RESOLUTION NO. 8-14

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RICHMOND, CALIFORNIA, REQUESTING STATE AND FEDERAL LEGISLATIVE ASSISTANCE TO MITIGATE DAMAGE FROM TRAIN HORNS

The City Council of the City of Richmond hereby finds and declares as follows:

WHEREAS, exposure to unnecessary and unwanted noise produces significant medical, social and economic effects as evidenced by the following:

- Noise is arguably the most common - and least regulated - form of environmental pollution;¹ and
- Noise represents the principal avoidable cause of permanent hearing impairment worldwide;² and
- Hearing impairment leads to interpersonal, school and job related problems, with lasting detrimental social and economic effects;³ and
- Community noise interferes with sleep, leads to fatigue, increases irritability, impairs performance, and causes accidents;⁴ and
- Noise increases blood pressure and heart rate and may cause abnormal rhythms, whether awake or asleep;⁵ and
- Noise provokes strongly felt annoyance, creating stress that leads to disease and degrades quality of life;⁶ and
- Current studies from the European Union confirm that 3% of all fatal heart attacks are induced by noise;⁷ and
- Noise provokes unwanted behaviors, leading to antisocial acts or unwillingness to help others;⁸ and
- Governmental studies confirm that a substantial portion of the population is exposed to noise levels that are unhealthy, interfering with learning, task performance, leisure, and sleep;⁹ and
- Studies in the European Union show that noise decreases housing prices and median home costs, imposes restrictions on land use, and increases time lost from work;¹⁰ and

WHEREAS, in 1972, the Noise Control Act was passed by the Congress, declaring - - - “it is the policy of the United States to promote an environment for all Americans free from noise that jeopardizes health and welfare.”¹¹ and

WHEREAS, the 1999 United States Census reported that Americans named noise as the number one problem in neighborhoods, of greater concern than crime or other bothersome conditions, noting that:

- Noise levels have risen at least six-fold in major U.S. cities, and will continue to grow because of increases in population, and the number, variety, and mobility of sources of noise;¹² and

- Noise is arguably the most common - and least regulated - form of environmental pollution;¹ and
- Noise represents the principal avoidable cause of permanent hearing impairment worldwide;² and
- Hearing impairment leads to interpersonal, school and job related problems, with lasting detrimental social and economic effects;³ and
- Community noise interferes with sleep, leads to fatigue, increases irritability, impairs performance, and causes accidents;⁴ and
- Noise increases blood pressure and heart rate and may cause abnormal rhythms, whether awake or asleep;⁵ and
- Noise provokes strongly felt annoyance, creating stress that leads to disease and degrades quality of life;⁶ and
- Current studies from the European Union confirm that 3% of all fatal heart attacks are induced by noise;⁷ and
- Noise provokes unwanted behaviors, leading to antisocial acts or unwillingness to help others;⁸ and
- Governmental studies confirm that a substantial portion of the population is exposed to noise levels that are unhealthy, interfering with learning, task performance, leisure, and sleep;⁹ and
- Studies in the European Union show that noise decreases housing prices and median home costs, imposes restrictions on land use, and increases time lost from work;¹⁰ and

WHEREAS, in 1972, the Noise Control Act was passed by the Congress, declaring - - - “it is the policy of the United States to promote an environment for all Americans free from noise that jeopardizes health and welfare.”¹¹ and

WHEREAS, the 1999 United States Census reported that Americans named noise as the number one problem in neighborhoods, of greater concern than crime or other bothersome conditions, noting that:

- Noise levels have risen at least six-fold in major U.S. cities, and will continue to grow because of increases in population, and the number, variety, and mobility of sources of noise;¹² and

• Most people object to the intrusion of unwanted noise into their homes, and on their streets, neighborhoods, and parks; and

• In 1974, the Environmental Protection Agency estimated that nearly 100 million Americans lived in areas where the daily average noise levels exceeded those identified as being safe, and the number of people exposed to unhealthy levels of noise is far greater than it was in 1972 at the time the Noise Control Act was passed and the degree of oversight and control is unquestionably less; and

WHEREAS, noise is best controlled at the source; and

WHEREAS, community noise intrudes into homes, neighborhoods, and parks; and

WHEREAS, since the air, a universally shared resource, is a commons, owned by none but used by all; and;

WHEREAS, individuals and businesses, either willfully or ignorantly, assume they have the right to emit noise into the air, thereby adversely affecting all who have no choice but to hear it; and

WHEREAS, domestic tranquility is one of the six guarantees in the United States Constitution; and

WHEREAS, it is the responsibility of government at all levels to protect citizens from the unwanted effects of noise and other forms of pollution; and

WHEREAS, on May 17, 2011, the Richmond City Council unanimously adopted Ordinance 14-11, Community Noise Ordinance, and;

WHEREAS, the Richmond Community Noise Ordinance regulates every noise source in Richmond except federal and state regulated transportation noise sources, including aircraft, motor vehicles and rail, and;

WHEREAS, the Richmond Community Noise Ordinance limits specific short term or intermittent noise daytime sources to a range of 60-75 dBA in commercial areas and 60-65 dBA in residential areas and nighttime sources to 50 dBA in all areas, except for temporary construction noise, which is limited from 55-85 dBA only in the daytime, and;

WHEREAS, the Richmond Community Noise Ordinance at no time allows noise exceeding 85 dBA in the daytime or 50 dBA at night, and;

WHEREAS, within the City of Richmond there are two Class I railroads (UP and BNSF) and three local line haul railroads, and;

WHEREAS, Richmond is a pioneer in Quiet Zone establishment and has more Quiet Zones than any city in California – eight separate zones that include 15 grade crossings, and three that are pending, and;

WHEREAS, within Richmond there are a number of private grade crossings, and;

WHEREAS, under the Train Horn Rule (49 CFR Part 222), locomotive engineers are required to sound horns at all public grade crossings not designated as Quiet Zones, and the required volume level for train horns ranges from minimum 96 dBA to maximum 110 dBA, and;


17 http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&tpl=/ecfrbrowse/Title49/49cfr222_main_02.tpl

WHEREAS, under the Train Horn Rule (49 CFR Part 222), locomotive engineers are required to sound horns at all public grade crossings not designated as Quiet Zones, and the required volume level for train horns ranges from minimum 96 dBA to maximum 110 dBA, and;
WHEREAS, under California Public Utility Code 6706, locomotive engineers are required to sound horns at all private grade crossings not designated as Quiet Zones, and the required volume level for train horns ranges from minimum 96 dBA to maximum 110 dBA, and;

WHEREAS, according to the National Institute of Health, “long or repeated exposure to sounds at or above 85 decibels can cause hearing loss. The louder the sound, the shorter the amount of time it takes for NIHL [Noise-Induced Hearing Loss] to happen.”20 and;

WHEREAS, even at lower decibel levels, the noise from train horns can have severe physiological effects on humans, particularly at night when people are trying to sleep. Dr. Louis Hagler writes in Noise Pollution: A Modern Plague:

Exposure to night-time noise also induces secondary effects, or so-called after effects. These are effects that can be measured the day following the night-time exposure while the person is awake. These include reduced perceived sleep quality, increased fatigue, depressed mood or well-being, and decreased performance.

Long-term effects on psychosocial well-being have been related to nocturnal noise exposure. Noise annoyance during the night increases total noise annoyance for the following 24 hours. People exposed to night-time noise report an increased use of sedatives, closed bedroom windows, and use of personal hearing protection. Particularly sensitive groups include the elderly, shift workers, persons vulnerable to physical or mental disorders, and those with sleeping disorders.

Other factors that influence the problem of night-time noise include its occurrence in residential areas with low background noise levels, combinations of noise and vibration such as that produced by trains and heavy duty vehicles, and sources with low-frequency components which are more disturbing, even at very low sound pressure levels. These low-frequency components have a significant detrimental effect on health.21

WHEREAS, uninterrupted sleep is known to be a prerequisite for good physiological and mental functioning of healthy persons.

Whereas sleep disturbance is considered to be a major effect of environmental noise, data on the effects of environmental noise on sleep are limited. Recent research on sleep disturbance has been conducted for aircraft noise, road traffic, and railway noise. For example, road traffic noise in excess of 30 dB disturbs sleep. The probability of being awakened increases with the number of noise events per night. When background noise is low, noise exceeding 45 dB should be limited; for sensitive individuals, an even lower level is preferred.

The primary sleep disturbance effects are: difficulty falling asleep, frequent awakenings, waking too early, and alterations of sleep stages and depth, especially a reduction of REM sleep. Other effects of noise during sleep include increased blood pressure, increased heart rate, increased finger pulse amplitude, vasoconstriction, changes in respiration, cardiac arrhythmias, and increased body movement. For each of these, the threshold and response relationships may be different. Studies have shown that the frequency of noise-induced awakenings decreases over eight consecutive nights; however no such habituation has been shown for heart rate and after effects.

Exposure to night-time noise also induces secondary effects, or so-called after effects. These are effects that can be measured the day following the night-time exposure while the person is awake. These include reduced perceived sleep quality, increased fatigue, depressed mood or well-being, and decreased performance.22

Long-term effects on psychosocial well-being have been related to nocturnal noise exposure. Noise annoyance during the night increases total noise annoyance for the following 24 hours. People exposed to night-time noise report an increased use of sedatives, closed bedroom windows, and use of personal hearing protection. Particularly sensitive groups include the elderly, shift workers, persons vulnerable to physical or mental disorders, and those with sleeping disorders.

Other factors that influence the problem of night-time noise include its occurrence in residential areas with low background noise levels, combinations of noise and vibration such as that produced by trains and heavy duty vehicles, and sources with low-frequency components which are more disturbing, even at very low sound pressure levels. These low-frequency components have a significant detrimental effect on health. (Dr. Louis Hagler, Noise Pollution: A Modern Plague (2007).23

21 http://www.nonoise.org/library/smj/smj.htm
23 http://www.nonoise.org/library/smj/smj.htm
WHEREAS, sleep disturbances have been associated with a variety of health problems, such as functional impairment, medical disability, and utilization of treatment. Sleep difficulties are also associated with increased use of medical services even among those with no previous health problems, 24; and;

WHEREAS, the odds of waking up at night due to environmental noise were 1.7 times greater with noise levels of 55 – 59 dBA vs. below 40 dBA; 3.6 times greater at 60 – 64 dBA vs. below 40 dBA; and 7.1 times greater at above 65 dBA than below 40 dBA, and;25

WHEREAS, below is a recommendation from the Night Noise Guidelines for Europe, World Health Organization:

> For the primary prevention of subclinical adverse health effects related to night noise in the population, it is recommended that the population should not be exposed to night noise levels greater than 40 dB of L_{night-outside}, during the part of the night when most people are in bed. The LOAEL of night noise, 40 dB L_{night-outside}, can be considered a health-based limit value of the night noise guide-lines (NNG) necessary to protect the public, including most of the vulnerable groups such as children, the chronically ill and the elderly, from the adverse health effects of night noise.26

WHEREAS, transportation of goods on railways is increasing and the majority of the increased numbers of freight trains run during the night, and;

Transportation noise has adverse effects on sleep structure, affects the heart rate (HR) during sleep and may be linked to cardiovascular disease. … A laboratory study was conducted to examine how a realistic nocturnal railway traffic scenario influences HR during sleep.

Results: The train exposure led to a significant change of HR within 1 min of exposure onset (p=0.002), characterized by an initial and a delayed increase of HR. The high-vibration condition provoked an average increase of at least 3 bpm per train in 79% of the participants. Cardiac responses were in general higher in the high-vibration condition than in the low-vibration condition (p=0.006). No significant effect of noise sensitivity and gender was revealed, although there was a tendency for men to exhibit stronger HR acceleration than women.

Conclusions: Freight trains provoke HR accelerations during sleep, and the vibration characteristics of the trains are of special importance. In the long term, this may affect cardiovascular functioning of persons living close to railways.27

WHEREAS, published research shows:

… that prospective homebuyers view locating near train track with heavy freight traffic very negatively, and would rather locate beside an interstate highway. For this reason, increased freight rail traffic will diminish the value of affected real property relative to non-affected real property. The negative effect from increased freight rail traffic is multidimensional and cumulative. Studies suggest that negative effects on real property prices can be expected to follow from: noise, health and safety concerns (interrupted sleep, emergency vehicle delay), air quality effects (diesel particulates, coal dust), land use impacts (recreation – decreased access to parks, ability to enjoy parks), traffic (traffic delays at level crossings); and ability to enjoy parks), traffic (traffic delays at level crossings); and socioeconomic impacts (perceived “livability,” damage to a community’s “brand,” and loss of economic development opportunities).28

WHEREAS, private crossings are grade crossings that do not involve public streets, roads or highways and are not governed by the Train Horn Rule, and;

WHEREAS, California is one of only two states that requires horn sounding at private crossings, and;

WHEREAS, California Public Utilities Code 760429 regulates train horn use at private crossings and references the FRA Train Horn Rule but, unlike the Train Horn Rule, makes no provision for Quiet Zones:

7604. (a) (1) Except as provided in paragraph (3), a bell, siren, horn, whistle, or similar audible warning device shall be sounded at any public crossing in accordance with Section 222.21 of Title 49 of the Code of Federal Regulations.

27 http://bmjopen.bmj.com/content/3/5/e002655.full
29 http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PUC&sectionNum=7604
(2) Except as provided in paragraph (3), a bell, siren, horn, whistle, or similar audible warning device shall be sounded, consistent with paragraph (1), at all rail crossings not subject to the requirements of Subpart B (commencing with Section 222.21) of Part 222 of Title 49 of the Code of Federal Regulations.

(3) A bell, siren, horn, whistle, or similar audible warning device shall not be sounded in those areas established as quiet zones pursuant to Subpart C (commencing with Section 222.33) of Part 222 of Title 49 of the Code of Federal Regulations.

(4) This section does not restrict the use of a bell, siren, horn, whistle, or similar audible warning device during an emergency or other situation authorized in Section 222.23 of Title 49 of the Code of Federal Regulations.

(b) Any railroad corporation violating this section shall be subject to a penalty of two thousand five hundred dollars ($2,500) for every violation. The penalty may be recovered in an action prosecuted by the district attorney of the proper county, for the use of the state. The corporation is also liable for all damages sustained by any person, and caused by its locomotives, train, or cars, when the provisions of this section are not complied with.

WHEREAS, the City of San Clemente was successful in obtaining CPUC approval to establish quiet zones at some private crossings. The grade crossing improvements included wayside horns, a solution that is acceptable to the FRA as a one-for-one replacement of the train horn under the Train Horn Rule. BNSF challenged the CPUC decision, and the court (California Appeals Court, 3rd Appellate District) ruled against San Clemente, holding that the Public Utilities Code has no provision for Quiet Zones at private crossings:

This writ of review proceeding presents the question of whether the Public Utilities Commission (the commission) has the authority to order railroads to stop using locomotive mounted horns at certain pedestrian rail crossings in the City of San Clemente (the city). We conclude the answer to that question is “no,” because in Public Utilities Code section 7604 the Legislature has commanded that an audible warning device mounted on the train must be sounded at every rail crossing in the state, except those within federally established quiet zones. Because the pedestrian crossings at issue here are not within a federally established quiet zone, a train horn must be sounded at those crossings, and the commission has no authority to order otherwise. Accordingly, we will set aside the commission’s decision to the contrary.30

In sum, while it is true, as the city argues, that the 2006 amendment to section 7604 deleted the express requirement “that bells, whistles or sirens be ‘placed on’ or ‘attached’ to a locomotive,” it is not true that the Legislature simply “replaced [that requirement] with the broad language allowing the use of a ‘bell, siren, horn, whistle, or similar audible warning device.’ ” Instead, the Legislature replaced the express requirement of a locomotive-mounted audible warning device with the express requirement that an audible warning device be sounded “in accordance with Section 222.21 -- a federal regulation that itself expressly requires the sounding of a ‘[l]ocomotive horn,’ which by definition means an audible warning device “mounted on a locomotive or control cab car.” (49 C.F.R. § 222.9 (2006).) In making this amendment to the statute, the Legislature plainly signaled its intent not to deviate from the long-standing requirement of state law that an audible warning device mounted on a locomotive must be sounded at every railroad crossing in California, with the exception of those within quiet zones established pursuant to the federal regulations.

Conclusion Because the pedestrian crossings at issue here are not within a quiet zone established pursuant to the federal regulations, by the command of the Legislature in section 7604 a locomotive-mounted audible warning device must be sounded at those crossings. And because the commission does not have the authority to contravene the will of the Legislature as expressed in section 7604, the commission does not have the authority to grant the city’s application to the extent that application asks the commission to approve the use of wayside horns in lieu of train horns at the pedestrian crossings along the city’s beach trail. The commission erred in concluding otherwise.

WHEREAS, state and federal preemptions severely constrain local jurisdictions’ ability to regulate train horn noise, and;

WHEREAS, the Train Horn Rule is silent on who is responsible for grade crossing improvement costs – which can cost as much as $1 million per crossing – and as a result local jurisdictions requesting the improvements are often required to pay the costs for the same.

THEREFORE BE IT RESOLVED that the City Council of the City of Richmond believes that legislation is required at both the state and federal level to provide a rational and reasonable level of relief from

excessive train horn noise, especially at night, and to resolve conflicts and inconsistencies between federal and state regulation of train horns, and:

THEREFORE BE IT FURTHER RESOLVED that the City Council of the City of Richmond requests its Congressional delegation to sponsor legislation that would:

- Clarify that the states have authority to regulate the sounding of train horns within privately-owned yards for the purpose of signaling during switching operations.  
- Provide the states with authority to enforce train horn violations in Quiet Zones.
- Provide a funding source for local jurisdictions to implement grade crossing improvements required to establish Quiet Zones31, and;

THEREFORE BE IT BE FURTHER RESOLVED that the City Council of the City of Richmond requests its California legislative delegation to sponsor legislation that would:

- Authorize and require the CPUC to approve Quiet Zones at private crossings using the same process and criteria utilized by the Federal Railroad Administration for approving Quiet Zones at public grade crossings (See Exhibit A for proposed text).
- Provide cities and counties with authority to require railroad companies to use “other forms of communication … in place of whistle (and horn) signals between sunset and sunrise in urban areas in privately-owned owned rail yards32 for the purpose of signaling during switching operations,34 except as exempted by the General Code of Operating Rules.35
- Provide the cities and counties with authority to enforce violations of non-federal horn use rules.
- Provide legislation similar to 48 other states that eliminates the requirement for horn sounding at private crossings as the favored alternative to allowing Quiet Zones at private crossings.

31 “Switching operations” means the movement and relocation of train cars and engines for the purposes of temporary storage, making up and breaking down trains, loading and unloading, and includes starting and stopping.
32 In 2009, U.S. railroad operating revenue for the top five companies was $43 billion. A fee of one tenth of one percent of freight rail revenue would produce $43 million, enough to pay for improvements to hundreds of grade crossings to create Quiet Zones nation-wide.
33 A rail yard, or railroad yard, is a complex series of railroad tracks for storing, sorting, or loading/unloading, railroad cars and/or locomotives. Railroad yards have many tracks in parallel for keeping rolling stock stored off the mainline, so that they do not obstruct the flow of traffic. Railroad cars are moved around by specially designed yard switchers, a type of locomotive. Cars in a railroad yard may be sorted by numerous categories, including railroad company, loaded or unloaded, destination, car type, or whether they need repairs. Railroad yards are normally built where there is a need to store cars while they are not being loaded or unloaded, or are waiting to be assembled into trains.
34 “Switching operations” means the movement and relocation of train cars and engines for the purposes of temporary storage, making up and breaking down trains, loading and unloading, and includes starting and stopping.
Exhibit A – Proposed Amendment to Public Utilities Code Section 7604 Allowing the Establishment of Quiet Zones at Private Crossings Using Federal Guidelines

PUBLIC UTILITIES CODE - PUC

DIVISION 4. LAWS RELATING TO UTILITY CORPORATIONS AND THEIR EMPLOYEES [7503 - 8286]

( Division 4 enacted by Stats. 1951, Ch. 764. )

CHAPTER 1. Railroad Corporations [7503 - 7727]

( Chapter 1 enacted by Stats. 1951, Ch. 764. )

ARTICLE 5. Railroad Equipment [7601 - 7614]

( Article 5 enacted by Stats. 1951, Ch. 764. )

7604.

(a) (1) Except as provided in paragraph (3), a bell, siren, horn, whistle, or similar audible warning device shall be sounded at any public crossing in accordance with Section 222.21 of Title 49 of the Code of Federal Regulations.

(2) Except as provided in paragraph (3), a bell, siren, horn, whistle, or similar audible warning device shall be sounded, consistent with paragraph (1), at all rail crossings not subject to the requirements of Subpart B (commencing with Section 222.21) of Part 222 of Title 49 of the Code of Federal Regulations.

(3) A bell, siren, horn, whistle, or similar audible warning device shall not be sounded in those areas established as quiet zones pursuant to Subpart C (commencing with Section 222.33) of Part 222 of Title 49 of the Code of Federal Regulations.

(4) This section does not restrict the use of a bell, siren, horn, whistle, or similar audible warning device during an emergency or other situation authorized in Section 222.23 of Title 49 of the Code of Federal Regulations.

(5) A Quiet Zone may be established under the jurisdiction of the California Public Utilities Commission at any grade crossing not subject to (a)(1) in accordance with the provisions of 49 CFR 222, Subpart C, Exceptions to the Use of the Locomotive Horn, beginning with 222.33.

(b) Any railroad corporation violating this section shall be subject to a penalty of two thousand five hundred dollars ($2,500) for every violation. The penalty may be recovered in an action prosecuted by the district attorney of the proper county, for the use of the state. The corporation is also liable for all damages sustained by any person, and caused by its locomotives, train, or cars, when the provisions of this section are not complied with.

(Amended by Stats. 2006, Ch. 885, Sec. 3. Effective September 30, 2006.)
Exhibit A – Proposed Amendment to Public Utilities Code Section 7604 allowing Wayside Horns as a Substitution for Train Horns

7604. Audible warning devices; sounding of devices; penalty for violations; liability for damage

(a) (1) Except as provided in paragraph (3), a bell, siren, horn, whistle, or similar audible warning device shall be sounded at any public crossing in accordance with Section 222.21 of Title 49 of the Code of Federal Regulations.

   (2) Except as provided in paragraph (3), a bell, siren, horn, whistle, or similar audible warning device shall be sounded, consistent with paragraph (1), at all rail crossings not subject to the requirements of Subpart B (commencing with Section 222.21) of Part 222 of Title 49 of the Code of Federal Regulations. For the purposes of this subsection, a similar audible warning device includes a wayside horn as defined in Section 222.9 of Title 49 and which meets the minimum requirements of Appendix E to Part 222.

(3) A bell, siren, horn, whistle, or similar audible warning device shall not be sounded in those areas established as quiet zones pursuant to Subpart C (commencing with Section 222.33) of Part 222 of Title 49 of the Code of Federal Regulations.

(4) This section does not restrict the use of a bell, siren, horn, whistle, or similar audible warning device during an emergency or other situation authorized in Section 222.23 of Title 49 of the Code of Federal Regulations.

(b) Any railroad corporation violating this section shall be subject to a penalty of two thousand five hundred dollars ($2,500) an action prosecuted by the district attorney of the proper county, for the use of the state. The corporation is also liable for all damages sustained by any person, and caused by its locomotives, train, or cars, when the provisions of this section are not complied with.

I hereby certify that the foregoing resolution of the Council of the City of Richmond was duly passed and adopted at a regular meeting thereof held Tuesday, February 4, 2014, by the following vote:

AYES: Councilmembers Bates, Booze, Butt, Rogers, Vice Mayor Beckles, and Mayor McLaughlin.

NOES: None.

ABSENT: Councilmember Myrick.

ABSTENTION: None.

DIANE HOLMES
CLERK OF THE CITY OF RICHMOND
(SEAL)

Approved:

GAYLE MCLAUGHLIN
Mayor

Approved as to form:

BRUCE GOODMILLER
City Attorney

State of California
County of Contra Costa
City of Richmond

I certify that the foregoing is a true copy of Resolution No. 8-14, finally passed and adopted by the City Council of the City of Richmond at a regular meeting held on February 4, 2014.