earth quake or an air raid, and was terrified.

Richard Lynch, a resident of Nasl Road since 1978, has also been in volved in the neighborhood efforts "Having to stop phone conversation each time the train whistles by is ba enough, but far more upsetting wa trying to comfort my young grandchil dren when they woke up screaming a 11 pm because of the whistle."

Martin Street resident Jeffery Barr explains, "The whistle sound is so lou and so sudden, it causes a startle ef fect." He recalls flying over the fron of his riding lawn mower, when th train came from behind him an sounded the whistle. A worker on a roof on Maple Street almost fell off th roof when the train whistle took hir by surprise. According to Barry, th track noise alone is "an order of mag nitude less than the whistle, and be cause it is steady, doesn't have the sam startle effect."

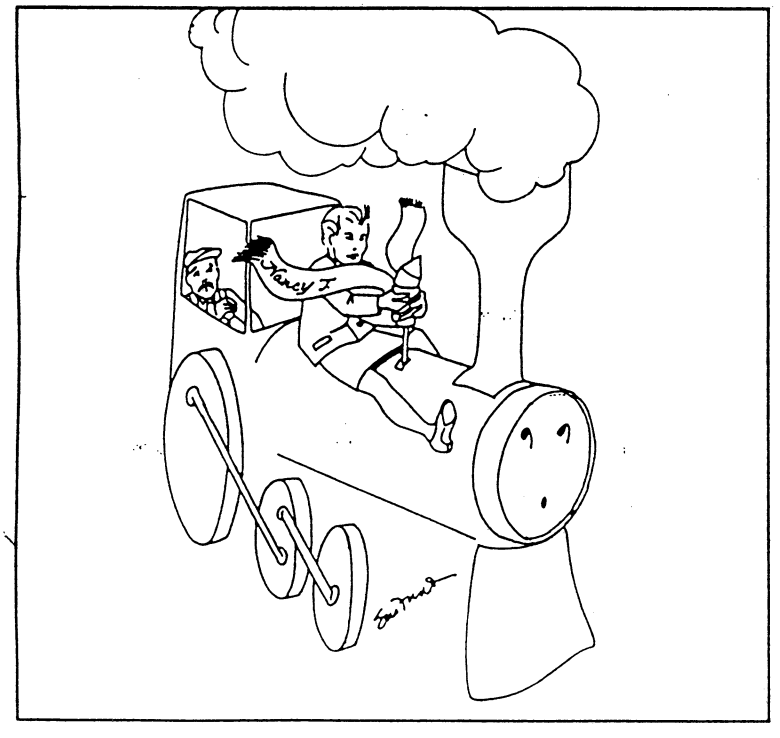
Barry expresses frustration over th lengthy bureaucratic process involvec in making a simple change in a law book. He points out that all of th towns on the rail line to the east, in cluding Concord, Lincoln, Weston Waltham, Belmont, Cambridge, an Somerville, have the same safety fea tures at crossings, and have had nc whistles for as long as 100 years. He blames the DPU for forcing the issue to the State legislature so that respon sibility for any future accidents would rest with the State.

When the Town's petition to the DPU was turned down, residents made a final effort by drafting a Home Rule Petition which asked the legislature to enact a special law to discontinue the sounding of train whistles at all rail road crossings in Acton that are pro tected by warning devices. After a pre sentation by Barry, the Petition was adopted at the April 27, 1993 Acton Town Meeting, attended by over 1000 registered voters. Pam Resor and Rob ert Durand sponsored the bill, which was passed by the Senate and House, and signed by Governor Weld.

Finally, after years of a frustrating struggle with bureaucracy, and hours of effort by Acton citizens, Selectman Tavernier, and Resor and Durand in the State Legislature, their efforts have been rewarded with success. The countdown has begun toward the day in December when the whistles will be silenced in Acton.

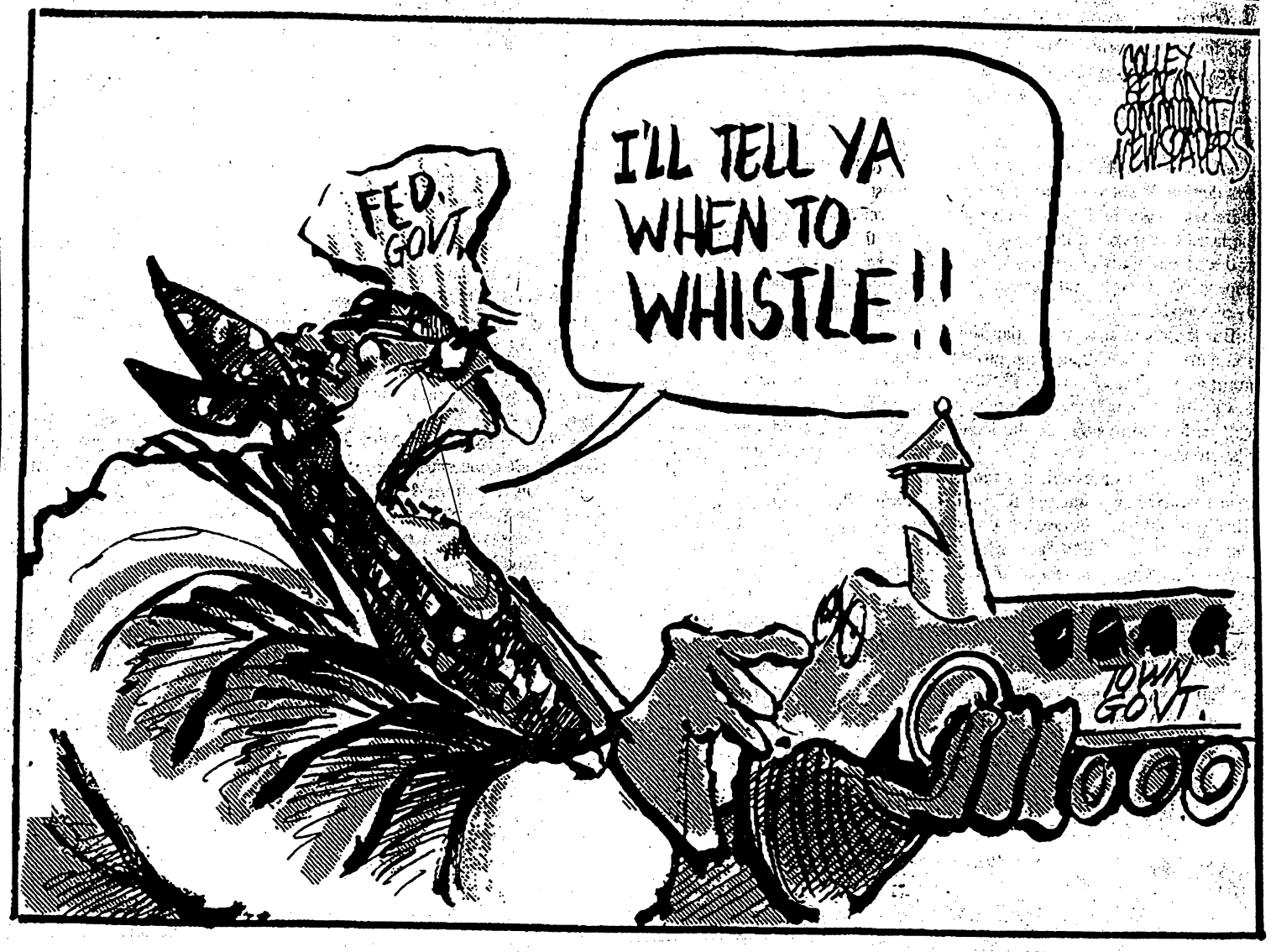
continued on pg 4

Editorial



I knew we could... I knew we could...

OPINION



TOWN OF ACTON
472 Main Street
Acton, Massachusetts, 01720
Telephone (508) 264-9612
Fax (508) 264-9630

Nancy E. Tavernier, Vice Chairman
Board of Selectmen

September 11, 1995

City Council
City of Cambridge
795 Massachusetts Ave.
Cambridge, MA 02139

Dear Local Officials:

The Acton Board of Selectmen is contacting the local officials of all of the cities and towns east of Acton who are located on the MBTA Fitchburg commuter rail line. You may have received a recent communication from the Federal Railroad Administration, with an attached report entitled "Nationwide Study of Train Whistle Bans." In this communication you were alerted to the fact that Congress has directed the Federal Railroad Administration to issue regulations that will require the sounding of train horns at all crossings in the country. We want to communicate to you the seriousness of this threat.

The Townspeople of Acton fought for 5 years to gain relief from train whistles. After we were denied by the DPU, we filed a Home Rule Petition which was successfully adopted and signed into law September 1994. Part of the motivation for this 5 year quest came from the knowledge that trains passing through your community, to the east of Acton, did not have train whistles blown at your grade crossings and had the identical safety features as ours.

Our residents had suffered for years from the effects of train whistles at grade crossings, measured at levels of 100-115 decibels from the backyards of abutting homes. This high noise level is not only damaging to people's physical health but their emotional well-being as well. When the whistles stopped last November, the euphoria was instantaneous. The mere thought of this pain returning is most distressing to our community.

We would encourage you to become informed about the impact this would have on your community and to take action immediately to make your position known. We believe this will be a serious political problem for all elected officials, who are responsible for implementing and explaining government policy. The Congressional representatives and two Senators should be communicated with immediately. It is not too late to stop this new regulation from taking effect by November 1996. We would be

Consent Communication #1 S-304

Communication was received from Nancy E. Tavernier, Board of Selectmen, Town of Acton, enclosing the attached report "Nationwide Study of Train Whistle Bans".

Placed on File.

In City Council, October 2, 1995