Cobblestones
Street Paving in Early Alexandria
BY JASON TERCHA

In the years following the American War of Independence, Alexandria’s town council grew increasingly concerned with the town’s growth. Alexandria had grown significantly over the previous forty years, and it developed into a bustling port of over 2,700 residents on the Potomac River. It contended for regional trade with numerous other Chesapeake towns, many of which were established much earlier (see Figure 1). To further entice commerce, Alexandrians improved and regulated their town streets, which enhanced the town’s capability to participate in coastal and Atlantic maritime trade. Paved streets appealed to town residents and commercial merchants and supported year-round social and business interactions. The network of streets constructed and improved in the late eighteenth and early nineteenth centuries validates the Alexandrians' economic aspirations and values. Their conscious decision to devote substantial resources to improving the town streets also reflects the ongoing trend of internal improvements in post-revolutionary America.

Like many other Chesapeake ports, Alexandria’s economy was driven by commercial trade. Foodstuffs, such as wheat and produce, and raw materials, such as timber, streamed into Alexandria for transshipment, while imported goods, such as salt, sugar, seeds, and fertilizers were carried inland. Merchants and commercial agents congregated in Alexandria and facilitated the commercial exchange. As middlemen, they arranged transportation and profited from differences in market prices. But they also assumed great risks, as accidents such as shipwrecks and overturned wagons and inconsistent product quality spoiled potential profits and ruined reputations. It was in the merchants' professional interest to seek improvements to Alexandria’s infrastructure and commercial facilities, and they consequently invested

Figure 1. Communities dotting the Chesapeake region were situated along the tributaries of the Chesapeake Bay. This enabled each town to have access to the Atlantic Ocean and presumably to maritime trade.
in banks, turnpikes and canals, and they encouraged the town council to hire a flour inspector.

Merchants relied on a rudimentary network of roads and the Potomac River and its tributaries to carry trade between rural northern Virginia and Alexandria. To reduce the risks and increase potential profits of transporting commercial products they improved waterways and constructed turnpikes into the country. Alexandrians, led by George Washington, formed the Patowmack Canal Company to circumvent the treacherous rapids and waterfalls of the Potomac River above the fall line. Closer to Alexandria, laborers cleared obstacles from the river to deepen and widen the navigable channels. Alexandrians extended piers and wharves along their waterfront and constructed warehouses nearby to facilitate marine and riverine trade. The town council declared, “the navigation of the river, and...the docks is of primary importance to the present and further interest of the town.”2 Alexandrians also addressed the unreliability of roads and improved the overland trails linking their town with the countryside. Merchants invested in, and often directed, turnpike companies, such as the Little River Turnpike Company that constructed a plank road to Loudoun County. Investors employed tolls to fund the construction and maintenance of the road and expected to benefit indirectly from the business generated by the turnpike.3 But within Alexandria, the town council was solely responsible for regulating, maintaining, and improving public streets.

Streets were the setting for many daily activities occurring in the town; people met one another for social encounters and to transact business. Unlike inland farming communities that speckled the back country landscape, Alexandria was strategically positioned along a navigable river. The original plan placed Alexandria’s waterfront on a cove that provided protection from the main current of the river and aligned the streets at right angles with the cardinal directions. Surveyors subdivided the spaces between streets into individual plots, which were later sold at auction.4

In the 1780s, the town council began to regulate the streets, which were essentially unimproved dirt paths susceptible to changing meteorological conditions. The town council passed ordinances to make sure the streets remained usable and authorized officials to fine residents for infractions. In 1785, they established rules guiding the future development of streets. From the original plan, the town council extended the existing streets westward and sanctioned additional cross streets. They required that most of the newly designated streets be constructed 66 feet wide.5 This width ensured that the streets were large enough to allow for the free passage of vehicles and pedestrians between buildings.

Throughout the 1790s, Alexandria’s town council intensified its efforts to improve the town streets and often instructed a town official to repair, improve,
or pave a street. On February 21, 1794, the council directed the Commissioner of Streets to pave several blocks of King Street, Fairfax Street, and Prince Street. They also specified that the streets were “to be leveled as to carry off[f] the water in the most convenient manner.” The council’s concerns were twofold: improving the surfaces of the principal town streets and resolving concerns about rainwater drainage. In June 1794, the council appointed a commission to investigate the practicality of leveling the slope of King Street. In separate meetings in August and September, the council directed commissioners to pave sections of Royal Street, King Street, and Union Street. On September 9, 1794, the council directed the paving of Prince Street from Water Street to the city dock. The following year, they paved portions of Fairfax Street and Union Street, as well as alleys leading into these streets (see Figure 2). By the end of 1795, Alexandrians had paved most of the streets adjoining King Street in the vicinity of the waterfront.

Alexandrians initially paved streets leading to the waterfront, which were most often used for commercial purposes, rather than more residential streets.

Figure 2. Alexandria's paved streets were concentrated along the waterfront and in the King Street corridor, streets that served the commercial needs of the town.
An analysis of the successive improvement projects in the 1790s and early 1800s shows that streets were paved along the King Street corridor and its immediate cross streets. A closer look at this pattern reveals a correlation between street improvements and the concentration of town wealth. This section of town was occupied by wealthier, white Alexandrians. Alexandria’s free black population resided along streets that were largely left unimproved. Rather than equally distributing the town’s resources, the town neglected to improve the streets in predominantly free black neighborhoods. Although this may have been evidence of racial inequality in a southern, slave-holding town, it could also be the result of insufficient taxable revenue from poorer, free black neighborhoods. Regardless, the distribution of paved streets paralleled the distribution of wealth within Alexandria.

Street improvements also resolved some of the Alexandrians’ anxiety about disease. Rainwater collected on streets without proper drainage in stagnant pools that often emanated a foul stench and served as an ideal breeding ground for disease-carrying insects like mosquitoes. The town tried to modify streets to improve runoff and prevent accumulating water, but with mixed results. Although on February 21, 1794, the council resolved that streets should be graded to enhance drainage, a health officer reported in August 1795 that large pools of stagnant and “other noxious waters” lingered and posed a significant health risk to the community. The health officer found that in “Washington Street there are large ponds of water at the intersection of Prince and Royal Street deep muddy stagnated waters.” To solve the problem, the council ordered the puddles filled immediately. It is likely the epidemics of yellow fever that ravaged mid-Atlantic ports in the 1790s were worsened by standing water. By mandating road improvements to prevent standing water, the council ultimately reduced the potential for disease.

Alexandrians continued to address street conditions into the nineteenth century, as confirmed from a survey of the 1817 Alexandria council minutes. On March 22, 1817, the council ordered “the Superintendent of Police do proceed to pave Duke Street from the west side of St. Asaph Street to the west side of Columbus Street.” In addition, the council ordered sections of Columbus and Washington Street to be paved and Wolfe Street to be regulated between Prince and St. Asaph streets. Over the next few months, the council ordered officials to pave sections of Queen Street and Union Street, and to repair gutters on Union Street, the footways on Water Street and Wilkes Street, and the roadway on Washington Street.

In addition to maintaining and improving street surfaces, Alexandrians continued to address water drainage by repairing gutters. On April 16, 1817 the council ordered Union Street to be repaved to allow for “freer movement
of water in gutters.” The council also ordered the Superintendent of Police, the town official then responsible for the maintenance and construction of streets, to charge the repair and paving costs to the wards most affected by the improvement. In regulating the footways on Water Street on March 29, 1817, the council charged the expense to the first ward, while the April 16 order to repair Washington Street was charged to the third ward. By charging the ward most influenced by the improvement, the town council avoided accusations of preferentiality.

Alexandrians also paved the narrow public alleyways leading behind buildings with cobblestones. One motivation was the persistent issue of standing water. Rainwater pooled behind houses and was as much a health concern as stagnant water on the town streets. As early as 1795, the Alexandria council ordered alleys paved to prevent the health risks associated with standing water. Another incentive to pave alleys was to delay erosion. Wheeled vehicles using the alleys frequently used the exact same tracks, which accelerated erosion, since the narrow paths between buildings restricted their movement. Property owners paid the expense to pave private alleys while the town financed the improvement of public alleys. Like streets, alley improvements incorporated a gutter system to facilitate runoff. Alley gutters carried water to the street, where street gutters carried it downhill to creeks and the river. Many of the surviving alleys in Old Town Alexandria continue to be paved with cobblestones.

Cobblestone-paved streets required regular upkeep to preserve their integrity. Frequent use and water erosion created ditches and imperfections in the road surface. In spring 1817, the Alexandria council moved to repair Washington Street when they received alarming reports of the road’s condition. This road had been paved only twenty years earlier but required resurfacing in 1817. The surface of the street may have resembled Cameron Street as it appeared in a 1910 photograph (see Figure 3). The 1910 Cameron Street roadway had grooves cut into the surface by wheels that regularly traveled the route. Over time, the wheels moved the cobblestones to a point where the spaces between stones lined up with the axle tracks of most contemporary vehicles. Although these furrows may have led to a smoother ride, they accelerated the erosion of the street. Left unchecked, the street would deteriorate, as deep trenches would form and eventually hinder traffic. The town council frequently ordered the cobblestones to be realigned for routine street maintenance.

Alexandria’s roads required regular cleaning to preserve the surface condition and to protect the wellness of the community. Rubbish, excrement and other street debris collected on the streets and washed into the gutters, often impeding the gravitational flow of water. Mud dried in warm weather, turned to dust, and became bothersome. In 1852, *The Alexandria Gazette* reported
that clay-like mud collected along King Street between Washington and Royal Streets, “which as soon as the sun comes out hot, and by the travel over it of carts and other vehicles is converted into dust, which makes it, when any wind is blowing, almost impassable and causes serious damage to goods in our stores.” Periodic street cleaning protected the community’s health and prevented damage to commercial products that were vital to the city’s economy.

Eventually the unremitting maintenance of cobblestone streets became too tiresome. In 1893, the engineer of streets declared that the city of Alexandria would no longer maintain cobblestone streets and began to replace the cobblestones with bricks. Photographs of Market Street, Fairfax Street, and King Street taken between 1917 and 1921 depict brick surfaces. Several photographs of the Lord Fairfax House, near the intersection of Cameron and St. Asaph Streets, demonstrate this dramatic change (see Figure 4). The earlier photograph shows Cameron Street paved with large cobblestones, visible by the rough-looking
surface of the roadway. At the intersection, large, rectangular slabs mark a pedestrian footway. The stone’s surface on both edges of the street plunge downward to form a gutter that drained water. Large flat stones span the gutter in front of doorways and at the pedestrian footways, which connected the sidewalk to the street. The second image, which was photographed only a few years later, shows Cameron Street paved with bricks in a pattern similar to a running bond, but in which the shiners were only visible on the surface of the road. Although the sidewalk remained the same, the street gutters disappeared. Instead, the street was lined with curbs made of cut slabs of granite laid end to end.

The materials used to pave streets depended on the local availability of materials and varied from town to town. Whereas towns along navigable waterways could more easily import construction materials, it was prohibitively expensive to transport large quantities of material overland. It can be generally assumed that much of the material used for road construction was readily available or naturally occurring in the immediate vicinity of the road.

Alexandria’s concentration of cobblestone streets was an outcome of its status as a major mercantile port and its location along the Potomac River, which led to the availability of sufficient cobble for paving its streets. Large, river-rounded rocks, colloquially termed cobbles, were removed from rivers and creeks during dredging and navigational improvement projects. Merchant

Figure 4. The Fairfax House stands near the intersection of Cameron Street and St. Asaph Street in Old Town Alexandria. Notice the change in street pavement between the two photographs taken only a few years apart, where in the older photograph (left) the street is cobblestoned while in the newer photograph (right) the street is paved with bricks. Exact dates are unknown for these images.
ships requiring ballast for maritime and coastal trade often used these stones. Cobble was fairly common and not considered a marketable commodity, so it was inexpensive to obtain. As a result, piles of cobble accumulated in mercantile ports like Alexandria. In 1793, the committee of streets advertised that they would “give a half and a Dollar for every ton of stone suitable for paving, delivered upon such wharf in the town as shall be directed when brought into port. The stone shall be best calculated for paving of the oval kind weighing 60 pounds and upwards.”

Since cobblestones were readily available and inexpensive in ports, they proved to be an exemplary construction material for streets. Alexandria was only one instance where streets were paved with materials normally used for ballast. Numerous other mercantile towns and cities along the coast or on navigable waterways used ballast for street pavement. Conversely, inland towns and riverine ports that failed to mature were less likely to use ballast stones to pave their streets, since transporting the heavy materials overland was impractical and a ready supply was unavailable. Paradigms for both scenarios occurred across the Chesapeake region.

Nineteenth-century photographs reveal that Richmond used cobblestones for street pavement. Richmond lies just below the fall line on the James River. In addition to serving as the state capital, Richmond was an industrializing city and major port in the heart of nineteenth-century Virginia. The city exported shipments of iron down the James River to the Chesapeake Bay, where its trade thrived with other cities. Within Richmond, several streets were surfaced with cobblestones. Reminiscent of streets found in Alexandria, Richmond paved its streets with large, rounded cobblestones and constructed gutters along the edges of the road to facilitate drainage.

A slight variation of the cobblestone model is the settstone-paved streets in the Fells Point neighborhood of Baltimore. Rather than naturally occurring river-rounded cobble, as in Alexandria or Richmond, the Fells Point setttstones were cut to have flat sides. The stones fit together like bricks and created a flat road surface. The additional work in shaping the stones created a much smoother surface than cobblestones, but they were more expensive, since each stone was individually shaped. Baltimore has preserved the historic integrity of Fells Point and has restored settstone pavement on parts of Thames, Fell, and Broadway Streets.

Although located on navigable rivers, Yorktown and Fredericksburg failed to develop into major mercantile ports like Alexandria, Richmond, and Baltimore. Early photographs of Yorktown and Fredericksburg show that neither town improved its streets. Towns further inland also failed to pave their streets, as Civil War era photographs of Mechanicsburg, Falls Church, and Centreville...
Generally, towns only used cobblestones as pavement when a supply of the stones was readily available or could be obtained inexpensively. While nearly everything around it has modernized—an effect of its proximity within the Washington metropolitan region—Old Town Alexandria has retained its historic appearance due to preservationist efforts and its 1966 designation as a national historic district. The historic character of Alexandria is reflected in the low-rising Georgian-style houses and the dimension and appearance of its city street. Streets played such a pivotal role in the historic panorama that, in 1979, Alexandria repaved several blocks of Prince and Princess Streets with cobblestones (see Figure 5). Many alleyways and side-street gutters in the historic district are also still paved with cobblestones and complement the historic setting.

The improvements to the roads within Alexandria coincided with the town’s emergence as a major Chesapeake port in the late eighteenth century. Alexandrians exploited the accumulation of ballast materials to inexpensively pave their streets with cobblestones. Paved streets enabled the town to attract commerce, particularly after the federal government located its permanent seat in the vicinity. In preserving its historic identity, Alexandria has restored and maintains two cobblestone streets in the vicinity of the waterfront. Tourists and Alexandrians alike can experience the city in its heyday, walking past Captain’s Row over cobblestone streets.

Figure 5. For two blocks, Prince Street in Old Town Alexandria is paved with the historic pavements of the city. The surface of the street in the 100 block (bottom) is cobblestone, while the surface of the 200 block (top) is brick. Together, these blocks are locally known as "Captain’s Row."
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Endnotes

1 Alexandria, Virginia sits along the Potomac River, approximately 4 miles south of Washington, DC and 91 miles from the river’s mouth on the Chesapeake Bay. Although now separate entities, the City of Alexandria and Arlington County share a common history in which they were politically linked. Alexandria was founded in 1749 in what was then Fairfax County. In 1791, the First Federal Congress agreed to locate the permanent seat of the federal government on the Potomac River near its confluence with the Anacostia River. In turn, Virginia agreed to contribute Alexandria and the northeast corner of Fairfax County to form part of the ten-mile-square federal district. The rural subdivision became known as Alexandria County. In 1801, the federal government assumed jurisdiction over the town and county and governed the territory until it was retroceded to Virginia in 1847. In 1870, Alexandria City became politically autonomous from Alexandria County, yet their economies and politics continued to be intertwined for the next sixty years. In 1920, the Virginia General Assembly renamed the county Arlington County to avoid confusion with the city.


4 John W. Reps, Tidewater Towns: City Planning in Colonial Virginia and Maryland (Charlottesville, VA: The University Press of Virginia, 1972); Christopher E. Hendricks, The Backcountry Towns of Colonial

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* Alexandria, VA, The Laws of the Corporation of the Town of Alexandria: To which are prefixed, the acts of the legislature of Virginia, and the acts of Congress, respecting the said town (Alexandria, VA: Printed by Samuel Snowden, 1811), pp. 7-10.


* Ibid., pp. 8-11.

* Ibid., p. 11.

* Ibid., pp. 9-11.


* Smith and Miller, A Seaport Saga, p. 133.

* Ibid., p. 120.


* Smith and Miller, A Seaport Saga, p. 120.


Many of the streets in Fell's Point continue to be paved with settstones, which can be viewed while visiting the neighborhood.
