

Student #2 Scholarship Essay

America's Aging Infrastructure – How can we fix it in the next decade?

No matter where you are at in the city of Pittsburgh, everyone who resides in the city or commutes to work within the greater Pittsburgh region can agree that our roads and infrastructure are old, weathered, and worn out. According to the American Society of Civil Engineers, “the state of Pennsylvania received a D+ grade for its bridges on its infrastructure report card” (Miller). Every day on my drive into Pittsburgh, whether it be going to work, school, or an event, there has been multiple potholes that I have hit, road construction that most likely requires a detour, or a road closure due to the infrastructure being repaired. These construction issues ultimately delay travel time. There have been various incidents within the past five years that have really raised some eyebrows in the city regarding the condition of our roads and transportation infrastructure. One case is the Port Authority Transit (PAT) bus collapsing into a sink hole on 10th Street and Penn Avenue back in October of 2019. Another instance was when the Liberty bridge caught fire in 2016. During this accident, construction workers were trying to repair the 88-year-old bridge. One of the workers was using a blowtorch and unfortunately a tarp caught fire, igniting the bridge into flames. Once they were able to put the fire out, construction workers realized that the fire ultimately weakened the beams while also shedding light on more problems the bridge had (Miller). This in turn required even more repair and shut the bridge down for about a month. Another bridge that required a lot of work was the Greenfield bridge. In 1989 the bridge had concrete blocks cracking off. Instead of repairing the bridge and shutting it down then, the city decided it would be easier to put a net below to catch the falling pieces (Miller). They eventually installed a bridge underneath the original to ensure safety for travelers, and then fully replaced the bridge in 2017 for travelers to safely use (Miller). These are some of

the major instances of poor organization, planning, and utilization of taxpayer's money. Since the transportation sector is only given so much money to work with in the state of Pennsylvania, it seems as if PennDOT tries to put band aids on bullet holes. This not only is dangerous to travelers but can ultimately cost even more money in the end to build a new form of infrastructure when the old form fails, or even collapses. Within the next decade PennDOT and the Pennsylvania Department of Transportation need to come up with an efficient and cost-effective plan to safely repair and revitalize the antiquated infrastructure that we are driving on today.

Currently, Pittsburgh's infrastructure needs to undergo a lot of change, revitalizing, and renewing. We cannot worry about building bike lanes to make our city appeal more "sustainable" until our major bridges and roadways are repaired. Bridges and highways are the vital entities that transport our population in and out of the city. In March of 2018, the Regional Transportation Alliance of Southwestern Pennsylvania developed Transportation 2.0 (*Transportation Solutions: Making Pittsburgh More Mobile*). This report showed that people want "multi modal means of transit" in order to move more efficiently throughout the city (*Transportation Solutions: Making Pittsburgh More Mobile*). The article explained that due to the topography and geographical mapping of our city that it would be hard to build a new and improved highway around it. However, it did suggest reconfiguring exit only lanes as well as adding new turning lanes and ramps (*Transportation Solutions: Making Pittsburgh More Mobile*). These simple improvements will help improve traffic flow once finished and also make Pittsburgh a bit easier to drive in. Another suggestion the guide had was to incorporate more smart traffic signals. Carnegie Mellon's Department of Civil and Environmental Engineering developed smart traffic signals. These traffic signals have sensors that detect the amount of

traffic and can automatically adjust the amount of time that is needed for red, yellow, and green lights (*Transportation Solutions: Making Pittsburgh More Mobile*). This will ease the flow of traffic, reduce the amount of weight and stress on the infrastructure as well as reduce the time of transportation and cut down emissions by nearly 20% (*Transportation Solutions: Making Pittsburgh More Mobile*). These ideas may be put into place if the Pennsylvania Department of Transportation receives the grant of 200 million that they applied for. Another recommendation that the Department of Transportation had was to utilize our rivers more. We have them for a reason, and businesses should be encouraged to use our waterways to efficiently transport goods. These ideas are great to implement, but like all other reconstructions, road work takes time and money. This model could ultimately increase our travel time into the city and could potentially increase the amount of money we pay in taxes since the project would be funded through the government.

Another plan that has been suggested for the city of Pittsburgh was Public Private Partnerships, also referred to as P3s. According to the Pitt News, the P3s method is the future of infrastructure development. This method of progress requires the government to be contracted with a private businesses or businesses to complete infrastructure repairs. This method was seen and successful in developing express lanes connecting Washington D.C. to Virginia, however, people can potentially view this form of development as businesses profiting on taxpayer dollars (Miller). Back in 2013, Harrisburg approved a 2.3-billion-dollar bill to help improve the state's infrastructure (*Transportation Infrastructure*). PennDOT stated that Allegheny county would require 1.8 billion dollars of that in order to fully repair the city (Miller). The article also mentioned that state tax does not fund the infrastructure repairs or development, but that would be the main form of funding for these kinds of repairs. Michael Glass, a professor of Urban

Studies at the University of Pittsburgh also suggested that maybe we should focus on how to incorporate more living areas within the city so that we can stop over utilizing the infrastructure for transportation to and from (Miller). His thought has little merit to it, especially with the pandemic going on. Our cities are already so overpopulated, and daily life should be returning to normal soon, so this plan would not be feasible. Another entity that can help with our infrastructure is an infrastructure plan from the Biden administration. In late March of this year, Biden announced that he would be introducing a two trillion-dollar investment to help better the infrastructure and environment (Tamari). The investment would be divided up to various aspects of our economy: 620 billion for transportation, 500,000 for electrical vehicle charging stations, 180 billion for research and development, and some money for manufacturing and training. The plan is set to be ongoing for over eight years (Tamari). Now this plan may sound really good, however, where is this money going to come from? According to the Biden administration, this investment will increase taxes on businesses by trillions of dollars (Tamari). There are pros and cons to this investment, pros being that businesses will benefit of having new and improved infrastructure to their businesses. More people will have access to shorter and improved routes, as well as more means of transportation (Tamari). Cons include that businesses will have a 7% tax increase, which in turn will increase product prices to their buyers (Tamari). No matter what, the businesses will have to increase their prices on the items they are selling in order to stay above the water in their business. This tax increase can be crippling to small business owners and companies especially because they are still trying to recover from the demise of the pandemic this past year. The city of Pittsburgh has various plans for what they want to use the investment for.

Various city officials want different projects accomplished under Biden's administration. Just a few project ideas that Rich Fitzgerald has for the city of Pittsburgh include cleaning up our sewage infrastructure, widening street connections in Hazelwood and the Mon Valley, extending the East Busway extension to Braddock and eventually Duquesne, and developing social infrastructure for young children whose parents want to enroll them in preschool and kindergarten (Morrison). Karina Ricks, the director of mobility and infrastructure, has other plans for what she wants the money to be used for. She has recognized that about 20% of our bridges are structurally deficient, so she wants to utilize the money to repair or rebuild those bridges and also refurbish the Fort Pitt and Squirrel Hill tunnels (Morrison). Since there has been substantial land movement in the city, she also wants to focus the money on stabilizing the slopes (Morrison). Various city officials have agreed that they need to repair the sewage system. The Pittsburgh Water and Sewer Authority are in dire need of help to repair their sewage system. They have identified to the city that the pipelines throughout the sewer system are not functioning as they should be. There are various leaky pipes which lead to sinkholes and ultimately land movement (Morrison). The sewage system has overflowed various times within the past few years and city officials want to repair this problem with the help of Biden's new plan.

Ultimately, if the disrepair of Pittsburgh's infrastructure is being recognized on a national level, it is apparent that we need to fix the problem before it worsens. The sooner that we start making changes to the city the better. The only problem is that city officials need to come to an agreement of the changes that need to be made first like repairing the bridges and sewage system. Utilizing P3s will help promote business and with the help of Biden's plan our city will get a nice renovation. Though the repair of the city will cost billions, it ultimately will make

travelling more efficient for city residents and commuters. Though taxes will most likely increase for citizens, our city will become safer from the changes that are being made.

References

Miller, Bayard. "Give Pittsburgh's Infrastructure a Makeover - The Pitt News." *The Pitt News*,

University of Pittsburgh Newspaper, 13 Oct. 2016,

www.google.com/amp/s/pittnews.com/article/112247/opinions/columns/pittsburgh-infrastructure-makeover/amp/.

Morrison, Oliver. "With Biden in Pittsburgh, 13 Experts Debate the City's Infrastructure

Needs." *PublicSource*, PublicSource, 2 Apr. 2021, www.publicsource.org/with-biden-in-pittsburgh-13-local-experts-diagnose-the-regions-biggest-infrastructure-needs/.

Tamari, Jonathan. "Why Joe Biden Is Pitching His Infrastructure Plan in Pittsburgh, Where He

Launched and Ended His Campaign." *Https://Www.inquirer.com*, The Philadelphia

Inquirer, 31 Mar. 2021, www.inquirer.com/news/joe-biden-pittsburgh-infrastructure-bill-20210331.html.

"Transportation Infrastructure." *Greater Pittsburgh Chamber of Commerce*, Greater Pittsburgh

Chamber of Commerce, 21 Sept. 2016,

greaterpittsburghchamberofcommerce.com/issues/transportation-infrastructure/.

"Transportation Solutions: Making Pittsburgh More Mobile." *Metroguide*, Metroguide

Magazine, 26 Nov. 2018, pittsburghmetroguide.com/transportation-solutions-making-pittsburgh-mobile/.