Dismantling the Streetcar System: What Have We Learned?
By John Hillegass

Numbers correspond to slides

1. Good evening everyone. My name is John Hillegass and I will be giving a talk on the Historic DC Streetcar System and the plan to convert all streetcar lines to bus lines in the District.

2. This talk is based on a paper I wrote for my Urban Planning History class at Georgetown's Urban and Regional Planning program. I became interested in the subject of streetcars because I kept seeing these old pictures of DC and streetcars were everywhere, so I wondered, what happened? Why did they all go away?

3. The agenda tonight is to briefly review the historic context leading up to the end of the streetcars in the District, analyze the plan to dismantle the streetcar system, then compare indicators of today's transit system to the transit system before streetcars were decommissioned, and finally I will discuss some lessons we can learn from this story.

4. And the story starts with DC being a city full of streetcars. From the late 1800s to the early 20th century, DC grew up as a city around the streetcar and the streetcars expansion. In this talk, I am not going to discuss the fascinating early history of streetcars. And I won't be discussing the history of the private companies that the built the system or how they consolidated to form the Capital Transit Company. Both of these topics have been covered much more extensively than I could do tonight. While I will not focus on the early history, I do want to impress just how extensive and pervasive the streetcar was in DC.

5. Here is a 1942 map of Downtown DC and the streetcar and bus routes. Streetcar routes are in green. Bus routes are in red. As you can see, almost every street downtown is served by some form of transit.

6. This is a recreation of the 1942 map, zoomed out, again with streetcar lines in green and buses in red. Notice the extent of the system, the many interconnections, and how the streetcars and buses coexisted at the same time.

7. It is important to note that the streetcar infrastructure was privately built, privately funded and operated with public oversight and regulation, and served a public purpose. Here you can see some of the infrastructure at 14th and Pennsylvania.

8. I am going to tell you the story of how we went from 338 million streetcar passengers in DC in 1946.

9. To zero, just sixteen years later, by January 29, 1962.

10. Like many of the great tragedies in urban planning history, it starts with the automobile. As automobiles flooded the streets, planners were scrambling to find solutions to the unbearable congestion. Rather than blaming the root cause of congestion, the car, they found a scapegoat in the streetcar, which you can probably just make out in this picture.

Of course, it made logical sense, the streetcar takes up space on the road, and blocks or gets blocked by cars so if we remove the streetcar, it will solve our traffic congestion.

11. And by 1921, a new technology was on the scene in Washington... the bus. The Bus promised faster, cheaper, more reliable transportation and was seen as the future of transportation. Here you can see the first fleet of buses in DC.

12. Within a few years, the crescendo of anti-streetcar sentiment was occuring throughout the world. From this newspaper clip you can see the Washington Post advocating that we need to make room for progress and the new technology the bus. The Post calls streetcars outmoded and that DC should follow the example of London and Paris who had gotten rid of their streetcars, failing to mention that both cities had existing metro systems. But the consensus was clear, the streetcar had no place in the future city.

13. However, with the start of World War 2, that quickly changed as streetcars were essential in the effort to save fuel and rubber during the war.

14. Here you can see advertisements encouraging patriots to conserve gas and rubber. War-time gas rationing, massive population growth in the District, and this patriotic propaganda tried to convince Americans to shift their preferred modes of transportation.

15. And the it worked, streetcar and bus ridership surged during the war. Whether similar efforts could work to combat climate change, I'll leave for another presentation.

16. After World War II, the Capital Transit Company, which was the consolidated private provider of transit in the District, was flush with $7 million in cash reserves (or about $73 million in 2019 dollars). Those cash reserves got the attention of Louis E. Wolfson who purchased the company in 1949.

17. Many referred to Wolfson as a corporate raider. Shareholders received huge dividends as the Wolfson Group consistently hiked fares and refused pay increases for the union. Here you can see that fares doubled in less than 10 years.

18. The public and congress soured against the Wolfson ownership and felt they were milking the Capital Transit Company of its assets and not serving in the best interest of the public. Here the Washington Post refers to the general public's belief that the Wolfson group is planning to dump the company on the government after milking the assets.

19. After a series of smaller, quickly resolved transit strikes, we come to the transit strike of the summer of 1955. Here you can see New Jersey Ave on the first day of the transit strike, July 1. At this point, nobody knew how long it would last as previous strikes had been resolved in a few days.

20. Wolfson, the owner of Capital Transit, refused to negotiate and was subpoenaed by Congress, (which was the legislative body for the District at the time). But Wolfson failed

to show up to the first hearing, and when he did show up to the second hearing he made it clear that he would not negotiate without a promise of additional fare hikes. So the strike dragged on for seven long weeks through a hot DC summer. I am sure you can imagine how frustrated people were, and how many people were forced to find transit alternatives.

21. With no end in sight to the strike, Congress was forced to take action, and created the Capital Transit Franchise Surrender Bill that would revoke the company's franchise one year after it was passed. The bill gave District Commissioners the authority to negotiate and shortly after it was signed, with their newfound authority, District Commissioners, the Capital Transit Company and the Union came to an agreement and the strike ended after 7 weeks.

22. The District had one year to find a replacement company to take over the Capital Transit operations. They thought it would be easy but in an era of declining transit ridership across the country, no company stepped forward. As the one year deadline approached, DC was still scrambling to find a replacement and had no plan. Eventually, O. Roy Chalk, the owner of the Trans Caribbean Airways came forward to purchase Capital Transit's assets and operations. With less than a month before the deadline, Congress came up with Public Law 757.

23. An act to grant a franchise to DC Transit System Inc and for other purposes.

24. The other purposes was pretty significant. They included a mandate to convert all streetcar lines to bus lines within 7 years and a requirement to remove the streetcar tracks from the road. Honestly, it was a simple plan. But a very powerful plan with huge ramifications for the city by completely dismantling the existing streetcar system.

25. While the intentions were not directly stated in the plan, by reviewing newspaper articles at the time, the intentions become clear. The conversion to buses was supposed to ease congestion, speed automobile traffic, and create a more reliable, affordable, and faster transit system. We will come back to these intentions a little later.

26. I want to take a quick pause from the story to review this plan. Whenever you make plans, even if it is plans for a drink with friends or colleagues, you want to be able to definitively answer these six questions: who, what, where, when, why how. When you are making a policy decision that affects everyone in a metro area, you definitely want to be able to answer these questions. Public Law 757 did not satisfactorily answers these six questions. It really only answered three. Most notably, it did not include metrics of success, it did not include a plan for how the plan should be carried out, and it did not include why this plan was necessary. Nonetheless, plans have power. And whether or not it made sense or was justified, it set the wheels in motion.

27. The new company to take over was called DC Transit, led by O Roy Chalk and they had to work with the Public Utilities Commission to set a schedule for the total conversion to

bus lines within 7 years.
When the new owner, Chalk, protested the conversion because DC Transit had the newest fleet of streetcars in the country and it would be a waste to decommission them early, it did not matter and the plan moved forward.
When citizen groups came together to protest the conversion of their routes to buses and residents along the Glen Echo route argued for an exemption as their line did not even run in the street, it did not matter and the plan moved forward. Here you can see the crews removing the tracks along the Glen Echo line.

28. Two years after it passed, when the Chairman of the House District Committee, John McMillan, argued against the conversion citing how transit would have been impossible during the war without streetcars and the conversion plan should be stopped as it would be disastrous, it did not matter and the plan moved forward.
And finally, several years into the plan, when there was a noticeable decline in the number of transit riders and people were not using the buses at the same rate they were using streetcars. It did not matter and the plan marched forward.Here you can see the Washington Post article about how streetcar lovers were scorning buses and the important yet unanswered question was how many of the trolley riders who won't use buses are permanent holdouts? And unfortunately, the answer seemed to be, a lot.

29. January 28, 1962 was the last day of service for the remaining streetcars. This was actually one year ahead of schedule. Many old cars were brought out to celebrate the 100 year history of service in the District. The primary objective of the plan was complete. All streetcar lines had been converted to bus lines.
Unfortunately, the city gave permission to pave over remaining tracks rather than remove them in an effort to save money, going against the original plan's objective, which turned out to be a short-sighted decision that led to years of headaches for road maintenance. So, the District failed to complete one of the main objectives of the plan.

30. That was a brief history of the final years of the DC streetcar system. Now I want to refocus and ask, was the plan successful in its intentions to create a more reliable, faster, and more affordable transit system? 60 years later are we better off? I am going to review some indicators of what makes a good transit system to compare the transit system before the streetcar dismantling to today.

31. First, we will look at an indicator of reliable transit, passenger counts, or the number of passengers. Here you can see bus ridership in 1946 was 194 million, significantly larger than the 2017 metrobus ridership of 120 million. But what about the metrorail system?

32. Looking at the same year in 1946, streetcar ridership was 338 million… almost double the 2017 metrorail ridership of 180 million riders for the entire metro system. It may be more fair to compare the streetcar number to Metrorail's peak ridership, which happened in 2008, with 215 million passengers. Which is still significantly smaller. So you may be asking, but wasn't DC's population bigger in 1946?

33. And you'd be right. DC's population was larger, but only 1.3x larger in 1946 than 2017

34. And the metro area population was much smaller. Only ¼ the size during the 1950 census as it is today.

35. This is all to say that population itself cannot explain the difference in transit use.

36. So next, let's look at another indicator of reliable transit, headways. Headways are how much time passes between each bus, streetcar, or transit vehicle. In 1945, headways on Georgia Avenue for the 70, 72, and 74 lines were 120 seconds, or one streetcar coming every two minutes. Today, for the equivalent 70 and 79 express bus lines that serve Georgia Avenue, they are 327 seconds or one bus coming every five and a half minutes during rush hour. I also looked at the 10 major streetcar routes, tried to find their equivalent bus routes today. Only 6 of the streetcar routes had equivalent bus routes today, but all six had longer (or worse) headways today than their streetcar counterparts, meaning less buses and less reliability for riders.

37. Another similar metric is to count how many transit vehicles would pass through an intersection. Here we are looking at Pennsylvania and 8th Street SE. In 1945, 40 streetcars would have rolled through the intersection during rush hour. In 2018, only 27 buses would cross during the morning rush hour and as you can see it is a much more complicated transit landscape with 27 buses spread over many more routes in 2018 than 1945 which makes it a more complicated system for people to use and understand. I want to briefly mention that Streetcar, specifically Capital Transit and DC Transit PCC model had more seats than today's buses, up to 61, and had about the same number of seats as our double length articulated buses which make up only about 5% of the metro fleet. So not only are there less buses coming per hour today, there are less seats as well.

38. To summarize, looking at headways and trips per hour, the streetcar system was more reliable than today's bus system.

39. This map shows streetcar lines in white and metro lines in red, with a quarter mile buffer around each to indicate the transit accessibility and coverage. As you can see, especially in the downtown core, the streetcar provided much more coverage in DC than today's metro rail system.

40. And of course we cannot forget about our H Street streetcar in green which fills in some of the gaps in metrorail coverage.

41. In short, these slides show the streetcar system provided more coverage in DC than today's metrorail system.

42. Next, I looked at scheduled run times for different routes. In this instance I looked at how long a streetcar or bus is scheduled to take along Route 70 from the District border by

Silver Spring to downtown. As you can see there has been essentially no change on Georgia Avenue. It takes about 45 minutes during rush hour.

43. And the same is true for Route 30 from Friendship Heights to the Anacostia River. For this indicator, I looked at the major streetcar routes and tried to find their equivalent bus routes today. Only 4 routes could be directly compared because today's bus routes are generally shorter than the streetcar routes. As we saw, the Georgia Avenue Route 70 lines and the Pennsylvania Ave Route 30 Lines were comparable, The rest of the bus lines, were scheduled to be significantly slower today during rush hour, or would be slower if going the same distance as the streetcar.

44. Which indicates the streetcar system was about as fast, if not slightly faster, than today's bus system.

45. I also wanted to look at an indicator of affordability. I reviewed fares as a percentage of minimum wage. In 1956, after the prices had already doubled within 10 years, fares were only 20 cents or 20% of the minimum wage. Today, depending how far you go on the metro, at what time, whether you use a regular bus or an express bus, it ranges from 20-59% of the hourly minimum wage averaged across the District, Maryland, and Virginia.

46. So, even after a doubling of the streetcar fare and being run by a private company, the streetcar system was actually more affordable for riders than today's metro and bus system.

47. For our last set of indicators, let's look at the number of cars on the road and the ability to move cars around. In blue we have two counts of daily car volume on Wisconsin Avenue shared by the then Highway Director Harold Aitken in 1959. This was shortly before the conversion of the streetcar line to buses. In red, we have four counts from DDOT of traffic volume at various points along Wisconsin Avenue in 2015. As you can see, there has been essentially no improvement in moving more cars along Wisconsin Ave. Moving more cars was a main promise of the new bus system and the dismantling of the streetcars. In fact, shortly after the Wisconsin Avenue conversion, Highway Director Harold Aitken apologized that traffic had not sped up and blamed the congestion on the remaining loading platforms, which were shortly removed.

48. This graph shows three trend lines related to car ownership in the District. In solid red at the bottom is the number of car registrations in the District. In blue is the DC population. And the dashed red line is the cars per DC resident. The point of this graph is to show that there were a lot of cars in DC long before the decision to convert to buses and while the cars per DC resident rose dramatically in the following decades, the raw number of cars did not change as dramatically.

49. As we have seen, cars, buses, and streetcars co-existed on our streets for several

decades before 1962.

50. Before reviewing the analysis, I want to discuss streetcars and snow as I spoke with several people who told me they actually remembered the streetcars and that they couldn't operate in the snow and the city would shut down. So I did some digging through old newspaper accounts and there were in fact snowstorms that halted streetcars. But the reason wasn't that streetcars couldn't run in the snow, but that cars had stalled or gotten stuck on the streetcar tracks, blocking the streetcars' way. This was likely exacerbated by the requirement for underground conduits in DC rather than overhead wires used outside of DC. The underground conduits prevented the city from using salt on many streets. So rather than the streetcars not being able to operate in the snow, it seems cars had the bigger problem with snow, which of course we still experience today.

51. To review, according to these indicators of what makes a better transit system, the streetcar and bus system before the dismantling was either better or equivalent to today's metro and bus system.

52. So, to paraphrase Jack Eisen, a Washington Post reporter writing on the 10th anniversary of the last day of streetcars, "whoever was benefited by the changeover to buses, it was not the transit rider." This begs the question, who did benefit? In a city such as Los Angeles, the common story is that automakers were directly involved in the dismantling of their streetcar system and it was done to gain control over transportation. That does not seem to be the case in DC. While I am sure automakers did indirectly benefit from the streetcar's demise, they are not the main culprit in our story. Our culprit seems to be a failure of planning.

53. This brings me to what can we learn from this history, or perhaps more accurately, what have I learned. I think there are many many lessons that can be learned from this story. And I am sure additional research will turn up more. But the first lesson I want to discuss tonight is the often unappreciated wisdom of old infrastructure.

54. So I want to play a little game where you look at these pictures and try to identify an element of the old infrastructure, that we removed, but is now making a comeback. Just take a moment to think in your head about what I am referring to. A hint, I am not talking about the streetcar. Do you notice the loading platform they are standing on in the middle of the street?

55. Today, that might be called a pedestrian island and they can help slow traffic and provide refuge when people cross wide streets. Yesteryear, it was a hindrance to the smooth and efficient flow of traffic and had to be removed.

56. Here is Pennsylvania Ave and this time I'm not looking for the loading platform on the left or the streetcar.

57. I am thinking about the center dedicated transit way like the recently announced K Street Transitway. Most streetcar lines in the District were not actually separated from regular

traffic, but they were concentrated in the center of the road. And some were actually physically separated and we are beginning to realize, whether with buses or with streetcars, how essential that is to providing better service.

58. And last in this series, do you notice anything with this picture? Do you see the yellow painted lines that create a loading platform?

59. Whether with bike lanes, bus lanes, or curb extensions, we are starting to use more low-cost temporary measures, such as paint, to create safer streets and indicate which parts of the street are not for cars. These ideas are not new. But they were temporarily forgotten in our quest to make way for a future that was embodied by the private automobile and its public counterpart the bus. While watching the streetcar video, I noticed intersections with the Barnes Dance, the all-way pedestrian crossing, or pedestrian scrambles, that disappeared in the District but have recently made a comeback at intersections in Chinatown and Columbia Heights. And it makes me wonder, what other lessons have we forgotten?

60. So, what should we learn from this case study? As I mentioned before, there is a lot we could learn. I think we could have a whole ‘nother presentation comparing WMATA and Metrorail’s response to declining passenger numbers to Capital Transit’s response. But I think the most important lesson from this story is that we need to embrace a healthy skepticism of new technology.

61. Just as bus advocates promised in the mid 20th century to be the solution to the transit and congestion woes of the day, today all sorts of new companies and entrepreneurs are making news sets of promises, claiming to have found the solution. All we need to do is grant them access to our streets or our pocketbooks.

62. But will they deliver? Are Uber and Lyft increasing transportation access and equity? Or are they cannibalizing the little remaining support we have for public transit? Will autonomous vehicles reduce congestion by eliminating the driver or will they increase congestion through fleets of ghost cars roaming our cities waiting to pick people up? Are electric scooters a good last-mile transit solution or does their $1 per ride plus 15 cents a minute pricing scheme only add to an already unaffordable transit system for many people?

63. Unfortunately, I do not have the answers. But I think we need to be asking the right questions to ensure new transit technologies complement our existing system, rather than replace it. Because as we saw with the streetcars, we do not know whether that replacement system will be better. We need to be creating more alternatives to the car. We need to be enticing people to leave cars behind. We can not just replace one car alternative with another as we did with the streetcars.

64. We need the right questions. We need to understand who benefits from the technology. What already exists? Is it a replacement or a complementary system? Where is the need for this technology and how will we measures its success?

65. As we bring back the streetcar we need to be asking the same questions. You may have

heard that the Mayor included money in her proposed budget to expand the streetcar to Benning Road and create a K Street bus Transitway which might later be converted to a streetcar transit way. But just because streetcars worked in the past does not mean they will in the future and we need that healthy skepticism and we need to be asking the right questions of these technologies and of our planners.

66. To conclude…

67. Plans have power. Once set in motion, they can be hard to derail so we need to make sure we have the right safeguards and metrics of success from the beginning. We also need tools to evaluate and update the plan as it moves forward and especially as we are confronted with unpredicted or unintended results.

68. A better, faster, more reliable transit system is possible. We've had a better system before and we can build one again. We have more technology and data available at our fingertips than ever before to design better systems. What that system looks like, I can't say, but we know it is possible.

69. The future is not the only place we should look for inspiration. The past may have lessons and solutions for today's problems. Rather than investing in new "better" technologies we may want to re-invest and commit to our existing technologies.

70. Finally, the promises of new technology may fall short. I am not advocating for a luddite approach but we must be cautious and skeptical to ensure that new technology serves our needs and not just the needs of its shareholders. New technology can help make a better transit system, but that is not guaranteed.

71. Thank you!