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KEEP CALM AND ROCK ON: A FEDERAL CROWD MANAGEMENT LAW FOR THE LIVE MUSIC INDUSTRY

I. INTRODUCTION

The changes COVID-19 occasioned that have taken root in our lives include preferring remote working and streaming platforms over in-office work and movie theaters.¹ The live music industry however, remained unaffected by pandemic-supplied alternatives. The much bottled-up desire for a good, in-person show skyrocketed as social distancing subsided. Despite the economic recession, ticketing revenue broke records, stadium attendance tripled, and ancillary fan spending surged.² An unprecedented demand for Taylor Swift’s upcoming tour crashed Ticketmaster servers, just with pre-sales.³ It’s not like technology wasn’t available to provide substitutes. Streaming or release of previous shows have been immensely popular for artists like Rolling Stones while BTS’s pay-per-view virtual live concert “Map of the Soul ON:E” was viewed by over a million people.⁴ But they can’t compete with the real thing.

Despite the plethora of optimistic projections on the live music industry, a perilous threat looms over it—the lack of a federal law on crowd management. 37 percent of the crowd-related

¹ Companies can access an ever-expanding talent pool and enhanced flexibility increases retention. Ankur Modi, *Is Remote Working Just Another Fad Or Actually Good For Your Business?*, FORBES (Sep 27, 2021), <https://www.forbes.com/sites/ankurmodi/2021/09/27/is-remote-working-just-another-fad-or-actually-good-for-your-business/>; see also Eliana Dockterman, *Streaming Was Already Up 13% Last Weekend. Can Movie Theaters Survive COVID-19?*, TIME (Mar. 18, 2020), <https://time.com/5806060/coronavirus-movie-theaters-streaming/> (In addition to consumer preference, shortage of content that can be released on screen due to suspension of filming caused by the pandemic makes it harder for the movie theaters to compete against streaming services with “near-unlimited amount of content”).

² Glen Peoples, *Live Nation Turns in Record Quarter as Touring Business Booms*, BILLBOARD.COM (Nov. 3, 2022), <https://www.billboard.com/pro/live-nation-record-quarter-earnings-touring-business-booms/> (“Ticket sales for shows in 2023 are pacing even stronger than they were heading into 2022, up double-digits year-over-year, excluding sales from rescheduled shows”); Elizabeth Dilts Marshall, *With a Looming Recession, Will Music Fans Still Buy Concert Tickets?* BILLBOARD.COM (Nov. 14, 2022), <https://www.billboard.com/pro/touring-recession-music-fans-buy-concert-tickets/>.

³ Marisa Dellatto, *Ticketmaster Cancels Public Sale For Taylor Swift Eras Tour Amid Historically High Demand*, FORBES (Nov. 17, 2022) <https://www.forbes.com/sites/marisadellatto/2022/11/17/ticketmaster-cancels-public-sale-for-taylor-swift-eras-tour-amid-historically-high-demand/>.

⁴ See Paul Sexton, *Rolling Stones GRRR Live! To Be Launched With Unique Online Concert Event*, YAHOO (Dec. 15, 2022), <https://www.yahoo.com/entertainment/rolling-stones-grrr-live-launched-145831924.html>; see also Glenn Peoples, *HYBE’s Quarterly Earnings Get Boost From Ithaca Holdings as BTS Concerts Await*, BILLBOARD.COM (Nov. 5, 2021), <https://www.billboard.com/music/music-news/hybe-q3-earnings-2021-bts-ithaca-holdings-9655792/>.

injuries in concerts around the world takes place in the U.S.⁵ The latest tragedy at Astroworld Festival needs no reminding—the shock is still fresh. Although sometimes interchangeably used, crowd control and crowd management are two different concepts. While crowd control implies physical confinement of the mass, crowd management, a broader concept, accommodates the psychology of the public to predict their behavior and possible problems.⁶ The 1979 The Who concert disaster is an example of poor crowd management. Fans who had been freezing outside for hours rushed when they heard music during sound check, thinking the show had already started. It resulted in 11 deaths at the entry door.⁷

This paper argues for a federal crowd management law that specifically addresses the risks entailing live music performances. It also proposes a technological solution to allay economic concerns of its enactment. Part II addresses past crowd mismanagements in concerts and their causes and remedies, both of which are well-known to industry experts. Part III explains the coverage and shortcomings of the standards that have been utilized thus far. Part IV expounds the damages accompanied by the absence of a national standard and proposes a federal law. Lastly, Part V suggests a profitable plan to supplement the legislation.

II. HISTORY OF CROWD MISMANAGEMENT IN CONCERTS

The Astroworld crowd crush was sadly not the first of its kind. Fatal crowd mismanagement has been a recurring problem for decades. Between 1999 and 2015, there were 44 crowd crushes globally in which ten or more were killed. From 2016 through 2021, there have been another 21, around 20% of which took place at music shows.⁸ Deadliest tragedies include the 1991 AC/DC concert in Salt Lake City that claimed three lives;⁹ the '99 Woodstock in New York which left 1,200 injured and caused several rapes, 44 arrests and millions in damages;¹⁰ Pearl Jam's Roskilde Festival performance in 2000 that caused a stampede which killed 9;¹¹ and the 2003 E2 Nightclub incident that led to 21 deaths and more than 50 injuries.¹²

⁵ Tracy Hresko Pearl, *Crowd Crush: How the Law Leaves American Crowds Unprotected*, 104 KY. L.J. 1 (2015).

⁶ John Shaughnessy, *Focal Guide to Safety in Live Performance* (George Thompson, Ed. 1993) (Crowd Management is “the business of ensuring that the demands of a large body of people in one place are analyzed and met by a combination of forward planning, engineering response, adequate information systems and alert general management.”).

⁷ Holly Yan, *Deadly crowd surges have happened for decades. Safety standards exist, but they're not required nationwide*, CNN (Nov. 21, 2021), <https://www.cnn.com/2021/11/11/us/safety-standards-requirements-crowd-surges/index.html>.

⁸ Will Pritchard, *After Astroworld, what is being done to stop crowd crushes from happening again?*, DJMAG.COM (Mar. 8, 2022), <https://djmag.com/features/after-astroworld-what-being-done-stop-crowd-crushes-happening-again>.

⁹ Jordan Burrows, *Many similarities between 1991 Utah AC/DC concert and Astroworld Festival*, ABC4 (Nov. 15, 2021), <https://www.abc4.com/news/many-similarities-between-1991-utah-ac-dc-concert-and-astroworld-festival/>.

¹⁰ Jeff Cornell, *Woodstock 99: Remembering the Chaos 20 Years Later*, VARIETY (Jul. 23, 2019), <https://variety.com/2019/music/news/woodstock-99-remember-20-year-anniversary-1203276536/>.

¹¹ Rachel Treisman, *Astroworld Festival joins a list of historical concert tragedies*, NPR (Nov. 6, 2021), <https://www.npr.org/2021/11/06/1053226380/astroworld-concert-tragedies-love-parade-pearl-jam-the-who-rolling-stones>.

¹² Jodi Wilgoren, *21 Die in Stampede of 1500 at Chicago Nightclub*, THE NEW YORK TIMES (Feb. 18, 2003), <https://www.nytimes.com/2003/02/18/us/21-die-in-stampede-of-1500-at-chicago-nightclub.html>.

Direct cause of death is already known—compressive asphyxiation.¹³ Uncontested simple math asserts that density above 5-6 ppm² (persons per square meter) causes crowd collapse or crowd crush that leads to compressive asphyxiation. So, all that is required is maintaining 4 ppm² or less. In November 2021 however, the Astroworld Festival evinced that this isn't so easy. During the rapper Travis Scott's performance on the first night of the two-day event, ten lives were lost after a crowd crush. Analysis showed that the victims were in compressed areas with a high risk of crowd collapse which allowed a mere 1.85 square feet per person.¹⁴ But Astroworld wasn't without safety measures. An Event Operations Plan (EOP) addressing crowd management had been drafted, but it only mentions the need for one whereas operational details are unspecified.¹⁵ Paul Wertheimer, founder of Crowd Management Strategies, commented that the Astroworld EOP, without a specific plan for a mass casualty crowd crush, was "mostly boilerplate".¹⁶

III. A PROVISIONAL CODE THAT OVERSTAYED ITS WELCOME

A. *The NFPA 101 Life Safety Act: Its Effectiveness and Shortcomings*

There are laws regulating the number of trash receptacles or limiting sound decibels, but none that requires concert venues to maintain crowds within safe density.¹⁷ A uniform direction is imperative for an industry that inherently involves interstate commerce. But states are inescapably concerned with the cost of adopting such stringent crowd management directive, especially since live performance is a huge revenue stream - the biggest one for artists.¹⁸ Cincinnati, which adopted a 'festival seating' law that banned first-come, first-served seating after The Who crowd crush, abandoned it 25 years later after allegations of performers skipping the city because of this law.¹⁹ In defiance of its urgency, states are bound to be unenthusiastic about a federal legislation when it evidently presages reduced profit.

¹³ Leo Benedictus, *Hajj crush: how crowd disasters happen, and how they can be avoided*, THE GUARDIAN (Oct 3, 2015), <https://www.theguardian.com/world/2015/oct/03/hajj-crush-how-crowd-disasters-happen-and-how-they-can-be-avoided>.

¹⁴ Shawn Boburg, Sarah Cahlan, Joyce Shogun Lee, Attar Mirza & Elyse Samuels, *Most of the dead Astroworld victims were in one highly packed highly packed area, video timeline shows*, THE WASH. POST (Nov. 24, 2021), <https://www.washingtonpost.com/investigations/interactive/2021/what-happened-astroworld-travis-scott/>.

¹⁵ Astroworld Nov 5-6 Live in Houston, TX 2021 EOP demanded suitable crowd management "from the minute the doors open." And added "Crowd management techniques will be employed to identify potentially dangerous crowd behavior in its early stages in an effort to prevent a civil disturbance/riot." Rosa Flores and Anna-Maja Rappard, *Here's what the operations plan for the Astroworld Festival included and didn't include*, CNN (Nov. 8, 2021), <https://www.cnn.com/2021/11/08/us/astroworld-festival-operations-plan/index.html>.

¹⁶ *Id.*

¹⁷ Ahiza García-Hodges, *Questions have long swirled around who is liable for tragedies at concert*, NBC (Nov. 12, 2021), <https://www.nbcnews.com/business/business-news/questions-long-swirled-liable-tragedies-concerts-rcna5369>.

¹⁸ David Chidekel, *The Future Of Live Events: AR, VR, And Advertising*, FORBES (Feb. 9, 2021), <https://www.forbes.com/sites/legalentertainment/2021/02/09/the-future-of-live-events-ar-vr-and-advertising/> ("In 2019, the top artists on *Billboard's* Money Makers list earned between 75-90% of their yearly income from live performances and appearances.").

¹⁹ The decision was unanimous - Cincinnati was the only one among the top 50 cities for concert venues that did not allow festival seating. The Associated Press, *Cincy Lifts 'The Who' Concert Law*, CBS (Aug. 5, 2004), <https://www.cbsnews.com/news/cincy-lifts-the-who-concert-law/>.

There is, however, a regulation currently used in every U.S. state and adopted in 43 states; the National Fire Protection Association (NFPA)'s 101®: Life Safety Code® (hereafter, "NFPA 101"). This non-profit organization's code is the only document that covers life safety in both new and existing structures and stipulates minimum building stipulations to protect occupants from fire-related danger.²⁰ Since 1999, NFPA 101's goals include providing safe crowd movement, and its 2021 edition requires at least 1:250 crowd manager-occupant ratio at an event and adequate access to unambiguous exits and limits density to one person every 7ft².²¹ But it also excuses jurisdictions to reduce the number of managers if sprinklers are installed properly.²² While pertinent to a certain extent, it does not address the particular needs of the live music industry. NFPA 101 incorporated Cincinnati's report on the crowd management at rock concerts specifically in regard to "festival seating" after the The Who crush.²³ A 1990 report reflects Dr. John J. Fruin's "crowd dynamics factors" of time, space, information, and energy and incorporated them into NFPA 101.²⁴ But to this day, it is without details as to how they should be regulated and managed. It also rejected restricting the number of tickets sold or otherwise distributed so that it would not exceed the aggregate number of seats and standing room.²⁵ NFPA 101 categorizes and provides different standards for sprinklers but it merely scratches the surface with non-fire related matters.²⁶ But because it directly regulates spaces with entertainment purposes and claims to go beyond safety from fire, the live music industry has been using it for decades, turning a blind eye to everything it comes without.²⁷ What is more notable is the NFPA's express intention to provide general rather than specific guidelines when it comes to crowd management.²⁸ Enforcement is another beast of its own. Even though NFPA 101 is revised every three years and explicitly states that the most current edition supersedes previous ones,

²⁰ The National Fire Protection Association (NFPA), <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=101> (last visited Dec. 20, 2022).

²¹ NFPA F1999 Report on Proposals (ROP) p. 65.

²² NFPA 101 Life Safety Code 2021 Edition, 12.7.6.1, 13.7.6.1.

²³ Robert F. Duval, National Fire Protection Association, *NFPA Case Study: Nightclub Fires* (2006).

²⁴ Explains various types of situations that could induce crowd related emergencies, very pertinent to live music as well as list of factors like movement pathways, pressure points, etc. John J. Fruin, *The Causes and Prevention of Crowd Disasters*, CROWDSAFE.COM (Jan, 2002).

²⁵ NFPA Committee on Safety to Life, *F1990 Technical Committee Reports (TCR)* p. 590.

²⁶ Recommends further clarification of the types of bars with live music and dance halls, which may require sprinklers. Report on Comments (ROC) 2006 Edition p.101-85, 101-95 ("If the bar is just a lounge with 50 seats in a larger restaurant, or the dance hall is for 200 people in a church fellowship hall, the justification for mandating sprinklers based on their fire record is far different than all bars with live music or all dance halls.").

²⁷ Report on Comments (ROC) 2003 edition p.345 (A.1.2.4. "Although fire safety has been the long-standing focus of NFPA 101, its widely known title, Life Safety Code, and its technical requirements respond to a wider range of concerns including, for example, crowd safety.").

²⁸ See NFPA Report on Comments (ROC) 2006 Edition p.101-123 (Points out that not all occupancies with loads over 250 need trained crowd managers because it could be school lunchrooms or small restaurants, which have yet to show poor track record for fire incidences without crowd managers present.); see also F1996 Report on Proposals Part 2 (ROP) p.174 (1996)(Over the years, National Fire Protection Association have voiced concerns about NFPA 101 being particular for a certain industry as it applies to a vast array of gatherings from schools, churches and hospitals to music festivals. Amendment opinion recognizes ergonomic issue as irrelevant to NFPA 101.).

different states are using different editions or select chapters combined with local jurisdiction.²⁹ The 2021 version is currently adopted by only four states.³⁰

B. Apposite Resources Aplenty

There are other regulations in practice, even though they also do not sufficiently cover risk elements of live music in detail. The California Concert and Festival Crowd Safety Act, passed recently in September 2022, sets out to establish minimum crowd safety standards for large outdoor events.³¹ The City of Houston–Harris County Special Events Task Force published updated safety protocols for NRG Park, the Astroworld 2021 venue, after the tragedy.³² The Texas Task Force on Concert Safety (“TFCS”) recommends a Concert Attendee Code of Conduct as part of ticketing process to clarify what behaviors will lead to ejection, encourages communication among venues that have hosted the same artist and recommends crowd management training albeit leaving details to be determined by associated parties.³³ The House Oversight and Reform Committee launched a probe into the festival, but so far it amounts to a letter to the CEO of Live Nation, requesting information on the promoter’s role in the incident.³⁴ While the U.S. Department of Homeland Security recognizes “Soft Targets and Crowded Places (ST-CPs)”, crowd management is omitted in related publication; the focus is on possible bomb threats and mass shootings.³⁵ The Event Safety Alliance’s *The Event Safety Guide* makes useful suggestions to consider categorization of shows by size, timing of door opening to prevent bottleneck effect, safe stage design and subdivisions for large shows, maximum rate of flow for turnstiles and artist movement around the pit, but again is without methodology.³⁶ The Entertainment Services and Technology Association (“ESTA”) Technical Standards Program, arguably the most detailed guideline available as it incorporated much of the NFPA 101 and has taken

²⁹ Holly Yan, *Deadly crowd surges have happened for decades. Safety standards exist, but they re not required nationwide*, CNN (Nov. 21, 2021), <https://www.cnn.com/2021/11/11/us/safety-standards-requirements-crowd-surges/index.html>.

³⁰ NFPA 101 2021 Edition is adopted by Connecticut, Delaware, Nevada, and West Virginia. UPCODES.COM, <https://up.codes/code/nfpa-101-life-safety-code-2021>.

³¹ California Concert and Festival Crowd Safety Act, 2022 Cal AB 2681.

³² Madison Bloom, *Astroworld Task Force Calls for Added Security and Permit Requirements at NRG Park*, PITCHFORK (Dec. 1, 2022) <https://pitchfork.com/news/astroworld-task-force-calls-for-added-security-and-permit-requirements-at-nrg-park/>.

³³ See generally Texas Task Force on Concert Safety (TFCS), *Report from the Texas Task Force on Concert Safety* (Apr. 19, 2022).

³⁴ Rebecca Shabad, *House committee launches probe into deadly Astroworld concert*, NBC (Dec. 21, 2021), <https://www.nbcnews.com/politics/congress/house-committee-launches-probe-live-nation-s-role-astroworld-tragedy-n1286468>; see also Congress of the United States, *Letter to Mr. Michael Rapino*, (Dec. 22, 2021), [https://oversight.house.gov/sites/democrats.oversight.house.gov/files/2021-12-22.CBM Comer et al. to Rapino-Live Nation re Astroworld.pdf](https://oversight.house.gov/sites/democrats.oversight.house.gov/files/2021-12-22.CBM%20Comer%20et%20al.%20to%20Rapino-Live%20Nation%20re%20Astroworld.pdf).

³⁵ See generally Department of Homeland Security, *Soft Target and Crowded Places Security Plan Overview* (May, 2018), https://www.cisa.gov/sites/default/files/publications/DHS-Soft-Target-Crowded-Place-Security-Plan-Overview-052018-508_0.pdf; see also Cybersecurity and Infrastructure Security Agency (CISA), *Security of Soft Targets and Crowded Places–Resource Guide* (Apr, 2019), https://activeshootersurvivaltraining.com/shared-files/9236/19_0424_cisa_soft-targets-and-crowded-places-resource-guide.pdf.

³⁶ See Event Safety Alliance of USA, Inc., *The Event Safety Guide*, (Nov. 21, 2013) eventsafetyalliance.org; see also Ticketmaster FAQ, <https://help.ticketmaster.it/hc/en-us/articles/4417862535953-What-is-the-Pit-sector-> (last visited Dec. 22, 2022) (“the “Pit” sector is the area under the stage, thus being closer to the stage than the General Admission ticket in Parterre.”).

into consideration and extended works of crowd management experts, also supplies relevant information such as types of barricade required—T shape barricade for forward-facing general admissions events and round corners for bigger events. But specifications for this barricade and definition of ‘bigger events’ are missing.³⁷ Compared to how NFPA 101 provides precise fire safety criteria, we are with multiple vague provisions.

IV. ONE FOR ALL AND ALL FOR ONE: A FEDERAL CROWD MANAGEMENT LAW

A. *The Cost of Discombobulating Standards*

In addition to the climbing death toll, lack of a uniform legislation entails many problems. First of all, victims find it hard to get justice due to complications regarding jurisdiction and assigning responsibility. Crowd crushes are underreported and rarely litigated, which burdens the few who do pursue legal recourse. Due to the absence of an absolute standard, states have no choice but to rely on case law but whether they are in abundance or in dearth is a non-matter since precedents at most propound the adequacy of crowd management tactics.³⁸ Without an unvarying touchstone, courts have been vulnerable to errors and as a result left behind irregular jurisprudence.³⁹ Even though experts singularly voice density as the sole most credible indicator of crowd crushes, scientific findings were often disregarded.⁴⁰ Future victims are likely to be discouraged from bringing a suit while venues and event managers would see no incentive to attenuate the likelihood of future crowd accidents. Victims without means will settle reluctantly. Although reasons are undisclosed, one of the Astroworld victims already settled out of court.⁴¹

Secondly, loose adoption of existing guidelines in practice due to the discrepancy among state regulations is prevalent.⁴² This is inevitable, due to the difficulty posed upon every party involved in live music events. Perusing and abiding by relevant local rules, especially with a national tour, heightens the possibility of disastrous accidents. Even the most careful concert-goer would also find it cumbersome to locate relevant regulation and verify its compliance, not knowing whether the promoter, artist, venue, or some or all of them are responsible.

The assemblage of de facto discretionary crowd management standards that have been obfuscating the industry will ultimately hurt it in its entirety. More accidents would spike up insurance

³⁷ ESTA works with and represents interests of numerous organizations in the industry including ESA, USITT, VPLT, ANSI, ICC, UL, and the NFPA. 2020 Entertainment Services and Technology Association (ESTA) and Event Safety Alliance (ESA), *ANSI ES1.9-2020 Crowd Management* (Jul. 6, 2020),

<https://static1.squarespace.com/static/5aec979d3e2d09db8bcad475/t/5f28405c6701be2fe6ae9a24/1596473447880/ANSI+ES1.9-2020.pdf>.

³⁸ Injured attendees at a Diana Ross concert at Central Park claimed that a stampede could have been averted with reasonable crowd control methods. The court recognized the absence of “adequate supervision and control of that crowd.” *Rotz v. City of New York*, 143 A.D.2d 301, 305 (N.Y. App. Div. 1988); (“The jury here could reasonably find that the risk of a riot or a stampede could have been averted, or its consequences contained, by adequate crowd-control measures which would have inhibited or prevented the eruption of precipitating incidents...”).

³⁹ Pearl, *supra* note 1.

⁴⁰ Courts often relied on conventional knowledge like that on music genres. García-Hodges, *supra* note 18.

⁴¹ Minyvonne Burke and Diana Dasrath, *Astroworld victim's family settles lawsuit against rapper Travis Scott, Live Nation, attorney says*, NBC (Oct 20, 2022), <https://www.nbcnews.com/news/astroworld-festival-lawsuit-travis-scott-settled-family-21-year-old-vi-rcna53219>.

⁴² Event promoters are reportedly unaware of the permit requirements, while others intentionally falsify applications or ignore the process in entirety. TFCS, *supra* note 34.

costs, which would add to the already surging concert ticket prices.⁴³ People will eventually assess the escalating risk of going to live concerts against staying home and opt for the latter. Big acts may survive, but rookie and indie artists will have a tougher time finding a stage to go on.⁴⁴ Promoters and venues will too suffer. For many, concert experience is the biggest music consumption boost, what shapes their taste in culture and entertainment and the backdrop to most memorable moments in life. Small venues often act as gateways to more expensive and out-of-state arena performances. Decreased accessibility to live events will significantly weaken the industry.

B. Establishing Guidelines Germane to the Industry

History of tragedies have evinced the dire need for a federal crowd management law while analysis of available guidelines bespoke its possibility. This federal mandate on crowd management shall be the floor, not the ceiling, and should accommodate the distinct nature of the live music industry, including artist guidance. Artists shouldn't have to restrain from getting the crowd excited. If they did, they'd be neglecting their duty to provide the fun promised.⁴⁵ But they should be notified on how to halt the show and announce warnings in case of emergencies that include crowd related incidents.⁴⁶ Artists' direct addressing of the audience has been proven to be effective in emergencies.⁴⁷

⁴³ Irene Galea, *Popular concert tickets nearly 20% more expensive than pre-pandemic, statistics show* THE GLOBE AND MAIL (Jul. 14, 2022) <https://www.theglobeandmail.com/business/article-popular-concert-tickets-nearly-20-more-expensive-than-pre-pandemic/> (According to Pollstar, tickets to the 100 most popular tours in North America cost \$108.20, an increase of 17 percent compared to the pre-pandemic year of 2019.); *see also* Ian Thomas, *Why Taylor Swift, Bruce Springsteen tickets will be more expensive and tougher to get*, CNBC (Nov. 13, 2022) <https://www.cnbc.com/2022/11/13/why-taylor-swift-bruce-springsteen-tickets-will-be-more-expensive.html> (Concert ticket sales in the third quarter of 2022 were up 37% compared to 2019 while 2023 projection shows double digit increase compared to the previous year.).

⁴⁴ Tim Ingham, *Jay Marciano on Streaming, Coachella, Macro-Economics - And Why 'Everyone's a Genius in a Bull Market'*, MUSIC BUSINESS WORLDWIDE (Dec. 5, 2022), <https://www.musicbusinessworldwide.com/jay-marciano-on-streaming-coachella-macro-economics-and-why-everyones-a-genius-in-a-bull-market/> ("A young artist that's on the road today is seeing all of their costs going up – their tour bus, staff, sound engineer, lighting engineer, hotels... and as a result some artists can't even afford to go on tour").

⁴⁵ García-Hodges, *supra* note 18. ("Arguably the job of a performer is sometimes to get the crowd riled up and use hyperbole. What about a song like 'Burning Down the House'? Is the performer responsible for an audience member burning down the place?"); *also see* *Jones v. Live Nation Entm t., Inc.*, 63 N.E.3d 959 (Ill. App. Ct. 2016) (Injured audience claims artist was responsible for a crowd surge after the performers encouraged the crowd to leave their assigned seats and "come on down to party.").

⁴⁶ An Eminem concert lawsuit recognized a duty between a performer or touring company and a concertgoer in the context of suspending performance once potential danger was discerned. Citing *Theilmier v. Louisiana Riverboat Gaming*, 732 So. 2d 620 (La. 1999) which held that the performer owed a duty of reasonable care to an audience he called on stage who fell on her way back off the stage. *Cunningham v. Dist. of Columbia Sports Entertainment Comm*, Civil Action No. 03-839(RWR)(JMF) (D.D.C. Nov. 30, 2005).

⁴⁷ Pearl Jam singer Eddie Vedder stopped the show and successfully asked the audience to take steps back. David Fricke, *Nine Dead At Pearl Jam Concert*, ROLLING STONE (Aug. 17, 2000), <https://www.rollingstone.com/music/music-news/nine-dead-at-pearl-jam-concert-235167/>.

Every show is idiosyncratic, but most live music performances share a common trait; explosive energy. The very characteristic that makes it captivating entails great risks.⁴⁸ Industry particulars like stage lights, audience demographic - now better ascertained with pre-registering with ticket sellers - flow of migration in multi-stage events and order of performance should be considered.⁴⁹ Maximum attendees for general admissions and required visibility of safety-related signage should also be included as their absences have caused live concert injuries in the past.⁵⁰ CPR training and cardiac devices should also be required. Music festival sexual assault reports demand related guidelines.⁵¹ Details on broad and vague arrangements for barricades, subdivisions and corrals are necessary as perfunctory subdivision could sometimes act as a catalyst in crushes.⁵² Taking further measures than required may be encouraged when proven to be effective.⁵³

Security and crowd manager employment standards are reportedly leniently followed while capricious implementation, varying renewal periods, and verification issues are widespread.⁵⁴ Some Astroworld securities were hired without qualification and notification on their job description.⁵⁵

⁴⁸ Keith Still, *What Went Wrong At Astroworld? The Deadly Dynamics Of Crowd Surge*, NPR (Nov. 11, 2021) <https://www.npr.org/transcripts/1054765905> (“high-energy performer and a high-energy crowd and high density in that same space, then you have high risk. So understanding the difference - what works, what doesn't work - that's the science of crowd dynamics.”); *see also* John J. Fruin, *supra* note 25. (“Craze like group behavior has been created where participation in an event, or viewing of a public personage, is intensively promoted. General admission events... cause craze like competition for favorable seats or standing positions close to entertainers.”).

⁴⁹ Ticketmaster uses each user's account information when registering them onto a Verified Fan status for each event they promote, which includes favorite artists, previous purchases, address, etc., *Everything You Need to Know about Ticketmaster Verified Fan*, TICKETMASTER (May. 10, 2020), <https://blog.ticketmaster.com/verifiedfan-faq/>; *see also* Chris Willman, *Ramping Up Festival Safety, Post-Astroworld: Concert Pros Consider Measures to Avert Future Disasters*, VARIETY (Feb. 14, 2022), <https://variety.com/2022/music/news/concert-safety-festivals-pollstar-live-1235181788/>.

⁵⁰ *Cunningham v. Dist. of Columbia Sports Entertainment Comm*, Civil Action No. 03-839(RWR/JMF) (D.D.C. Nov. 30, 2005).

⁵¹ Christopher Damien and Nicole Hayden, *We reviewed rape statistics surrounding Coachella, Stagecoach. Here's what we found*, DESERT SUN (Apr. 5, 2019), <https://www.desertsun.com/story/life/entertainment/music/coachella/2019/04/05/rape-statistics-surrounding-coachella-stagecoach-heres-what-we-found/3228396002/>.

⁵² Bard Callas, *Congress Is Getting Involved in Astroworld Festival Tragedy With Investigation Into Live Nation's Role*, COMPLEX (Dec. 22, 2021), <https://www.complex.com/music/congress-astroworld-festival-tragedy-investigation>.

⁵³ Since 2018, Coachella Valley Music and Arts Festival promoter Goldenvoice began deploying drones and more armed security. Tom Coulter, *Coachella 2022 security: Police, security prepare as experts anticipate high-energy crowd post-COVID*, DESERT SUN (Apr. 14, 2022), <https://www.desertsun.com/story/life/entertainment/music/coachella/2022/04/14/coachella-2022-police-security-prep-high-energy-crowd-post-covid/7305586001/>.

⁵⁴ Coachella and Aftershock festival involved around 100 volunteer Marines; security at both events were not required to obtain security officer licenses. Sarah Holtz, *Why Are Marines Working Unpaid Shifts as Security Guards at California Concerts?*, THE SAN FRANCISCO STANDARD (Nov. 11, 2022) <https://sfstandard.com/arts-culture/why-are-marines-working-unpaid-shifts-as-security-guards-at-california-concerts/>; *see also* States that adopt NFPA tend to use the crowdmanagers.com certification, which is supported and endorsed by National Association of State Fire Marshals, but it is not the only one. www.trainedcrowdmanager.com also follows NFPA guidelines.

⁵⁵ People without training, prior event security experience and information on what the job would entail were hired by Astroworld security contractors to work two 17-hour shifts. Bevan Hurley, *Complete fricken chaos : Astroworld security guard says festival staff were woefully unprepared*,

Over-policing and racial discrimination issues have occurred.⁵⁶ Hiring security without guidance on dispatching led to injuries.⁵⁷ The post-pandemic tour era security shortage problem is being gravely exacerbated.⁵⁸

V. A MORE LUCRATIVE SEATING PLAN TO MAKE THIS PILL EASIER TO SWALLOW

The biggest hindrance in enacting a federal crowd management law would be the lack of economic incentive. The solution clearly demands less density, which means less audience and less profit. States without such a law would obviously be preferred to those with stricter regulation, hence the overdue advent of a trailblazer. Technology that can immediately be deployed could provide an answer to this apprehension - camera seats. Certain seats in any given and willing venue could install 360-degree cameras to provide live streaming of the event. Their price would vary depending on visibility and distance from the stage like regular seats, although much less costly given how seat holders won't be physically present at the event.

Because it will be simple broadcasting, Camera Seats are quite different from XR experiences, which currently are at their inception stage. There will be no avatar, metaverse, VR goggles or headsets.⁵⁹ Travis Scott's live, free-of-charge virtual reality concert within the Fortnite video game platform in 2020 was a huge success, but it was deemed uncertain whether requiring players to purchase a ticket for a VR concert will negatively affect participation.⁶⁰ Plus, metaverse concerts demands an entirely new production which takes months of preparation.⁶¹ Camera Seats are free from the risk and cost associated with under-tested technologies. Broadcasting is a tried-and-true market; BTS's October 2022 concert was broadcasted for a million TV viewers and live-streamed online and hit 49 million views.⁶² Charging a cost for a seat requires a "personal touch".

A personal Cam Seat would cater to the concert-going experience better, precisely because of the limited and unimaginative camera movement because it would convey the feeling of actually being in the seat. One of the main factors that motivate listeners to attend live concerts is the social connection of experiencing the organic progression of music performance with others.⁶³ Cam Seat holders would feel a stronger rapport with those at the venue by (via camera) entering the venue when the door opens, absorbing the pre-show anticipation and getting access to on-site merchandise rather

INDEPENDENT (Nov. 9, 2021), <https://www.independent.co.uk/news/world/americas/astroworld-security-travis-scott-latest-b1954479.html>.

⁵⁶ Kira Leadholm, *Rethinking concert safety*, CHICAGO READER (Jun. 27, 2022), <https://chicagoreader.com/music/rethinking-concert-safety/>.

⁵⁷ There were more than a hundred officers for security but not a single officer were inside the venue. Every single one of them were on the sidewalk and at the entrances. *Daly v. City of New York*, 2013 NY Slip Op 30594(U).

⁵⁸ Chris Eggersten, *Astroworld Exposed an Industrywide Security Staffing Crisis*, BILLBOARD.COM (Nov. 23, 2021), <https://www.billboard.com/pro/astroworld-security-staffing-crisis-labor-shortage/>.

⁵⁹ eXtended Reality (XR) is a 'catch-all' term which encompasses augmented reality (AR), virtual reality (VR), and mixed reality (MR).

⁶⁰ Chidekel, *supra* note 19.

⁶¹ Puah Ziwei, *Travis Scott reportedly earned \$20million from Fortnite event*, NME (Dec. 2, 2020), <https://www.nme.com/news/gaming-news/travis-scott-earned-20million-fortnite-concert-event-2829792>.

⁶² Patrick Frater, *BTS Concert in Busan Viewed by 50 Million Worldwide*, VARIETY (Oct. 15, 2022), <https://variety.com/2022/global/asia/bts-busan-concert-worldwide-views-1235404813/>.

⁶³ See generally Dana Swarbrick, Dan Bosnyak, Steven R. Livingstone, Jotthi Bansal, Susan Marsh-Rollo, Matthew H. Woolhouse, and Laurel J. Trainor, *How Live Music Moves Us: Head Movement Differences in Audiences to Live Versus Recorded Music*, FRONTIERS IN PSYCHOLOGY Volume 9, (Jan, 2019).

than going on the stage or get a bird's eye view as they would in VR concerts.⁶⁴ There won't be any on-screen 3D objects to make one feel like a disparate crowd compared to those who are there in person; it would and should be as real as it could get.⁶⁵

Spin-off packages like multi-seat deals would allow audiences to view the event from multiple seats - opening on the first row, favorite song from the box seat and encore from the pit. Because these Cam Seats can be sold to as many people as the server capacity allows, even taking into the consideration that more than one person may enjoy a single seat, with the restriction of commercial use, they will still create greater profit for the artist, promoter and venue. The cost of setting up necessary equipment would be more than offset and the burden on limited physical tickets and venue backlog issues may also be mitigated.⁶⁶ Meet-and-greet, backstage pass, sound check and rehearsal footage are too possible. In addition, Cam Seats would be used for other events at the venue like sports and theater and be a great segue into future implementation of XR technology developments that are to come.

VI. CONCLUSION

Halloween weekend, 2022. My plan to vicariously enjoy the annual revelry on social media was soon replaced by hours of frantic phone calls to friends in Korea, because a tragic crowd crush that took 158 lives occurred on a street I was so familiar with. For the next few days, I saw people who got out safely tell their account of helping first responders wash party makeup off of the deceased for identification. They said Halloween will never be the same for them. For an increasing number of Americans, for similar reasons, their favorite songs are not the same after experiencing crowd mismanagement catastrophes. In the past few years, 'crowd crush' has been registered in our minds as a probable cause of death. Awareness is manifested, solution is given but disaster is repeated. It's time to codify a stringent federal law to better assure a safer, healthier live music industry.

⁶⁴ *The Next-Gen Concert Experience: Imagine Dragons in Virtual Reality*, WIRED (Jul. 2017), <https://www.wired.com/brandlab/2017/07/next-gen-concert-experience-imagine-dragons-virtual-reality/>.

⁶⁵ In Coachella 2022, Australia DJ Flume's YouTube livestream was reinforced with psychedelic 3D visuals and parrots floating around the stage. Andrew R. Chow, *Coachella Gave Fans a Wild AR Experience. It Could Be the Future of Concerts*, TIME (Apr. 21, 2022) <https://time.com/6168688/coachella-enters-the-metaverse/>.

⁶⁶ Thomas, *supra* note 44. ("22 is going to probably be a record year, but there's only so many Fridays and Saturdays. More inventory to spread into '22, '23 and '24.").