

BILLIONS FOR RED TAPE

FOCUSING ON THE APPROVAL PROCESS FOR THE GATEWAY RAIL TUNNEL PROJECT

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ABOUT THIS REPORT

This report was written by Philip K. Howard, Chair of Common Good, with the help of Common Good staff, including Matt Brown and Andrew Park. Important analysis and insight was provided by transportation economist Charles Komanoff. Covington & Burling's Gary Guzy supplied valuable ideas. Transportation engineer Sam Schwartz, E. Donald Elliott (Covington & Burling), Henry Miller, and Ron Faucheux provided valuable feedback. We are grateful to numerous public officials working in different agencies for their openness in providing facts and guidance.

ABOUT COMMON GOOD

Common Good is a nonpartisan reform coalition which believes individual responsibility, not rote bureaucracy, must be the organizing principle of government. We present proposals to radically simplify government and restore the ability of officials and citizens alike to use common sense in daily decisions.

Common Good was founded in 2002 by Philip K. Howard. Our Advisory Board includes leaders from many areas of society, including former Senators Bill Bradley and Alan Simpson, former Governor Tom Kean, former Speaker Newt Gingrich, and Salk Institute President William Brody.



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INTRODUCTION

Two new rail tunnels need to be built under the Hudson River to alleviate a critical rail bottleneck and permit overhaul of century-old tunnels. The purpose of this report is to outline the economic and environmental costs of different permitting timetables, and to propose approval mechanisms that will save taxpayers billions and avoid significant environmental harm. This report supplements our earlier report released in September 2015, “Two Years, Not Ten Years: Redesigning Infrastructure Approvals,” available at www.commongood.org.

THE PROJECT

The Gateway Rail Tunnel Project is a \$24 billion infrastructure plan to alleviate a critical bottleneck on the Northeast Corridor rail line (Washington, DC to Boston). It will create two new tunnels under the Hudson River between New Jersey and Penn Station in New York City, rebuild capacity on the New Jersey approaches to the Hudson, and add platform and station capacity within Penn Station.¹ This connection is a critical transportation link in the Northeast Corridor, an area of the country that accounts for 20 percent of national GDP.² Ridership on the Northeast Corridor rail line includes nearly 100,000 individual train trips each way between New Jersey and New York City every workday. The trains run at close to full capacity.

The existing rail connection between New Jersey and Penn Station consists of a pair of 105-year-old tunnels underneath the Hudson River, just south of the Lincoln Tunnel. These rail tunnels, which serve both Amtrak and

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NJ Transit trains, were already in need of repair when they were badly damaged in October 2012 by millions of gallons of seawater from Superstorm Sandy, causing further deterioration of system performance. In one otherwise ordinary week in July 2015, four out of five weekdays saw total service disruption, with no trains crossing the Hudson at all.³ Without intervention such delays are a “soul-chilling premonition of our future,” said New York Senator Chuck Schumer in August, adding that he feared we are approaching a “transportation Armageddon.”⁴

At the heart of the Gateway Project, which was first proposed by Amtrak in 2011, is the creation of two new Hudson River tunnels. Further disruptions on the existing tunnels are inevitable, and each of them must be closed down, at some point in the next decade, for at least a year of repairs. Closing one without the creation of additional tracks will reduce system capacity by 75 percent.⁵ The economic and environmental effects of closure, without new tunnel capacity to replace the existing tunnels, will be harmful to the regional economy and cause paralytic traffic jams through much of the day. Last May, during a tour of the current tunnels, New Jersey Senator Cory Booker told reporters, “I want to focus people on the fact that we’re in crisis.”⁶

New rail capacity under the Hudson has been studied since at least 1971.⁷ A proposal to build two new tunnels was incorporated in the ARC (Access to the Region’s Core) Project that was approved in 2009, after six years of environmental review, with an initial budget of \$8.4 billion. In 2010, the project’s stated cost had risen to \$11 billion and New Jersey Governor Chris Christie withdrew his state’s share of the funding. The project was terminated after \$600 million had been spent.⁸

Gateway's proposed two tunnels are similar to those in the ARC Project but will take a slightly more northerly path under the Hudson, terminating at Penn Station. (The ARC tunnel would have terminated under Herald Square in Manhattan, without a direct connection to Penn Station.) Gateway will also involve adding platforms to Penn Station and rehabbing bridges and crossings in New Jersey to improve system capacity.⁹ With the addition of two new tunnels, and the rehabilitation of the two current ones, Amtrak estimates that Gateway will ultimately double rail capacity throughout the project area.¹⁰ Amtrak in 2015 estimated that Gateway would cost \$20 billion—half for the new tunnels and half to expand capacity on both sides, including bridge upgrades and new platforms for Penn Station. In early 2016, Amtrak raised estimated costs to \$23.9 billion.¹¹

Final costs will depend on when work can begin. Planning for the project is substantially complete, and, with permits in place, work could start by the end of 2017.¹² However, Gateway requires environmental review and permits from almost two dozen federal, state, and local agencies.

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Today, there is no clear path to review and permitting for the project even though the similar ARC Project underwent a six-year environmental review and was fully permitted. Nor is there agreement as to the scope of review that is required. Amtrak estimates a process of three years.¹³ Other participants have suggested that it will take twice as long.¹⁴ A five-year review process would mean the new tunnels would not open until 2028 at the earliest, past the time at which one of the existing tunnels will likely be shut down for repairs.

In our 2015 report, "Two Years, Not Ten Years,"¹⁵ Common Good found that a six-year delay in environmental review and permitting more than doubles the total cost of infrastructure, including continuing capacity inefficiencies. The report also found that lengthy environmental review often causes environmental harm by prolonging bottlenecks. The main flaw in the current processes for infrastructure approval, the report found, is the absence of clear lines of authority to make judgments needed to make sure the review process moves forward and does not get bogged down in immaterial issues and disagreements.

With a project the size of Gateway, time is not just money, but lots of money. As set forth below, when compared to an 18-month process to finish review and permitting, a three-year permitting timetable could increase taxpayer cost of the project by over \$3 billion. A further two-year delay would increase costs by almost \$10 billion.

The importance of Gateway is undeniable. There are no serious arguments against the project. Nor are there any serious alternatives, which have already been studied as part of the ARC review. Delay in starting work will only raise costs, drag down the regional economy, and cause environmental harm. Conversely, the environmental benefits of building Gateway as soon as possible are compelling. Better rail capacity takes cars and buses off the road. Avoiding the nightmare scenario of premature shutdown of an existing tunnel is itself an overriding reason to start construction as soon as practicable. What is needed to advance the public interest—to save taxpayers billions and avoid a potential "transportation Armageddon"—is an expedited and certain legal path to approval of Gateway.

COSTS AND BENEFITS

Based on engineering, design, and evaluation work already completed, we understand that construction on the Gateway tunnels could commence by late 2017, or roughly 18 months from April 2016, and that the tunnels could be operational seven years later,¹⁶ in late 2024. As set forth below, delaying permits by another 18 months will increase costs by over \$3 billion, with costs rising at a higher rate with further delays.

The main potential costs and benefits are as follows:

1. Environmental benefits of increasing rail capacity sooner.

The permitting documents for the ARC Project projected an additional 80,000 trips by train per day over the current baseline, a nearly 50 percent increase in ridership, upon project completion.¹⁷ Gateway would double the ARC capacity (ultimately adding around 160,000 additional train trips). Increasing rail capacity produces a commensurate drop in automobile usage. The analysis for ARC estimated that 80,000 additional train trips would translate to a 4.9 percent decrease in daily car trips across the Hudson, some 590,000 fewer miles driven per day.¹⁸ Based on the same metrics, Gateway would save over 1.1 million miles per day, reducing automobile traffic across the Hudson by nearly ten percent.

2. Economic benefits of Gateway.

- A. *Construction stimulus benefits.* ARC planning documents concluded that the project would generate nearly 100,000 jobs in the region during the construction phase, and approximately \$9 billion in business activity during that same period.¹⁹ ARC's environmental impact statement (EIS) also estimated that the construction phase of the project would generate around \$1.5 billion in federal, state, and local tax revenue.²⁰
- B. *Efficiency benefits of increased rail capacity.* A post-mortem report of ARC by the Government Accountability Office aggregated various economic analyses which concluded that economic growth attendant to improved transportation infrastructure would generate somewhere between 44,000 and 100,000 additional jobs, and lead to an increase of up to \$4 billion in personal income during the ten years following the project's completion.²¹ The analysis also concluded that the project would generate \$120 million a year in business activity over the long term, and that home prices in regions served by the project would increase by an average of 4.2 percent following the project's completion, resulting in an additional \$375 million a year for local governments from increased property tax revenue.

THE IMPORTANCE OF GATEWAY IS UNDENIABLE. THERE ARE NO SERIOUS ARGUMENTS AGAINST THE PROJECT. NOR ARE THERE ANY SERIOUS ALTERNATIVES. DELAY IN STARTING WORK WILL ONLY RAISE COSTS, DRAG DOWN THE REGIONAL ECONOMY, AND CAUSE ENVIRONMENTAL HARM.

Gateway will provide double the capacity of ARC, at double the cost. However, we here conservatively assume no greater economic benefit from Gateway than from ARC. Because we cannot determine the net benefits of what the ARC analysis calls increases in "business activity," we here discount that number by 80 percent.

3. Costs of delaying Gateway.

- A. *Construction cost increases due to delay.* As a rule of thumb, developers estimate an increase in construction costs of at least five percent for each year of delay in a project. Two percent is due to inflation in hard costs, and three percent for carrying overhead for each additional year.²² In 2003, ARC was projected to cost \$3.7 billion. By 2010, because of a number of factors, including delay, the cost estimate had risen to \$12.4 billion.²³
- B. *Costs attributable to closures of existing tunnel.* Amtrak estimates that further degradation of the two existing trans-Hudson rail tunnels will result, sooner rather than later, in a 75 percent decrease in capacity when one tunnel must be shut down for repairs,²⁴ or a loss of over 131,000 train trips per day (65,500 each way). The closure for repairs is estimated to be for one year. Once repairs are complete for one tunnel, the other must be shut down for repairs. At the rate used in ARC's permitting documents, noted above, shutting down one tunnel translates to nearly one million additional miles driven in the region per day. The three Hudson River automobile crossings already exceed capacity during rush hours. Because congestion time rises disproportionately as traffic exceeds capacity, a rail tunnel closure will result in dramatic increases in delays.

None of the participants has publicly commented on how much longer the existing tunnels can remain in service before being closed for repairs. Nor do they suggest how many more short-term closures will be required. Here, for simplicity, we assume a relatively optimistic scenario:

- i) for a three-year permitting process with approvals in Spring 2019 (new tunnels completed in 2026) we assume a 25 percent chance that a tunnel must be shut down in 2023 (i.e., in seven years), and that the second tunnel can remain open until the new tunnels are completed;
- ii) for permitting processes lasting either five or seven years, we assume a 75 percent chance of shutdown ten years from now (in Spring 2026), and that the second tunnel must be closed after the first is repaired; and
- iii) upon a shutdown in all scenarios, we assume an increase of 50,000 cars per day entering Manhattan (based on Amtrak's estimate of a loss of 65,500 round trip train rides per day (131,000 total trips) and assuming a diversion of lost rail passengers to cars at a rate of 1.3 passengers per car) when a tunnel is closed.

To date, there have been no comprehensive, publicly-available analyses of the potential effects of a surge in traffic of the size that would occur when one of the existing tunnels shuts down and many of those passengers divert to cars or stop commuting altogether. However, a NJ Transit analysis concluded that a traffic spike caused by a similar reduction in rail capacity would create major congestion as far as 25 miles from the bridge and tunnel approaches on the New Jersey side.²⁵ ARC's EIS similarly found that as many as 44 intersections within Manhattan would be plagued by persistent gridlock during peak hours if car traffic increased by a similar level (up from the nine intersections that currently experience gridlock during peak hours).²⁶ Traffic modeling software, used here to derive economic loss, additionally shows that average vehicle speed, throughout the affected region, could drop by as much as ten percent during rush hours.²⁷ No one has calculated the specific delays caused at the entrance to the Hudson crossings by 50,000 additional cars.

CALCULATION OF ADDED COSTS ON DIFFERENT PERMITTING TIMETABLES

The estimated costs and benefits of delay are necessarily approximate. The numbers we use are drawn from ARC review documents, and the congestion effects are based on the generally-accepted Balanced Transportation Analyzer traffic model.²⁸ While increases in construction costs and environmental costs are generally dollar-for-dollar losses, the reduction in business activity is a more complex equation and different categories may offset each other at the margins. As noted, we have generally applied conservative assumptions, including using economic benefits comparable to the ARC Project for the Gateway Project of double the size and scope, and using optimistic scenarios for a potential shutdown of the existing tunnels. Different assumptions that are realistic could increase the costs of permitting delay by another 50 to 100 percent.²⁹

Using an 18-month review and permitting process as the baseline, with permits granted by late 2017, the costs of additional permitting delay are as follows (again, delayed construction benefits, lost business activity, and lost property tax revenue are based on ARC projections):

March 2019 Permitting Date (18-Month Delay; Total 3-Year Process)

Construction cost increase from 18-month delay: 5 percent yearly premium on \$24 billion construction cost x 1.5 years = \$1.8 billion

Delayed construction benefits: (\$4 billion in construction income + \$1.8 billion in net business activity (\$9 billion in business activity less 80 percent) + \$1.5 billion in tax revenue on construction activity) discounted at 3 percent over 1.5 years = \$317 million

Loss in general business activity: \$120 million in business activity yearly discounted by 80 percent x 1.5 years = \$36 million

Lost property tax revenue: \$375 million in tax revenue yearly x 1.5 years = \$562.5 million

Delay in environmental benefits: (401 million additional yearly vehicle miles³⁰ driven generate 181,898 tons of CO₂ emission per year³¹) x 1.5 years = 601 million additional miles driven, 272,000 tons of CO₂ released

*Additional costs from one-year shutdown of one tunnel³²
(assumes 25 percent chance of tunnel closure by Spring 2023):*

Environmental effects: 736,000 additional tons of CO₂ released yearly³³
x 25 percent chance = 184,000 tons of CO₂ released

Lost productivity due to 50,000 additional automobiles crossing Hudson into NYC daily:
\$2.3 billion per year³⁴ x 25 percent chance = \$575 million

Business losses from gridlock: Difficult to calculate

Total monetary cost of 18 months of permitting delay in project: \$3.3 billion

March 2021 Permitting Date (3.5-Year Delay; Total 5-Year Process)

Construction cost increase from 3.5-year delay: 5 percent yearly premium on \$24 billion construction cost x 3.5 years = \$4.2 billion

Delayed construction benefits: (\$4 billion in construction income + \$1.8 billion in net business activity (\$9 billion in business activity less 80 percent) + \$1.5 billion in tax revenue) discounted at 3 percent over 3.5 years = \$718 million

Lost business activity: \$120 million in business activity yearly discounted by 80 percent x 3.5 years = \$84 million

Lost property tax revenue: \$375 million in tax revenue yearly x 3.5 years = \$1.3 billion

Delay in environmental benefits: (401 million additional yearly vehicle miles driven generate 181,898 tons of CO₂ emission per year) x 3.5 years = 1.4 billion additional miles driven, 636,000 tons of CO₂ released

Additional costs from two years of back-to-back tunnel shutdowns³⁵ (assumes 75 percent chance of tunnel closure by Spring 2026):

Environmental effects: 736,000 additional tons of CO₂ released yearly x 2 years x 75 percent chance = 1.1 million tons of CO₂ released

Lost productivity due to 50,000 additional automobiles crossing Hudson into NYC daily: \$2.3 billion per year x 2 years x 75 percent chance = \$3.45 billion

Business losses: Difficult to calculate

Total cost of 3.5 years of permitting delay in project: \$9.8 billion

March 2023 Permitting Date (5.5-Year Delay; Total 7-Year Process)

Construction cost increase from 5.5-year delay: 5 percent yearly premium on \$24 billion construction cost x 5.5 years = \$6.6 billion

Delayed construction benefits: (\$4 billion in construction income + \$1.8 billion in net business activity (\$9 billion in business activity less 80 percent) + \$1.5 billion in tax revenue) discounted at 3 percent over 5.5 years = \$1.1 billion

Lost business activity: \$120 million in business activity yearly discounted by 80 percent x 5.5 = \$132 million

Lost property tax revenue: \$375 million in tax revenue yearly x 5.5 = \$2.1 billion

Delay in environmental benefits: (401 million additional yearly vehicle miles driven generate 181,898 tons of CO₂ emission per year) x 5.5 years = 2.2 billion additional miles driven, 1 million tons of CO₂ released

Additional costs from two years of back-to-back tunnel shutdowns (assumes 75 percent chance of tunnel closure by Spring 2026):

Environmental effects: 736,000 additional tons of CO₂ released yearly x 2 years x 75 percent chance = 1.1 million tons of CO₂ released

Lost productivity due to 50,000 additional automobiles crossing Hudson into NYC daily: \$2.3 billion per year x 2 years x 75 percent chance = \$3.45 billion

Business losses: Difficult to calculate

Total cost of 5.5 years of permitting delay in project: \$13.4 billion

SOLUTIONS

Other countries, including Germany and Canada, complete review and permitting for large projects within one to two years.³⁶ They achieve this without sacrificing public input, transparency, or quality by allocating clear lines of authority to make sure deadlines are adhered to.³⁷

For Gateway, much of the review has commenced or has already been completed. The main environmental issues raised, as noted, have been extensively studied and published in the ARC review. Finishing permitting within 18 months is achievable provided there are authority mechanisms in place to avoid blind alleys or delays caused by bureaucratic inertia.

The mechanisms needed to achieve this timetable could include:

1. **Executive order by the President.** By executive order, the President can: i) declare an expedited timetable for Gateway to avoid economic and environmental harm;³⁸ ii) designate the Chair of the Council of Environmental Quality to make decisions about the scope and adequacy of environmental review;³⁹ iii) give the head of the Office of Management and Budget the job of resolving all other permitting issues;⁴⁰ and iv) require state and local governments to abide by the timetable or risk federal funding.
2. **Legislation.** Congress could enact a law exempting Gateway from various federal requirements (including further environmental review), preempting state and local permits if they fail to meet the designated timetable (similar to the procedure in place for permitting interstate gas pipelines), and expediting judicial review.
3. **State and local adherence to deadlines.** The governors of New Jersey and New York could appoint a project czar, and use their powers to set and enforce timetables.

CONCLUSION

Infrastructure projects come in many shapes, sizes, and circumstances. The best process will depend, in part, on weighing the circumstances, including the costs and benefits of delay and debate. An optional project with material environmental costs should generally have a process with time for reasonable debate. The collapse of a bridge or highway will generally call for immediate repair, as occurred when the Santa Monica Freeway was rebuilt in 66 days after the 1994 Northridge earthquake in Los Angeles.⁴¹

WHAT IS NEEDED TO ADVANCE THE PUBLIC INTEREST—TO SAVE TAXPAYERS BILLIONS AND AVOID A POTENTIAL “TRANSPORTATION ARMAGEDDON”— IS AN EXPEDITED AND CERTAIN LEGAL PATH TO APPROVAL OF GATEWAY.

The circumstances of the Gateway Rail Tunnel Project require a process that is completed by the time contractors are able to begin work, because: i) the risk of shutdown of the damaged existing tunnels itself is an overriding reason; ii) there is no reasonable alternative to the new tunnels; iii) delay will add billions to the cost and will be harmful environmentally; and iv) the costs and benefits have already been extensively studied and debated with the similar ARC Project.

Meeting this timetable requires that multiple governmental agencies meet time deadlines, and that an overriding authority exists to resolve disagreements that are inevitable among agencies with different public mandates. The main challenge in achieving this result is that agencies are not used to working this way. That is why commitment by political leaders is vital. Public support for a disciplined timetable is also essential. The benefits more than justify a determined effort to make sure this happens: Taxpayers will save billions, traffic congestion will be reduced, and the New Jersey and New York economies will get a needed boost—just by minimizing red tape.

ENDNOTES

- 1 See, e.g., Editorial, "[Build a New Hudson River Tunnel](#)," *The New York Times*, August 17, 2015, at A18.
- 2 See Northeast Corridor Commission, "[Investing in the Northeast Corridor: Advancing the American Economy](#)," February 2016.
- 3 See, e.g., Larry Higgs, "[Why NJ Transit Commuters Suffered Through a Week of Lousy Commutes](#)," NJ.com, July 24, 2015.
- 4 Dana Rubinstein, "[Schumer Rushes in to a Leadership Vacuum On Cross-Hudson Rail](#)," *Politico New York*, August 11, 2015.
- 5 Closing one of two tunnels reduces capacity by 75 percent because the extra time required to switch tracks on each side of the tunnel to accommodate two-way train traffic will reduce throughput to six trains per hour, down from the current 24.
- 6 Larry Higgs, "[Take a Ride Inside the Aging Hudson River Train Tunnels That Could Cost Billions to Replace](#)," NJ.com, May 4, 2015.
- 7 See, e.g., The Port Authority, "[1971 Annual Report](#)."
- 8 See, e.g., Editorial, *supra* note 1.
- 9 Gateway is a joint project of Amtrak, the Federal Railroad Administration, NJ Transit, and the Port Authority of New York and New Jersey.
- 10 The project is also expected to significantly increase the Trans-Hudson tunnels' resilience in the face of future disasters, and to facilitate Amtrak's rollout of high-speed rail within the region. Amtrak, "[The Gateway Program and Hudson Tunnel Project](#)."
- 11 Emma G. Fitzsimmons, "[Amtrak Says New York Region's Rail Projects Could Cost Up to \\$23.9 Billion](#)," *The New York Times*, January 20, 2016, at A23.
- 12 Interviews with professionals working on the project.
- 13 "The Gateway Program," *supra* note 10.
- 14 Off-the-record interview with officials connected to the project.
- 15 Philip K. Howard, "[Two Years, Not Ten Years: Redesigning Infrastructure Approvals](#)," Common Good, September 2015.
- 16 See Amtrak, Hudson Tunnel Project, "[When Will the Hudson Tunnel Project Be Completed?](#)".
- 17 USA, Government Accountability Office, "[Potential Impacts and Cost Estimates for the Canceled Hudson River Tunnels Project](#)," March 2012.
- 18 *Ibid.*
- 19 *Ibid.*
- 20 *Ibid.*
- 21 *Ibid.*
- 22 "Two Years, Not Ten Years," *supra* note 15, at 7 ("Project developers conservatively budget three percent inflation in 'hard' construction costs and ten percent added overhead cost for each year of delay. As a rule of thumb, construction represents 70 percent of project costs and overhead 30 percent. Thus, we assume here that the total increase in direct cost from delay is five percent per year (70 percent times three percent = 2.1 percent, plus 30 percent times ten percent = three percent, for a total delay cost of 5.1 percent per year).").
- 23 See Floyd Lapp, "ARC Alternative Transit Project: Examining Cross-Hudson Transit Options in the Wake of the ARC Failure," 2012. The paper concluded that: "Even though the ARC Project was awarded one of the largest federal sums ever, this anomaly belies the current state of federal funding, which has protracted time constraints and other hurdles that put potential partner agencies in conflict with one another for these scarce funds. First, federal funding requires a lengthy environmental review process. In the case of the aborted ARC Project, this alone took approximately six years to complete. During this time period, inflation costs soared seventeen percent."
- 24 See "The Gateway Program," *supra* note 10.
- 25 Unpublished report, on file with author.
- 26 USA, Department of Transportation, Federal Transportation Administration, "Access to the Region's Core Final Environmental Impact Statement," October 2008, [Chapter 3.3 "Roadways."](#)
- 27 This number is derived from the Balanced Transportation Analyzer (BTA) analysis described in note 33, *infra*.
- 28 The BTA is a detailed tool developed by transportation economist Charles Komanoff to model traffic impacts within Manhattan's central business district and in neighboring areas. The BTA is available for download at http://www.nynj.org/kheelplan/BTA_1.1.xls.

- 29 Two projects contained within the Gateway Program, replacement of the Portal swing bridge and replacement of the Sawtooth Bridge, are substantially permitted and possess independent utility, such that they could be built irrespective of the work on the Hudson tunnels. However, delay in tunnel permitting could delay the start date for construction on these projects, as they are key components of an overall program being planned. We therefore count the cost of these bridge replacements (approximately \$2.3 billion) here. See, e.g., Paul Berger, "[Hudson Rail Project to Cost \\$23.9 Billion, Take 15 Years to Finish](#)," *The Record* (Bergen County, NJ), January 29, 2016.
- 30 As noted above, using the ratio of train trips to miles saved in ARC's planning documents, Gateway would save around 1.1 million vehicle miles per day, or approximately 401 million miles per year.
- 31 At a rate of 411 grams of emissions per mile driven. See USA, Environmental Protection Agency, "[Greenhouse Gas Emissions From a Typical Passenger Vehicle](#)," May 2014.
- 32 As noted above, Amtrak estimates that tunnel repair work will take at least one year per tunnel. See "The Gateway Program," supra note 10. In this scenario we assume that, even if one tunnel fails, the other will remain serviceable until the new tunnels are completed in Spring 2026.
- 33 The BTA calculates that adding 50,000 additional inbound automobile trips to Manhattan each day (and assuming almost no "time-elasticity" in automobile usage, i.e., largely discounting the possibility that the worsened travel time would cause many drivers to abandon some trips) would result in overall emissions from all vehicles affected by the resulting congestion of over 736,000 tons of CO₂ per year.
- 34 Using the assumptions described in note 33, supra, the BTA calculates 50,000 additional trips as generating roughly 220,000 hours of additional traffic each day, at a yearly cost of \$2.3 billion in lost productivity on the part of commuters.
- 35 In this scenario we assume that, once one tunnel is repaired and returned to service, the other will require immediate repair.
- 36 See "Two Years, Not Ten Years," supra note 15.
- 37 Ibid.
- 38 For instance, the White House could issue a Presidential Memorandum making clear that this project, as a result of its response to Hurricane Sandy, qualifies for the Unified Federal Review process for Historic Preservation and Disaster Recovery (under § 429 of the Stafford Act). See USA, Advisory Council on Historical Preservation, "[What Is the Unified Federal Environmental and Historical Preservation Review Process?](#)"
- 39 The Chairman of CEQ could immediately issue an instruction that: i) notifies agencies to use ARC developed information and analysis to the maximum extent possible and to avoid any duplication with ARC review; and ii) limit the scoping and consideration of alternatives to those that advance present and future regional mass transit reliability and expansion needs, to avoid wasting time on other alternatives.
- 40 Another immediate option would be to facilitate the development of a Memorandum of Understanding among all participating agencies.
- 41 See, e.g., Rick Orlov, "[1994 Northridge Earthquake Served as Defining Moment for L.A., Then Mayor Richard Riordan](#)," *Los Angeles Daily News*, January 16, 2014.



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