

Government Interest in Bike Lane Infrastructure

William Baay

Introduction

“Get off the road, or I’m gonna run you over!”^[1] Threats akin to this are often hurled at bicycle commuters^[2] because many motorists do not believe that cyclists should be riding in the street.^[3] Initially, cities did not construct smooth streets exclusively for automobiles. At the turn of the twentieth century, “cyclists were a prime force in the Good Roads Movement, and literally paved the way for the automobile age.”^[4] Thanks to technological developments, motorized transportation followed bicycles and very quickly, cars, bikes, horses, and pedestrians were sharing the roads of America. This diversity (in an evolving mix) continues today, and with that in mind, the urban grid should accommodate modes of transportation as varied as its inhabitants and their needs.^[5]

During construction of most American cities, consideration for bicyclists fell by the wayside and planners began designing roads primarily for automobiles. The current trend in America supports the proliferation of bicycle commuting,^[6] but the strain of inadequate facilities in existing infrastructure has curbed its growth.^[7] Congress has codified a requirement for the integration of bike facilities^[8] in all new construction and all reconstruction projects.^[9] On multiple occasions, federal legislation has not only reinforced this law but also accompanied it with support from various funding sources.^[10]

Despite favorable policy implemented by the federal government, the creation of bike lanes and the growth of bicycle commuting have been inhibited by a lack of validation. Motorists do not believe that bicycle commuters have a place in the streets,^[11] and local governments’ attempts to construct lanes in existing infrastructure have been challenged as a violation of the Fifth Amendment’s Takings Clause,^[12] particularly in regards to property exaction.^[13] The Supreme Court has extended its test for violations of the Takings Clause by requiring the government to prove that there is a “rough proportionality”^[14] between the private land dedication and a “legitimate state interest.”^[15]

As more communities develop bike lanes, facts supporting a legitimate state interest also grow. Reducing dependency on motorized transportation helps reduce harmful emissions,^[16] bettering the health of the environment^[17] and the human population.^[18] Additionally, exercise from bicycle commuting promotes the health of citizens individually,^[19] lowering society's overall costs of mortality and morbidity.^[20] Contrary to popular criticism, an increase in bicycle commuting has also proven to boost local economies.^[21]

In order to increase bicycle commuting in America, local governments should harness the assistance available at the federal level and use evolving evidence to prove bike lanes' proportionality.

The aim of this article is threefold: first, to describe the evolution of the Court's test for Takings Clause violations; second, to recognize the resources available to build the proper biking facilities; and finally to present the evidence needed to justify government exaction^[22] for bike lanes by emphasizing the positive benefits associated with bike commuting.

Background

As an extension to the introduction, this section showcases public misconceptions and the evolution of bicycle commuters' right to the road.

a. In the Eyes of the Law.

Courts categorized bicycles as vehicles in some of the very first disputes regarding their use,^[23] and as such, they allowed them the right to use the road.^[24] The National Committee on Uniform Traffic Laws and Ordinances (NCUTLO) has declassified them as vehicles per se,^[25] but has "granted all of the rights" and subjected them "to all the duties applicable to the driver of a vehicle."^[26] This declaration was made on the national level, and it ensures that the bicycle commuter shall have a place to ride – the road.^[27]

One seminal bike law case, which proved to be a long, hard-fought battle, was *City of Trotwood v. Selz*.^[28] Counsel for the commuter, "Bike Lawyer" Steve Magas of Cincinnati, articulated several points justifying the bike's place on the road.^[29] Particularly, a bicyclist does not "imped[e] traffic, he [is] traffic...[s]o he

now becomes one thread in the fabric of traffic.”^[30] Certainly, there is an inherent danger to riding a bike on the road and in some places, even in designated bike lanes,^[31] but this is a risk that commuters have the right to assume.

b. Obstacles.

The vast majority of bicycle use is limited to recreational riding or exercising^[32] on bike paths.^[33] Unfortunately, the fear of cars coupled with improperly maintained lanes also contributes to minimal ridership.^[34] These are important facts because a majority of Americans would like to be biking more than they are currently.^[35] The status quo is insufficient, and it must be improved.

In cities without sufficient biking infrastructure, commuters struggle for a place to ride. A misconception in this country is that bicycles belong on the sidewalk.^[36] The error in this view is prevalent in the suggestion itself – *ride on the sidewalk*. Riding a bicycle on a narrow path used for walking is dangerous and should not be allowed.^[37] There is no national restriction of sidewalk riding; instead, each state determines how to regulate it.^[38] Even if local law prohibits sidewalk riding, there is often a lack of enforcement, which can be bothersome^[39] and sometimes, deadly.^[40] In communities without proper infrastructure, bicycle commuters are driven to the sidewalk.^[41] People who choose to follow the law and stay off the sidewalk either ride in fear, or they submit to life without biking.^[42] In order to fix this problem, cities should work to install proper bike lanes.^[43]

Increasing bicycle commuting is not a universally accepted cause. The construction of bike lanes in new cities and towns is not a contested endeavor, and in fact, federal law requires that it be considered and implemented.^[44] Bike lane development becomes controversial when it involves reconstruction of existing infrastructure. When cities propose to install a proper bike facility on a previously established street, the neighborhoods involved will almost instantly mount an attack.^[45] Shop keepers claim that it will kill economic activity,^[46] and motorists argue that it will escalate traffic congestion.^[47] Politicians also attempt to rally behind purported pejorative public sentiment in order to gain appeal from what they believe is the majority’s mindset.^[48] On the contrary, most people will

choose to approve of bike lanes after they have had a chance to try them.^[49] Gaining public support is vital to mitigating delays in development.^[50]

The High Court's Hurdle

When the installation of lanes involves an exaction^[51] of private property,^[52] the state runs the risk of violating the Fifth Amendment's Takings Clause.^[53] The Supreme Court developed an essential nexus test to determine whether a state action violates this clause in *Nollan v. Cal. Coastal Com.*^[54] "*Nollan* required that the exaction sought by local government be substantially related to the harms imposed by the development."^[55] In its most recent opinion regarding exactions and the takings clause, *Dolan v. City of Tigard*, the Court had the opportunity to reconsider the constitutionality of property exaction as it pertained to dedication of private property development.^[56] Specifically, *Dolan* addressed the state's interest in bike lanes.^[57] Instead of simply applying the *Nollan* test, the Court added a second prong requiring the state to show a certain extent of "rough proportionality."^[58] In 1995, at the time of the decision, the state was unequipped to make their case and consequently, failed this test.^[59] *Dolan* has not been overruled, but that should not stifle bike lane construction because municipalities are now in a better position to pass the test. Data which were previously unavailable may now be used to prove that bike lanes fulfill a legitimate public interest.

Critics of the Supreme Court's opinions in *Nollan*^[60] and *Dolan* claim that they "establish *significant* limitations on the use of exactions."^[61] One solution suggests sidestepping the test by using eminent domain.^[62] Another proposes formulating a new test based on intrinsic fairness.^[63] However, the Supreme Court's development of a more stringent test was well-founded.^[64] The sanctity of property rights is of utmost importance, and courts on every level should defend landowners from the potentially far-reaching arm of the government. The test developed in *Nollan* and *Dolan* has already been re-affirmed in a subsequent decision by the Court,^[65] so advocating for its replacement is not the most practical option.

Instead, when attempting to prove the rough proportionality between a government exaction for bike lanes and a private landowner's proposed

development, city officials should use the ample evidence available from previously established, successful Bicycle Friendly Communities (BFC's). Dolan argued, and the Supreme Court agreed, that the city failed to identify any "special quantifiable burdens" created by Dolan's new store which justified the city's land-dedication required of her.^[66] Arguably, a municipality's interest in relieving traffic congestion is easily associated with dedicating land for the purpose of pedestrian and bicycle pathways, which not only provide, but encourage alternative means of transportation on public roads.^[67] One scholar believes that this connection was clearly established,^[68] but the Court was correct in dismissing the inexact proof.^[69] In 1994, the proper evidence was not available to the city of Tigard (or any other city hoping to justify an exaction for the purpose of bike lane installation), but now, it is.

Show Me the Money

American government on every level is committed to the success of bike lanes.^[70] The following illustrates all of the tools available, which enable federal and local governments to enhance cities by providing citizens with safe, well-maintained bike lane infrastructure.^[71]

Congress has passed helpful bicycle legislation multiple times since the early 1970s.^[72] They have implemented acts that funnel federal funding to the local level and aid transportation projects, including bike lane installation.^[73] The Federal-Aid Highway Act of 1973 was the first time bicycle priorities were actually codified.^[74] What funding had previously been used solely for the maintenance and development of the interstate transportation system is now potentially open for bike lanes.^[75] The Act added § 217 to 23 U.S.C.,^[76] a massive victory for bicycle commuters. Previously, there was no federal funding available for any modes of transportation other than automobiles. This statute furthers the cause of bicycle commuting by specifying that eligible projects be designated for transportation purposes rather than merely recreation.^[77]

Proper funding is critical to bike lane success; without money, there is no way to construct the facilities needed for safe bicycle travel.^[78] After the Federal-aid Highway Act of 1973 opened the door to federal funding, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991^[79] expanded it significantly by

allocating funds from several specific government programs.^[80] Congress realized the potential bicycle-use has in reaching various goals, such as improved air quality, a reduction in energy costs, relieved traffic congestion, and generally helping lower transportation costs.^[81] Constructing more bike lanes goes beyond offering a transportation alternative and actually provides several ulterior benefits.

Despite the government's positive disposition and correlative congressional action for bike lanes, bicycling and pedestrian casualties "remain stubbornly high," while the amount persons biking and walking "remains frustratingly low" and communities continue to develop without much regard to alternative means of transportation.^[82]

In order to increase bicycle commuting in America, local leaders must utilize the federal funding available to build bike lanes.^[83] Opinions vary greatly in respect to solving the "urban transport problem," however the general goal is to find the "best solutions given the resources available." The challenge for planners, engineers and various types of roadway-users is striking a between competing interests within "a limited amount of right-of-way."^[84] This challenge was articulated by the U.S. Department of Transportation (USDOT) in its policy statement *Accommodating Bicycle and Pedestrian Travel: A Recommended Approach*.^[85]

When planning bike lane developments, States and Metropolitan Planning Organizations (MPOS) are clearly instructed to compile two documents: a Long-range Transportation Plan and a Transportation Improvement Program (TIP) or Statewide Transportation Improvement Program (STIP).^[86] The League of American Bicyclists recommends that MPOs use a specific ten-point plan in order to build a BFC. ^[87] These ten points provide a bit more specific guidance than the USDOT's policy statement and give municipalities concrete instructions for planning.^[88]

Biking with Benefits

"Public support for bike infrastructure and programming depends on one crucial concept: that more biking benefits people whether or not they ever ride a bike themselves."^[89]

The positive benefits of bike lanes and corresponding bicycle commuting help prove the degree of the state's interest in reducing emissions, improving the health of its citizens, and bolstering economies.

The use of automobiles has been directly linked to an increase in harmful greenhouse gases.^[90] Congress has acted to solve this problem by passing the Congestion Mitigation and Air Quality (CMAQ) program as part of ISTEA to help fund bike lane construction.^[91] The Nonmotorized Transportation Pilot Program (NTPP) was created as part of SAFETEA-LU to measure benefits of bike lane construction,^[92] which produced positive results.^[93]

An effective solution to America's chronic disease problem^[94] is substituting our sedentary mode of transport in the automobile with an increasing amount of bicycle commuting.^[95] BFC's proved that providing proper bike lane infrastructure allows their citizens to bike more, become healthier,^[96] and save a tremendous amount of money.^[97]

Finally, there is a misconception that bike lanes hamper economic activity.^[98] In fact, the opposite has proven to be true.^[99] BFC's throughout the country are experiencing the positive effects that bike lanes have on business.^[100]

Conclusion

The government has a legitimate interest in bike lanes for several convincing reasons. Not only is there an ever-increasing popularity in pedal-powered transport, but the upshot of its use affects far more than the rider alone. The precious resource of land can be harvested for this less-frequently considered mode of transportation, and we can all benefit, both individually and societally. The featured mode not only promotes the health of its users but also the health of the environments and economies it travels. The myriad of benefits from bicycle commuting may now be quantified, allowing the government to successfully substantiate its interest in building bike lane infrastructure.

Preferred Citation: William Baay, *Government Interest in Bike Lane Infrastructure*, LSU J. Energy L. & Res. Currents, (August 2, 2016), <https://jelr.law.lsu.edu/?p=1372&preview=true> [<https://perma.cc/7ATH-5PE4>].

[1] See Rebecca Resman. *Write of Way: The weblog of the Active Transportation Alliance*, Active Transportation Alliance, (Submitted 8/21/13), “A more serious form of harassment is assault, when verbal threats occur or when someone is using their car as a deadly weapon.” See also *I Hate Bicyclists: Bicyclists are the worst people in the world. Here’s why*, ihatebicyclists.com.

[2] See Resman *supra* note 1. “It’s not uncommon for people biking to experience some form of harassment, verbally or otherwise, from people in cars.”

[3] See U.S. Dep’t of Transp., *2012 National Survey of Bicyclist and Pedestrian Attitudes and Behavior Volume 2: Findings Report*, Nat’l Highway Traffic Safety Admin. 73 (2012), “When asked whether bicyclists were just as entitled to ride on the road as were motorists, about two-thirds agreed with that statement while close to one-fourth disagreed.”

[4] Paul F. Hill, *Bicycle Law and Practice* 89 (Edward F. Kearney ed., Bicycle Law Books 1986).

[5] See Fmr. Sec. of Transp. Ray LaHood, *Fast Lane*, Blog, “We need roadways designed to account for the needs of everyone who uses them, whether driving, walking, or riding in a wheelchair or on a bicycle.” (Citing from Robin Smith et al, Fed. Highway Admin., *Street Design: Part 1 – Complete Streets*, Public Roads Vol. 74 No. 1).

[6] See Ken McLoed, *Accommodating Pedestrianism in the Twenty-First Century: Increasing Access and Regulating Urban Transportation Safety: Article: Bicycle Laws in the United States – Past, Present, and Future*, Fordham Urb. L.J. May 2015, “In the last decade, bicycling has been the fastest growing mode of travel used to commute to work.”

[7] See NTHSA *supra* note 3 at 4, “Bicycle Lane – Marked lane on a public road reserved for bicycles to travel.” See also NTHSA *supra* note 3 at, 59 “Q46. What changes, if any, would you like to see your local government make in your community for bicyclists? 30% = More bike lanes.”

[8] See U.S. Dep’t of Transp., *Bicycle and Pedestrian Provisions of the Federal-aid Program*, Fed. Highway Admin., http://www.fhwa.dot.gov/environment/bicycle_pedestrian/resources/bp-broch.cfm?redirect [<https://perma.cc/7Z2J-CM32>] (last visited 12/5/14), “A bicycle transportation facility is ‘a new or improved lane, path, or shoulder for use by bicyclists and a traffic control device, shelter, or parking facility for bicycles.’”

[9] See 23 U.S.C. § 217, “Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all *new construction* and *reconstruction* of transportation facilities, except where bicycle and pedestrian use are not permitted.” (emphasis added).

[10] *Infra* Show Me the Money.

[11] See *supra* notes 1 and 3.

[12] U.S. Const. Amend. V, “nor shall private property be taken for public use, without just compensation.”

[13] See Theodore Taub, *Development Exactions and Impact Fees*, American Law Institute – American Bar Association Continuing Legal Education, 272 and 273 (9/30/1993), “Development exactions are primarily challenged as either statutorily unauthorized or constitutionally defective...Constitutionally, an exaction can be challenged as violative of federal or state due process, as a taking, or as denying equal protection.”

[14] See *Dolan v. City of Tigard* 512 U.S. 374, 391, “We think a term such as ‘rough proportionality’ best encapsulates what we hold to be the requirement of the *Fifth Amendment*. No precise mathematical calculation is required, but the city must make some sort of individualized determination that the required dedication is related both in nature and extent to the impact of the proposed development.”

[15] The penultimate decision regarding this issue was *Nollan v. Cal. Coastal Com.* See 483 U.S. 825, 841, “our cases describe the condition for abridgment of property rights through the police power as a ‘substantial advanc[ing]’ of a legitimate state interest.”

[16] See U.S. Dep’t of Transp., *Nonmotorized Transportation Pilot Program [NTPP]: 2014 Report*, Fed. Highway Admin., http://www.fhwa.dot.gov/environment/bicycle_pedestrian/ntpp/2014_report/page04.cfm#Toc386019770 [<https://perma.cc/CU83-GZUG>] (last visited 5/30/14), “Key Highlights: The pilot communities saved nearly 3.6 million gallons of gasoline between 2009 and 2013. This translates to an estimated 34,629 tons of CO₂ emissions averted over that time period.”

[17] See EPA, *Reducing Greenhouse Gas Emissions*, <http://www3.epa.gov/climatechange/reducing-emissions.html> [<https://perma.cc/MA5Z-S85U>] (last visited 11/4/15), “Cleaning up carbon pollution protects our environment and supports a strong, clean-energy economy.”

[18] See Luis Cifuentes et al., *Climate Change: Hidden Health Benefits of Greenhouse Gas Mitigation*, *Science Magazine* (8/17/2001), “However, the same actions that can reduce the long-term buildup of greenhouse gases (GHG) – reductions in burning of fossil fuels – can also yield powerful, immediate benefits to public health by reducing the adverse effects of local air pollution.”

[19] See Jennifer Dill, *Bicycling for Transportation and Health: The Role of Infrastructure*, *Journal of Public Health Policy* Vol. 30, S105 (2009), “The study demonstrated that bicycling for transportation can be used by adults to meet the recommendations for daily physical activity.”

[20] See Fed. Highway Admin., *White Paper: Evaluating the Economic Benefits of Nonmotorized Transportation*, Office of Human Environment (March 2009). “Increased levels of physical activity that result from bicycle and pedestrian infrastructure translate to a reduction in health care costs due to decreases in mortality (rate of death) and morbidity (rate of disease) related to obesity and other health conditions.”

[21] *Id.* “According to a case study in Baltimore, pedestrian and bicycle infrastructure projects created approximately 11 to 14 jobs per \$1 million of spending, whereas road infrastructure projects created approximately 7 jobs per \$1 million of spending.”

[22] *See* Taub *supra* note 13.

[23] *See* Holland v. Bartch, 120 Ind. 46, 51 (Ind. 1889), “We are of the opinion that [a bicycle] is a carriage or vehicle which carries a person mounted upon it, and which is propelled and driven by him. The word ‘vehicle’ is certainly broad enough to include any machine which is used and driven on the travelled part of the highway for the purpose of conveyance upon the highway.”

[24] *See* Thompson v. Dodge, 58 Minn. 555, 556 (Minn. 1894), “A person riding a bicycle upon the public highway has the same rights in so doing as persons using other vehicles thereon.”

[25] *See* Hill *supra* note 4 at 90, “In 1930 the U.V.C. (Uniform Vehicle Code) deleted the bicycle from the definition of a vehicle, but inserted a provision making cyclists subject to the provisions applicable to a driver of a vehicle except those provisions which by their very nature can have no application.”

[26] NCUTLO: Uniform Vehicle Code §11-1202 *Traffic laws apply to persons riding bicycles* (1969). (emphasis added).

[27] *Nota bene* The NCUTLO has made clear that its function is only to report on the law as it applies nationwide, but most bike law is written at the state level. *See* Supplement to Bicycling Laws in the United States 1974-1980 “The primary emphasis of the Supplement is to update those important provisions which regulate bicycle operation; *these are found almost exclusively in the state vehicle codes.*” (emphasis added).

[28] 139 Ohio App.3d 947 (2000).

[29] *See* ohiobikelawyer.com.

[30] Fred Oswald. *Bicycle “Right to the Road” Cases*. p. 2 Bike Laws. <http://bikelaws.org/Rt2Road.htm> [<https://perma.cc/USQ5-SBYZ>].

[31] See Derrick Jackson, *Wheel Dividends*, The Boston Globe 4/27/10, “This is unlike Boston and Cambridge, where lanes are painted on streets almost as a dare, sandwiching cyclists in between traffic on the left and parked cars on the right, where doors can swing open at any moment. Only the most nimble or fearless of cyclists use them at rush hour.”

[32] See NTHSA *supra* note 3 at 20, “Recreation and exercise were the most commonly cited purposes for the respondents’ first bicycle trip of the day.” Recreation and exercise accounted for 33% and 28% respectively (personal errands: 17% visit a friend or relative: 8% commuting to/from work: 7% commuting to/from school 4%).

[33] NTHSA *supra* note 3 at 4, “Bicycle Path – Path away from the roadway on which bicycles can travel. For example, a path through a wooded area.” *Nota bene* some courts and scholars alike have conflated the terms bike path and pathway with the meaning of bike lane.

[34] NTHSA *supra* note 3 at 26, “Those who felt threatened for their personal safety during their most recent bicycle ride were asked what made them feel in danger...Motorists were most often cited [83%] as the source of concerns, followed by uneven walkways or roadway surfaces.”

[35] NTHSA *supra* note 3 at 62, “I would like to bicycle more than I am currently bicycling. 55% = agree.”

[36] See Find Law, *Bicycle Laws*, <http://traffic.findlaw.com/traffic-tickets/bicycle-laws.html> [<https://perma.cc/M9S6-JJZJ>], “Most state and local ordinances prohibit bicyclists over a certain age (13 in San Francisco, for example) from biking on sidewalks.”

[37] See BikeSnobNYC. *Bike Snob: Systematically and Mercilessly Realigning the World of Cycling*, 53 (Chronicle Books 2010), “Telling a cyclist to ride on the sidewalk is like telling a driver to drive through a shopping mall.”

[38] *E.g.* CA, TX, and NY see Betty Wang, FindLaw, *Legal to Ride a Bike on a Sidewalk?* (8/24/13), http://blogs.findlaw.com/law_and_life/2013/08/legal-to-ride-a-bike-on-sidewalk.html [<https://perma.cc/3HE7-JWPZ>], “Texas. Much like California, the Lone Star State also does not have a statewide law against riding a bike on a sidewalk. Local lawmakers, however, can enforce their own rules under the Texas Transportation Code. That’s the case in Houston, where a city ordinance bars biking on sidewalks ‘within a business district or where prohibited by sign,’ according to the local bike club. *New York*. Riding a bicycle on a sidewalk in New York state also depends on local laws. For example, New York City only allows children under 13 to ride on sidewalks, and only if the bike’s wheels are less than 26 inches in diameter.”

[39] See *Bicycling on Sidewalks*, http://www.bike.cornell.edu/pdfs/Sidewalk_biking_FAQ.pdf [<https://perma.cc/J2PT-YG7J>], “Although the crashes are not typically life threatening to either party, certainly the comfort level of the pedestrian is compromised.”

[40] See Samuel G. Freedman, *A Bicycle Crash Kills Another Pedestrian in Central Park*, *The New Yorker* (9/23/14), “On August 3rd, again during the full daylight of a summer afternoon, a seventeen-year-old bicyclist swerved into the running lane, to avoid a pedicab, and struck a seventy-five-year-old teacher who was training for the New York Marathon. That man, Irving Schachter, died two days later.”

[41] See Nancy McGuckin, *Biking in the U.S. Trends from the National Household Travel Survey citing National Survey of Pedestrian and Bicyclist Attitudes and Behavior*, National Bike Summit slide 16, “Bicyclists riding in areas without bike paths or lanes are nearly twice as likely to feel endangered (mostly by motorists).”

[42] The availability of safe facilities is directly related to the amount of bicycle commuters in a community. See The League of American Bicyclists, *Bicycle Commuting Data*, bikeleague.org/commutingdata, “From 2000 to 2013, bicycle commuting rates in large BFCs [Bike Friendly Communities] increased 105% — far above the national average of 62% and more than double the rate in non-BFCs (31%).”

[43] See Wil Fisher, *Public Opinion towards Bicycle Lanes: The Case of New York*, Pepperdine University Undergraduate Student Research, 4 (March 2014), “To increase bicycle commuting, infrastructure must be well implemented: facilities should link desirable locations, commuters should know that cycling is an option, and facilities should form a network.” See also Jackson *supra* note 35, “Instead of throwing billions at uninspired car companies, cities should be reconstructed so that you will want to leave the car in the garage.”

[44] *Supra* note 9.

[45] See Jay Walljasper, *How to Beat the Bike Backlash: Lessons from NY & Beyond*, Shareable (6/6/13), <http://www.shareable.net/blog/how-to-beat-the-bike-backlash-lessons-from-ny-beyond> [<https://perma.cc/9WSY-8FUF>], “Former New York mayor Ed Koch envisioned bicycles as vehicles for the future, and in 1980 created experimental bike lanes on 6th and 7th Avenues in Manhattan where riders were protected from speeding traffic by asphalt barriers. It was unlike anything most Americans had ever seen--and some people roared their disapproval. Within weeks, the bike lanes were gone.”

[46] See Matt Seaton, *We Have Met the Enemy*, *Bicycling*, (3/20/12), <http://www.bicycling.com/culture/commuting/we-have-met-enemy> [<https://perma.cc/JF4Q-BGH9>], “Across the city, store owners said they feared that fewer customers would come, residents lamented the loss of long-used parking spots and voiced fears of being injured by reckless cyclists, and drivers vocalized resentment over losing part of the already overcrowded roadways.”

[47] See *id.* See also Fed. Highway Admin., *Accommodating Bicycle and Pedestrian Travel: A Recommended Approach*, Bicycle and Pedestrian Program, http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design.cfm [<https://perma.cc/MHM9-377H>] (last visited 5/7/12), “Retrofitting the built environment often provides even more challenges than building new roads and communities: space is at a premium and there is a perception that providing better conditions for bicyclists and pedestrians will necessarily take away space or convenience from motor vehicles.”

[48] See Michael M. Grynbaum, *For City’s Transportation Chief, Kudos and Criticism*, *The New York Times* (3/4/2011), “When I become mayor, you know

what I'm going to spend my first year doing?' Mr. [Anthony] Weiner said to Mr. Bloomberg, as tablemates listened. 'I'm going to have a bunch of ribbon-cuttings tearing out your [expletive] bike lanes.'"

[49] See Quinnipiac University Polling Institute, QUINNIPIAC UNIVERSITY POLL, (10/20/11), "31. As you may know, there has been an expansion of bicycle lanes in New York City. Which comes closer to your point of view: A) This is a good thing because it's greener and healthier for people to ride their bicycle. OR B) This is a bad thing because it leaves less room for cars which increases traffic. Good thing = 58% Bad thing = 37% DK/NA = 5%." See also District Department of Transportation, *Cycle Tracks and Green Lanes in Washington, DC: Overview and Research Results* 2013, <http://bit.ly/17giWPi>, 83% of people like the new lane.

[50] See David Garrick, *Bike lane backlash in Coronado: Resident complaints prompt city to halt further striping, frustrating bike advocates and other residents*, The San Diego Union Tribune, (9/24/15), "With cities across the nation scrambling to add bicycle lanes based on concerns about traffic congestion and carbon emissions, Coronado is moving in the opposite direction in response to resident backlash."

[51] See Taub *supra* note 13 at 271-272, "The first type of exaction was dedication of land...Significant changes in the political climate in the past thirty years are responsible for the rapid increase in the use of exactions and the types of exactions utilized. The 1960's marked the beginning of a 'quiet revolution' in land use regulation. The environmental movement that began in the 1960's raised the national consciousness regarding the costs of unmonitored growth."

[52] This is almost always the case associated with reconstruction as there is no way to install a lane on private property without dedicating some piece of it.

[53] U.S. Const. *supra* note 12. See also Taub *supra* note 13.

[54] See 483 U.S. 825, 837, "In short, unless the permit condition serves the same governmental purpose as the development ban, the building restriction is not a valid regulation of land use but 'an out-and-out plan of extortion.'"

[55] David Ackerly, *Exactions for Transportation Corridors after Dolan v. City of Tigard*, 29 Loy. L.A. L. Rev. 247, 248, (November 1995).

[56] *See* 512 U.S. 374.

[57] *Id.*

[58] *Supra* note 14.

[59] *See* 512 U.S. 374.

[60] *Supra* note 54 “In short...”

[61] Douglas T. Kendall and James E. Ryan, “*Paying*” for the Change: Using Eminent Domain to Secure Exactions and Sidestep Nollan and Dolan, 81 Va. L. Rev. 1801, 1802. (emphasis added).

[62] *See id.*

[63] *See* D.S. Pensley. *Note: Real Cities, Ideal Cities: Proposing a Test of Intrinsic Fairness for Contested Development Exactions*, 91 Cornell L. Rev. 699, 700 (March 2006), “Against this backdrop, exactions comprise all the conditions that municipalities – driven by need or greed – might impose on permit applications before approving development projects ranging from constructions of residential subdivision to rehabilitation of a single commercial structure.”

[64] In his dissent of the Oregon Supreme Court decision, which ruled that the city of Tigard had passed the *Nollan* test, Justice Peterson emphasized the importance of the Fifth Amendment, “If all that need be shown is that easements are needed for a legitimate public purpose the constitutional protection evaporates.” *Dolan* 854 P.2d at 446.

[65] *See* Pensley *supra* note 63 at footnote 13, “A unanimous Court, however, explicitly upheld the precedential value of *Nollan* and *Dolan*. *See* [*Lingle v. Chevron U.S.A. Inc.* 125 S. Ct. 2074] at 2087.”

[66] *Supra* note 14.

[67] Michael B. Dowling, *CASENOTE: Dolan v. City of Tigard: Individual Property Rights v. Land Management Systems*, 17 Hawaii L. Rev. 193 (Summer 1995).

[68] See David Ackerly, *Exactions for Transportation Corridors after Dolan v. City of Tigard*, 29 Loy. L.A. L. Rev. 247, 288, “Tigard clearly established the positive effects of bike paths, and their ability to alleviate some of the negative impact of increased automobile use.” (emphasis added). In fact, they did not see Justice Peterson 854 P.2d at 447 “the findings of fact that the bicycle pathway system ‘could offset some of the traffic demand’ is a far cry from finding that the bicycle pathway system will, or is likely to, offset some of the traffic demand.”

[69] See 512 U.S. 374, 395-396, “No precise mathematical calculation is required, but the city must make some effort to quantify its findings in support of the dedication for the pedestrian/bicycle pathway beyond the conclusory statement that it could offset some of the traffic demand generated.” (emphasis added).

[70] See FHWA *supra* note 47 at 8, “The United States Department of Transportation is committed to doing all it can to improve conditions for bicycling and walking and to make them safer ways to travel.”

[71] See Smith *supra* note 5, “Transportation agencies and their partners already have the ability – through legislation, Federal programs, policy statements, design guidelines, and planning – to provide more complete streets to all travelers by taking advantage of the many opportunities to go beyond traditional approaches.”

[72] See William A. Lipford and Glennon J. Harrison, RS20469 Bicycle and Pedestrian Transportation Policies, (2/14/00), “Federal transportation policy toward bicycling and walking has evolved since the passage of the Federal-Aid Highway Act of 1973 (P.L. 9387).”

[73] See *id.*, “Many bicycle and pedestrian projects are eligible for federal-aid highway program funding, including the construction of sidewalks; installation of bicycle parking at transit; educational programs to promote bicycle safety; the striping of bike lanes and the building of trails; and the installation of curb cuts and ramps for wheelchairs.”

[74] See Federal-Aid Highway Act of 1973, Title 1 §217, “SEC. 124. (a) Chapter 2 of title 23, United States Code, is amended by adding at the end thereof the following new section “§217. Bicycle transportation...””

[75] The subtitle of the Act specifically indicated that interstate funds specifically would be reapportioned. *See id.* Title 1 §101. “*Revision of Authorization for Appropriations for the Interstate System.*”

[76] 23 U.S.C. § 217

Bicycle transportation and pedestrian walkways

(a) To encourage the multiple use of highway rights-of-way, including the development, improvement, and use of bicycle transportation and the development and improvement of pedestrian walkways on or in conjunction with highway rights-of-way, the States may, on Federal-aid highway projects, include to the extent practicable, suitable, and feasible, the construction of separate or preferential bicycle lanes or paths, bicycle traffic control devices, shelters and parking facilities to serve bicycles and persons using bicycles, and pedestrian walkways in conjunction or connection with Federal-aid highways.

[77] See 23 U.S.C. §217(i), “Transportation purpose. No bicycle project may be carried out under this section unless the Secretary has determined that such bicycle project will be principally for transportation, rather than recreation, purposes.”

[78] See Bushell et al., UNC Highway Safety Research Center, *Costs for Pedestrian and Bicyclist Infrastructure Improvements: A Resource for Researchers, Engineers, Planners, and the General Public – Prepared for the Federal Highway Administration and supported by the Robert Wood Johnson Foundation through its Active Living Research program*, Appendix D – Complete Table of Infrastructure Costs: Bicycle lane Minimum Low = \$5,360/mi Maximum High = \$536,680/mi Average = \$133,170/mi.

[79] Act of December 18, 1991, Pub. L. No. 102–240, 105 Stat. 1914.

[80] See Lipford and Harrison *supra* note 72, for a concise summary of the ISTEA's effects. See also ISTEA §1033 Bicycle Transportation and Pedestrian Walkways.

[81] Lipford and Harrison *supra* note 72.

[82] FHWA *supra* note 47. See also Carrie Grace Henderson, *LSU Student Death Highlights Cycling Safety Concerns*, *The Daily Reveille* 11/18/15, "When kinesiology graduate student Zachariah Wood was struck and killed by a car while crossing Lee Drive on his bicycle Saturday, his death highlighted a larger issue that affects all of Louisiana."

[83] See Dill *supra* note 19 at S106, "A network of different types of infrastructure appears necessary to attract new people to bicycling."

[84] FHWA *supra* note 47.

[85] *Id.*

[86] See Fed. Highway Admin., *FHWA Guidance: Bicycle and Pedestrian Provisions of Federal Transportation Legislation*, Bicycle and Pedestrian Program, p. 6
http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/bp-guid.cfm [<https://perma.cc/USX2-K43Y>], (updated 10/22/08 – since, superseded in 2015 see http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/guidance_2015.cfm [<https://perma.cc/BE6D-TDLK>].).

[87] *Action Plan for Bicycle Friendly Communities*, The League of American Bicyclists. <http://www.bikeleague.org/content/resources> [<https://perma.cc/2VX3-E5AK>].

[88] See City of Las Cruces Council Action and Executive Summary Item #9 Ordinance/Resolution 10-173 (1/4/10) for an example of implementation. "Purposes of Action: Endorse the League of American Bicyclists' Action Plan for Bicycle Friendly Communities and bring Las Cruces closer to achieving a Bicycle Friendly Community status." Available at

cruces.granicus.com/MetaViewer.php?view_id=2&clip_id=101&meta_id=11268
[https://perma.cc/5YN7-NR25].

[89] Michael Anderson, *Real Talk: Bikes Don't Reduce Congestion without Bike Lanes*, People for Bikes (4/22/15).
<http://www.peopleforbikes.org/blog/entry/real-talk-bikes-cant-reduce-congestion-without-bike-lanes> [https://perma.cc/8EDH-8H3C].

[90] See EPA, *Sources of Greenhouse Gas Emissions*,
<http://www3.epa.gov/climatechange/ghgemissions/sources/transportation.html>
[https://perma.cc/D3TM-29TR], “In 2013, greenhouse gas emissions from transportation accounted for about 27% of total U.S. greenhouse gas emissions, making it the second largest contributor of U.S. greenhouse gas emissions after the Electricity sector.”

[91] See Fed. Highway Admin., *Congestion Mitigation and Air Quality Improvement (CMAQ) Program*,
http://www.fhwa.dot.gov/environment/air_quality/cmaq/
[https://perma.cc/LH8M-LE83], “With the passage of the Clean Air Act Amendments of 1990, the Congress made great strides in America’s efforts to attain the National Ambient Air Quality Standards (NAAQS).”

[92] FHWA *supra* note 20, “Established in SAFETEA-LU Section 1807, the NTPP provided approximately \$28 million each to four communities (Columbia, MO; Marin County, CA; Minneapolis Area, MN; Sheboygan County, WI) to demonstrate how walking and bicycling infrastructure and programs can increase rates of walking and bicycling...Congress required the FHWA, working with the pilot communities, to report on the extent to which investments of program funds accomplished a range of goals, including environmental improvement, energy savings, and health, in addition to mode shifts to walking and bicycling.”

[93] See U.S. DOT *supra* note 16. Between 2009 and 2013, the communities involved in the NTPP saved nearly 3.6 million gallons of gasoline, which prevented 34,629 tons of CO₂ emissions.

[94] Bushell *supra* note 78 at 7, “Through the design or redesign of environments to make walking and biking safer or more pleasant, planners and engineers can help people of all ages get the exercise they need to live longer, healthier lives.”

[95] *See* Dill *supra* note 19.

[96] *See* PeopleForBikes and Alliance for Biking & Walking, *Protected Bike Lanes Mean Business: How 21st Century Transportation Networks Help New Urban Economies Boom*, 25, “People who ride their bike regularly benefit in many different ways. Up to 32% use fewer sick days. Up to 55% have lower health costs. Up to 52% increase productivity.”

[97] *See* U.S. DOT *supra* note 16, “Applying this model, the additional bicycle trips taken in the pilot communities in 2013 reduced the economic cost of mortality by an average of \$46.3 million, plus or minus \$6.7 million. Note that this estimate is for just one year; three years of this benefit (approximately \$139 million) would eclipse the total amount of funding for the NTPP (\$125 million).” *See also supra* note 123 at 23, “A regional trail network in Portland, OR helps area residents avoid gaining 17 million pounds each year, saving the region \$155 million per year in obesity-related health care costs.”

[98] *See* Seaton *supra* note 46.

[99] *See* FHWA *supra* note 20, “These potential benefits [to bike lanes] include conventional economic benefits as well as benefits that are not always easily expressed in monetary terms.”

[100] *See* Elly Blue, *Bikenomics: Bike Lanes on Main Street*, Resilience, “After the road was rearranged, restaurant revenues along the street went up a combined total of 179%...‘clearly removing car lanes and replacing them with bike lanes had no ill effects on businesses, and of course it can be argued that the safer, slower street and better cycling/walking environment helped business.” *See also*, New York City DOT, *Measuring the Street: New Metrics for 21st Century Streets*, providing two examples—at Pearl Street in Brooklyn and Fordham Road in the Bronx— showing calculable proof that bicycle commuters have positive economic value.

