



**Written Testimony of
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Introduction

Chair Castor, Ranking Member Graves, and members of the House Select Committee on the Climate Crisis, thank you for the opportunity to submit this testimony. I am the Senior Vice President for Public Policy and Senior Advisor for Resilience at Enterprise Community Partners. Enterprise is a nonprofit organization committed to making well-designed homes affordable so that communities can thrive. We have eleven regional offices and in the past several years have worked in more than 425 communities nationwide. For more than 35 years, Enterprise has been committed to helping communities break down silos and build organizational capacity in both the public and private sectors so that funding is deployed more effectively. We have invested more than \$43 billion in capital to help create or preserve 585,000 homes in all 50 states plus the District of Columbia and Puerto Rico. We have been working with disaster-impacted communities for well over a decade. This testimony is informed by work we did from 2017-2018 with more than two dozen American cities participating in the 100 Resilient Cities network, which was pioneered by The Rockefeller Foundation.

Before working at Enterprise, I spent more than 15 years working on disaster recovery and infrastructure grants and loan guarantees at the U.S. Department of Housing and Urban Development (HUD). During that time, I served as Deputy Assistant Secretary for Grant Programs, overseeing billions of dollars in infrastructure programs, and served as Chief Operating Officer and Acting Executive Director of the Hurricane Sandy Rebuilding Task Force, overseeing development of an innovative \$1 billion flood control design competition. I have learned that while no two disasters are alike, the people whose lives, homes, and jobs are affected by the worst disasters all need the same thing – a safe and secure future, starting with safe places to live, work, get an education, and receive medical care. And they need reliable routes to get to where to where they need to be.

Currently Enterprise is supporting rebuilding and resilience initiatives in Puerto Rico, the United States Virgin Islands, Florida, Georgia, Texas, Louisiana, North Carolina, D.C., New York, Michigan, Illinois, and California. Enterprise provides a spectrum of resources in the form of capital, programs, and policy both before and after disasters occur. We are not first responders, but rather act as an intermediary supporting emergency preparedness, mitigation planning, and long-term disaster recovery. Through our nationwide work as a Community Development Financial Institution (CDFI), a syndicator of Low-Income Housing Tax Credits, and investor of other public and private funds, we have built a track record of successfully investing capital to build more resilient futures.

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At Enterprise, we don't just take it on faith that incorporating resilience measures saves money. We saw that firsthand in 2017 when a very heavy rainfall flooded New Orleans and tested the new Faubourg-Lafitte development which Enterprise and Providence Community Housing rebuilt after Hurricane Katrina. The deluge overwhelmed the city's drainage systems. Residents found their streets waist-deep in water, but our development escaped harm. Water did not breach the first floor of our property because the homes had been built two feet above the base flood elevation, taking into consideration the possibility of future flooding. These homes were unharmed, so residents could quickly get back to their daily lives once the water receded, and there was no need to make a claim on the development's National Flood Insurance Program policy. Better underground infrastructure is needed throughout the city to allow water to drain more quickly, but our efforts to do what was within our own control to minimize risk paid off.

I have learned that resilience isn't just about a building or road or sewer system, but also about drawing from the inherent strength in communities to help everyone prepare for and move forward in the face of our new climate future. As Members of this Committee well know, the challenges of our new climate are many, so Enterprise has identified the risk of our changing climate and its disproportionate effect on lower income communities and communities of color as an existential threat that we must address. We stand committed to deploying existing and new solutions that are cohesive and equitable, ideally harnessing both public and private will and capital to keep people and property safe from harm.

The Challenges of our New Climate

The increasing intensity of natural disasters all over the United States has placed a significant strain on communities and local economies. Since 1980, the U.S. has endured 254 weather and climate disasters where the overall cost reached or exceeded \$1 billion – totaling more than \$1.7 trillion in damage. The frequency of these devastating storms is only increasing, and already this year there have been ten weather and climate disaster events with losses above \$1 billion each. 2019 marks the fifth consecutive year in which 10 or more billion-dollar disaster have impacted the U.S.¹ Large-scale damage caused by wildfires, floods, tornadoes, and hurricanes has become the new normal. A recent report by the Trump Administration forecasted that this trend will continue in the coming years and decades. The Fourth National Climate Assessment stated that not only will our changing climate exacerbate existing vulnerabilities across the United States but that it will also present growing challenges to human health and safety, quality of life, and the rate of economic growth.²

While disasters are agnostic to whether a neighborhood is high or low income, low-income households and vulnerable communities generally pay the highest price when a major disaster strikes.³ Low-income populations and people of color are less likely to have the resources necessary to prepare for a storm and they are more likely to lack savings before disasters strike. Evacuating alone can be too costly for many, given that fewer than 40 percent of Americans have enough savings to cover a \$1,000 emergency.⁴

¹ NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2019). <https://www.ncdc.noaa.gov/billions/>

² Jay, A., D.R. Reidmiller, C.W. Avery, D. Barrie, B.J. DeAngelo, A. Dave, M. Dzaugis, M. Kolian, K.L.M. Lewis, K. Reeves, and D. Winner, 2018: Overview. In *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA.

³ Krause, Eleanor, Reeves, Richard V. "Hurricanes hit the poor the hardest." September 18, 2017. <https://www.brookings.edu/blog/social-mobility-memos/2017/09/18/hurricanes-hit-the-poor-thehardest/>

⁴ Blatchford, Laurel. "Climate Change Disproportionately Affects Low-Income Communities." December 7, 2018. <https://www.enterprisecommunity.org/blog/2018/12/climate-change-disproportionately-affects-low-income-communities>

Socially vulnerable populations are more likely to live in physically vulnerable areas that have greater natural hazard risks due to historical, economic, and political factors and thus cost less than homes in safer locations. Lower-quality homes are less stable in the high winds of hurricanes and tornados, posing additional risk to individuals and families who cannot afford to pay for something safer. Experience shows that natural disasters exacerbate wealth inequality.

I commend the Congress and particularly this Committee for embracing the need to better prepare communities and making funds available for resilience, adaptation and mitigation. In February 2018, Congress approved a one-time infusion of nearly \$16 billion for HUD to prepare communities for future disasters. The HUD Community Development Block Grant (CDBG)-Mitigation program will fund disaster mitigation activities such as mitigation planning, infrastructure upgrades, building retrofits, and strategic relocation (also known as buyouts). Funds were allocated to places that have had the worst disasters recently, including California, Florida, Georgia, Missouri, Texas, West Virginia, Puerto Rico and the U.S. Virgin Islands. As with the annual CDBG program, the CDBG-Mitigation program appropriately gives flexibility to state and local governments to choose from a menu of eligible activities to suit their local needs. Mitigation measures have been proven to more than pay for themselves. A FEMA-endorsed study by the National Institute of Building Science found that taxpayers save an average of \$6 in future disaster recovery costs for every dollar spent on hazard mitigation.⁵ I further commend the Congress for authorizing FEMA, through the Disaster Recovery Reform Act, to set aside six percent of Disaster Relief Fund dollars for hazard mitigation projects.

As a nation we are becoming more aware of our physical and financial exposure to impacts of the changing climate, with about six in ten Americans at least “somewhat worried” and more than one in five Americans (23%) “very worried” about global warming.⁶ However our worry has not been matched with proactive lifestyle, zoning, and building code changes. All over the country, people are confused about what they can do to protect themselves and their communities from what’s to come. Forward-thinking cities, including more than two dozen American cities that participated in The Rockefeller Foundation’s 100 Resilient Cities initiatives, have been working hard to design community-scale plans for protection, setting an excellent model for similarly-situated cities. But still as a nation we are underinvesting in preparing for the impacts of extreme weather events. Despite growing interest and commitment, our housing, infrastructure, and regions are not mitigating or adapting at the necessary pace of change. And inefficiencies in programs which are tolerable in normal times exacerbate post-disaster challenges.

In the extreme, the lack of physical infrastructure and natural systems necessary to withstand extreme weather conditions has led to displacement of entire communities of people, from Alaska to Louisiana to Puerto Rico. And we have a lack of user-friendly available data that can educate our communities on hazard risk, so we continue to build infrastructure that is not designed to withstand what’s to come.

This lack of investment and forethought leaves our communities vulnerable. As a result, the Federal Government is often called upon to authorize large supplemental appropriations to help communities rebuild homes and apartment buildings, reopen hospitals and schools, and cover uninsured losses for

⁵ National Institute of Building Science, <https://www.nibs.org/page/mitigationsaves>

⁶ <https://climatecommunication.yale.edu/publications/climate-change-in-the-american-mind-april-2019/4/>

small businesses. According to the Government Accountability Office (GAO), since 2005 the federal government has spent at least \$450 billion on disaster assistance. The unprecedented levels of funding for disaster recovery must be spent with an eye to the future. And to improve efficiency, communities should be encouraged to align their federally-mandated planning processes, so that, for example, a community's hazard mitigation plan aligns with its consolidated plan and disaster recovery plan.

Local governments rely on partnerships, in many cases with the Federal Government, to make their communities safer and more resilient. Federal grants, loans, loan guarantees, and other federally-backed sources such as mortgage insurance and flood insurance help cities finance and protect critical investments. Federal regulations and guidance set minimum requirements and provide information to guide cities' decision-making and use of federal dollars. And federally generated data inform project planning and implementation. The Federal Government has done an admirable job of investing in states' and cities' projects and programs, providing some data and technical expertise and regulating private and utility actors. Communities deeply benefit from and value these investments, but they often come with challenges. For instance, while cities rely on federal funds for affordable housing, infrastructure, and small businesses growth, all are authorized by different laws. Each funding source and corresponding law comes with a unique set of regulations, and this complexity can create barriers for cities and counties trying to use federal funding efficiently for integrated and effective solutions. In addition, while the federal data on flood plains is invaluable to cities, in many places, these data are out of date, lacking a reflection of changes to the built environment and climate conditions. And all communities suffer from the lack of a single source of data identifying all climate risks.

Through this testimony I recommend that Congress:

1. Charge Federal agencies with working together to provide the best available risk data to communities in a manner that is easily useable at the address or block level
2. Develop a Federal framework for rating resilient infrastructure
3. Improve and harmonize federal infrastructure requirements
4. Ensure that all federally-funded infrastructure projects – not just disaster recovery projects – are built to resilience standards
5. Increase HUD Community Development Block Grant (CDBG) program funding and mandate that a portion of the funds be used to identify and address local risks
6. Create a National Infrastructure Bank to further private investments in resilience

Recommendations:

Charge Federal agencies with working together to provide the best available risk data to communities in a manner that is easily useable at the address or block level

No private company, nonprofit institution, or local government is better suited than the U.S. Government to make accurate climate science and risk data available to the public. Further, in the absence of publicly

available, uniformly applied metrics evaluating communities, individual jurisdictions and companies could suffer a “first-mover disadvantage” for disclosing risks while their counterparts do not.⁷ The Federal Government alone has the power to shine a light on the risk we face, but it will not need to act alone once adequate information is shared. In creating risk data, it is important to include the unique needs of elders, people with disabilities and dependence on medical equipment, people with limited English proficiency, and people of modest means.

Develop a Federal framework for rating resilient infrastructure

Federal agencies should develop a framework for rating and evaluating resilient infrastructure design. The framework should serve as a best practice guide to help cities design, build and operate infrastructure to ensure its long-term viability and to deliver other environmental, economic, and social benefits, where feasible. Once a rating system is designed, federal agencies should then condition the receipt of federal funds on projects meeting a required resilience rating.

A rating framework would help agencies ensure that federally funded projects are evaluated consistently, and that federal investments are yielding resilient infrastructure systems. This consistency could, over the long term, create more efficiency and reduce operating and insurance costs, as well as mitigate risk. And predictability would remove a current obstacle to private investment.

The rating system should:

- Include metrics to help decision makers evaluate the factors of infrastructure resilience.
- Establish risk tolerance guidelines and help project designers incorporate risk mitigation.
- Address both future shocks and stresses, including sea level rise, extreme heat and changing precipitation patterns.
- Help design and develop infrastructure investments that provide multiple benefits, including projects that deliver improvements to infrastructure and the environment (including promoting reliable communication and mobility; ensuring continuity of critical services; providing and enhancing natural and man-made assets); health and well-being (including air quality and water quality); economy and society (including financial systems and job opportunities); leadership and strategy (including engaging and empowering community stakeholders).
- Include guidance on how cities can rehabilitate or incorporate resilience into existing infrastructure or integrate resilience into asset management planning.
- Complement other sustainability rating systems that address specific infrastructure types (e.g. roads or ports) or can be incorporated into them (as the Water Environment Federation has done with Envision).
- Help decision makers prioritize community needs to ensure that investments made in infrastructure systems are efficient, equitable and risk-based.

⁷ See Alice C. Hill & Leonardo Martinez-Diaz, *Building a Resilient Tomorrow*, Oxford University Press 2020, p. 61.

- Require compliance with local, state and federal law.

Congress should direct the National Institute of Standards and Technology to work with federal agencies, the U.S. Global Change Research Program and other private sector standard-developing organizations, to develop or identify certifications for resilient infrastructure that also pinpoint a consistent and authoritative set of climate information to be used.

Once a framework is identified, Congress should require its use in appropriation bills, such as the water resources developments acts, military appropriations and transportation reauthorization bills.

Congress should require agencies to prioritize projects that achieve higher resilience scores when awarding funds for infrastructure projects through discretionary competitive grant programs such as the Transportation Investment Generating Economic Recovery (TIGER) as well as for United States Army Corps of Engineers and Department of Defense infrastructure work.

Improve and harmonize federal infrastructure requirements

Private investment in federal infrastructure projects is hampered by inefficiencies and lack of certainty on the front end. Many federal funding programs require applicants to demonstrate that their project is “cost-effective” by submitting a complex benefit-cost analysis (BCA, also known as a benefit-cost ratio or BCR) showing how the benefits of the project outweigh the costs. It is prudent to ensure that taxpayer dollars are invested in projects that will deliver maximum results. However, a traditional BCA imposes unnecessary transaction costs and decreases government efficiency and innovation at both the federal and local levels. This problem is typical for both routine and disaster recovery projects. Current agency practices for comparing benefits to costs are flawed and the complexity and uncertainties discourage leveraging federal funds with private investments.

There is no harmonization between departments and agencies such as the Departments of Transportation, Homeland Security, Commerce and the U.S. Army Corps of Engineers. Each federal agency has its own processes and formulas for developing a BCA. This system creates burdens on both federal agency staff and the cities applying for federal funds, because applicants are saddled with additional transaction costs by having to prepare different BCAs for different agencies, often for the same project. Typical agency BCA methods do not properly account for increasing potential for loss in consideration of future risks, such as impacts of climate change. BCA methods do not adequately allow project applicants to capture a project’s economic, social and environmental co-benefits, including ecosystem services, or adequately quantify externalities of either cost or benefit. The discount rate is a rate set by the Office of Management and Budget (OMB) to determine the “present value” of the investment being made, using the concept of the time value of money to normalize when benefits are realized. However, it generally does not accurately account for future risk, or for projects like wetland restoration that appreciate over time.

The complexity of the BCA process for many federal grants discourages smaller communities with fewer staff and less resources from applying for competitive grants such as FEMA’s Pre-Disaster Mitigation program grants. Rather than investing in technical assistance to teach smaller communities to navigate varying and complex approaches across agencies, Congress should require the Executive Branch to improve, simplify, and harmonize its BCA methods.

Congress should commission a National Academies study to develop a process for harmonizing benefit-cost analyses across agencies and departments that grant funds or regulate infrastructure and other development projects. This group would be charged with evaluating current agency BCA processes and identifying options for aligning these processes in ways that account for the full life-cycle benefits of a project, future disaster risks to the project, as well as the full range of social, economic, and environmental co-benefits. An explicit goal of the endeavor should be facilitating the use of natural infrastructure projects such as restoration of wetlands which will have low costs to operate and maintain over time. The National Academies, Department of Transportation, Economic Development Agency, and Housing and Urban Development should engage the public, including finance, insurance, engineering and construction, utility, credit rating, and institutional investor communities, in an open dialogue about best practices for conducting BCA for projects with a long design life. These discussions should address calculations of future risks and benefits, given projected climate and other changes.

The Congressional Budget Office should ensure that project budget analysis incorporates risk mitigation's impact on future savings to infrastructure and communities.

Ensure that all federally-funded infrastructure projects – not just disaster recovery projects – are built to resilience standards

Agencies such as HUD and FEMA provide assistance for resilient rebuilding to communities that have survived the worst. Those grant funds come with standards for resilient rebuilding, such as increased elevation of homes and critical facilities located in the 100 year flood plain, in consideration of future and not just current risk. However, the regular, non-disaster-specific Federal resources available for building roads, bridges, schools, hospitals, nursing homes, affordable housing, and other public facilities do not consistently require a consideration of flood risk over the course of the useful life of infrastructure. Every year, flooding is the costliest type of disaster damage.⁸ We should stop investing taxpayer dollars in projects that don't plan for reasonably foreseeable risks. Congress should direct funded agencies to reinstitute the Federal Flood Risk Management Standards and develop other cross-cutting resilience requirements.

Proactively combating the impact of these disasters and building towards a more resilient future begins with building codes. In January 2019, a study by the National Institute of Building Sciences found that up-to-date model building codes save \$11 for every \$1 invested through earthquake, flood and wind mitigation benefits⁹. FEMA's current Strategic Plan highlights the fundamental role that up-to-date building codes have to play in disaster resilience and the promotion of public safety and property protection. However, more than two-thirds of communities facing hazard risk use out-of-date codes. If the Federal government is going to continue to supply state and local jurisdictions with aid to rebuild, they should require new repairs and construction to be done to the latest model building code. Additionally, where funding is going to new construction or substantial rehabilitation, they should meet green building certification, such as my organization's Enterprise Green Criteria.

⁸ Lightbody, Laura. "Flooding Disasters Cost Billions in 2016." February, 2017. <https://www.pewtrusts.org/en/research-and-analysis/articles/2017/02/01/flooding-disasters-cost-billions-in-2016>

⁹ National Institute of Building Science, <https://www.nibs.org/page/mitigationsaves>

The benefits of consistent codes are clear and will ensure that we have safer and more resilient homes, schools, workplaces, and childcare and healthcare facilities. Additionally, uniform adoption of modern model building codes is one of the easiest, most cost-effective ways to address our nation's affordable housing shortage. While it is vital that we tackle affordable housing challenges for American families, building cheap homes that will collapse in the face of any event, from minor flooding to historic is not the way to do it. All families deserve well-built homes they can afford, as well as the peace of mind that comes with knowing that their home can survive a natural disaster without bankrupting them. To protect families across the country, it's vital that we take these steps.

Increase Housing and Urban Development Community Development Block Grant (CDBG) program funding and mandate that a portion of the funds be used to identify and address local risks

CDBG provides essential annual resources to more than 1,200 cities, counties, states and rural areas nationwide. This formula allocation program is a crucial source of funding for a wide range of local projects, including funding infrastructure improvements, filling funding gaps in the development of affordable housing, and supporting code enforcement and other essential municipal services that have a real impact on the quality of a city's housing stock. For more than 40 years, CDBG has served as the cornerstone of the federal government's commitment to partnering with states and local governments to strengthen our nation's communities and improve the quality of life for low- and moderate-income Americans.

CDBG can be a powerful tool for advancing the resilience and adaptive capacity necessary to address future climate risks. The program already has a successful track record of being able to leverage funds. Based on reported leveraging data from 2018, there were 1,358 public infrastructure and public improvements activities recorded. These activities were funded with more than \$390 million of CDBG funds and leveraged \$563 million additional funds. Congress should expand the annual CDBG program, making additional capital available every year for activities now eligible under the one-time CDBG-Mitigation program. This funding should require that grantees adhere to forward-facing building codes, to ensure that new projects are up to the latest standards. This will allow communities nationwide to embrace a proactive approach to mitigation and resilience regardless of whether or not they have already been affected by a major disaster.

The program should identify and expedite activities known to mitigate risk:

- Explicitly state that eligible hazard mitigation projects include all activities permitted in FEMA's Hazard Mitigation Grant Program and Pre-Disaster Mitigation Program.
- Create catalogue of best practice mitigation strategies states can pre-approve and preauthorize for grantees.
- Maintain properties that have flooded multiple times as open space in perpetuity and deed restricted or used productively for water management or similar mitigation purposes.
- Encourage grantees to use funds for green infrastructure projects or other nonstructural, nature-based flood protections that are known to adapt to as well as mitigate flood risk and provide multiple co-benefits. Also allow funds to be used for operation and maintenance of green infrastructure projects.

- Allow and encourage other activities that reduce risk and benefit LMI communities.

Maintain a continuous feedback loop on whether programs are sufficient to meet community needs with ongoing CDBG-DR community participation requirements:

- Direct grantees to conduct a minimum number of public hearings to maximize community input and buy-in and for all major projects and programs.
- Direct grantees to create advisory bodies of affected populations (including homeowners participating in buy-out programs, small business owners receiving loans for their properties, residents and businesses living near infrastructure projects with \$50 million or more of federal funding, etc.) to consider ongoing decisions and input as programs and projects progress. Grantees should produce periodic reports detailing why proposed changes were accepted or not accepted. Prioritize use of taxpayer dollars for projects that both reduce risk and deliver other needed benefits for low- and moderate-income communities.

Require that mitigation projects deliver a benefit greater than risk reduction alone:

- Encourage CDBG-eligible activities that produce risk reduction along with other co-benefits to low-income communities.
- Prioritize mitigation investments in communities with the highest vulnerability to hazards.

Create a National Infrastructure Bank to further private investments in resilience

The Federal Government should further explore partnering with the private sector to ensure robust investment in resilient infrastructure investment through the creation of a National Infrastructure Bank. The use of private financing for infrastructure projects in the United States is not as substantial as it should be, in part because financing requires a revenue stream to pay back the loan. Infrastructure service fee structures do not account for the full cost of service, repair and maintenance and thus often private investors do not deem these projects to be financially prudent.

By creating a National Infrastructure Bank (NIB), Congress could enable private sector investment to rehabilitate and enhance the resilience of infrastructure. Infrastructure banks are often capitalized by public sector dollars, with public sector money then lent to state and local governments at below-market rates to attract private loans or deployed via loan guarantees for infrastructure projects that provide a clear public benefit. Revenues generated from the projects are then used to repay the loan and recapitalize the bank to fund other projects. To ensure that projects receiving NIB financing are meeting the resilience needs of cities, legislation creating a NIB should be designed with the following principles in mind. The NIB should: provide funds to complement, not replace, existing federal programs such as the Highway Trust Fund and State Revolving Funds and provide financing options for a variety of infrastructure projects (e.g., energy, water, transportation, communications).

The NIB could bring a great deal of value to many cities. For example, New York City's partially funded \$3.7 billion coastal protection plan calls for flood-protection infrastructure and ecosystem restoration to

enhance the city's flood resilience.¹⁰ Berkeley's 5-year, \$30 million initiative calls for street improvements and green infrastructure to address storm water management and other resilience objectives.¹¹ These investments would not only help these cities enhance their resilience, but also create job opportunities and increased economic investment into local city economies by supporting goods procurement and support for service.¹²

Congress should create and capitalize a NIB to facilitate private financing for projects aimed at rehabilitating and modernizing infrastructure. The expertise of leading infrastructure agencies should be sought in the design of the NIB to ensure that NIB financing can be blended with other public-sector dollars and financing mechanisms. Departments with leading roles in infrastructure funding and financing include the Department of Transportation, US Department of Agriculture with investments in rural communities, Department of Defense, Department of Energy and the Environmental Protection Agency.

Conclusion

In order to spur the level of investment and focus that is required to combat the looming threats of climate change, we must act boldly. I commend the House Select Committee on the Climate Crisis for your commitment to examining how to best create a climate resilient America and thank you for seeking my organization's input. Working collaboratively across all levels of government, the private sector, and nonprofit institutions, we can build resilient futures.

¹⁰ 100 Resilient Cities Resilience Strategy accessed from Georgetown Climate Center Adaptation Clearinghouse: <http://www.adaptationclearinghouse.org/networks/100rc-resilience-advisory-council/resilience-strategies.htm>

¹¹ This initiative was passed by voters in 2012. http://www.ci.berkeley.ca.us/City_Manager/Press_Releases/2014/2014-08-28_Measure_M_spurs_the_paving_of_streets_throughout_Berkeley.aspx