

Alexandria Waterfront Alliance

July 21, 2025

Mayor Alyia Gaskins
Vice Mayor Sarah Bagley
Councilman Canek Aguirre
Councilman John Chapman
Councilman Abdel-Rahman Elnoubi
Councilwoman Jacinta E. Greene
Councilman R. Kirk McPike
Alexandria City Hall
301 King Street
Alexandria, Virginia 22314

By email:

Re: Waterfront Park Pump Station

Dear Mayor and City Council of Alexandria:

The Alexandria Waterfront Alliance is a unified alliance of individual citizens, businesses, and long-standing civic organizations who have come together for the common purpose of saving Waterfront Park from a well-intended, but horribly ill-conceived plan to build an enormous two-story pump station that will eliminate a large area of public parkland, and irreparably harm the views and experience of the historic Alexandria waterfront. The Waterfront Park Pump Station is a complex and expensive solution in search of a problem.

The purpose of the pump station is not, and has never been, to completely eliminate flooding from the Potomac River. That has never been the design goal. The stated purpose of the pump station is to partially mitigate “nuisance” stormwater flooding at a small number of locations that is caused by occasional rain events. The City’s own data indicates that this nuisance flooding only occurs a few times per-year.¹ By and large, the citizens and businesses would rather to continue to experience this level of flooding than to have the proposed pump station in Waterfront Park, and the related disruption to business and traffic. But as described below, it is possible to both incrementally reduce flooding and eliminate the proposed Waterfront Park Pump Station. It need not be one or the other. The costs and harm of the proposed pump station “solution” vastly outweigh the benefits supposedly attributed to fixing the “problem.” This project is not

¹ The January 28, 2025 City Council Briefing on flood mitigation states that nuisance flooding occurs “38 days/year” but the River Stage graph on the same page shows the water exceeding the 4 foot “nuisance flood” stage only about 20 times in the last 20 years. The truth is probably somewhere in the middle.

cost effective, which means it is a poor investment that will cost the citizens millions. This project as currently designed must be stopped.

The members of the Alexandria Waterfront Alliance include over a half-dozen long time Alexandria institutions and businesses that collectively represent over a thousand Alexandria voters, civic organizations that have over a century of collective history protecting the public interest of the City, and businesses and property owners that generate many millions of dollars in annual Alexandria tax revenue.²

Our constituency is large, but more importantly our constituents are by far the most impacted by the rainfall-runoff flood events that the Pump Station project was conceived to mitigate, and theoretically stand to benefit the most from the promised improvements of this project. And yet, because the current pump station design is so ill-suited for the proposed location in Waterfront Park, we stand united in expressing our adamant opposition to both the design and location of this structure. We understand that even with some incremental improvements, periodic street flooding will continue and over time, may increase in frequency. However, any purported benefits of the project to reduce street flooding are far outweighed by the negative aspects of the current proposal, particularly in light of the fact that there are superior mitigation alternatives that could be constructed at lower cost, and with less disruption to waterfront businesses and residents, that have not been adequately considered by the City.

As discussed below, we hereby ask each of you to intervene immediately in this project to:

- 1) Stop the planning process for construction of the Pump Station in Waterfront Park (or any other City park); and**
- 2) Focus the City's precious financial resources on completing the specific aspects of the City's long-term Waterfront Master Plan for which there is a strong and positive consensus to move forward as outlined below.**

I. What is the "Pump Station"?

² The Alexandria Waterfront Alliance includes the Historic Alexandria Foundation, Old Town Civic Association, Old Dominion Boat Club, Alexandria Restaurants, and over 100 near-by residents and business owners who have united in opposition to the proposed Pump Station location on Prince Street.

The Pump Station would be a massive two-story building with a flat roof, no windows, clad in rusty metal scrim selected to mimic waterfront industrial equipment. It is proposed to be located in a beautiful waterfront park where it will displace open public recreation space, block critical waterfront views, and require the elimination of a large number of mature trees. The current design is over two stories high (33 feet to “top of scrim”), 46 feet wide, and 96 feet long, not including additional open frame canopies that add another 20 feet to the overall length and width. As shown below, the overall scale and mass is only somewhat smaller than the Old Dominion Boat Club that is immediately adjacent to the proposed location. This siting would require paving over parkland with over 7,500 square feet of concrete next to the River. The images below are from the City Manager’s June presentation to the Board of Architectural Review.



Figure 8: View of Pump Station from Prince Street

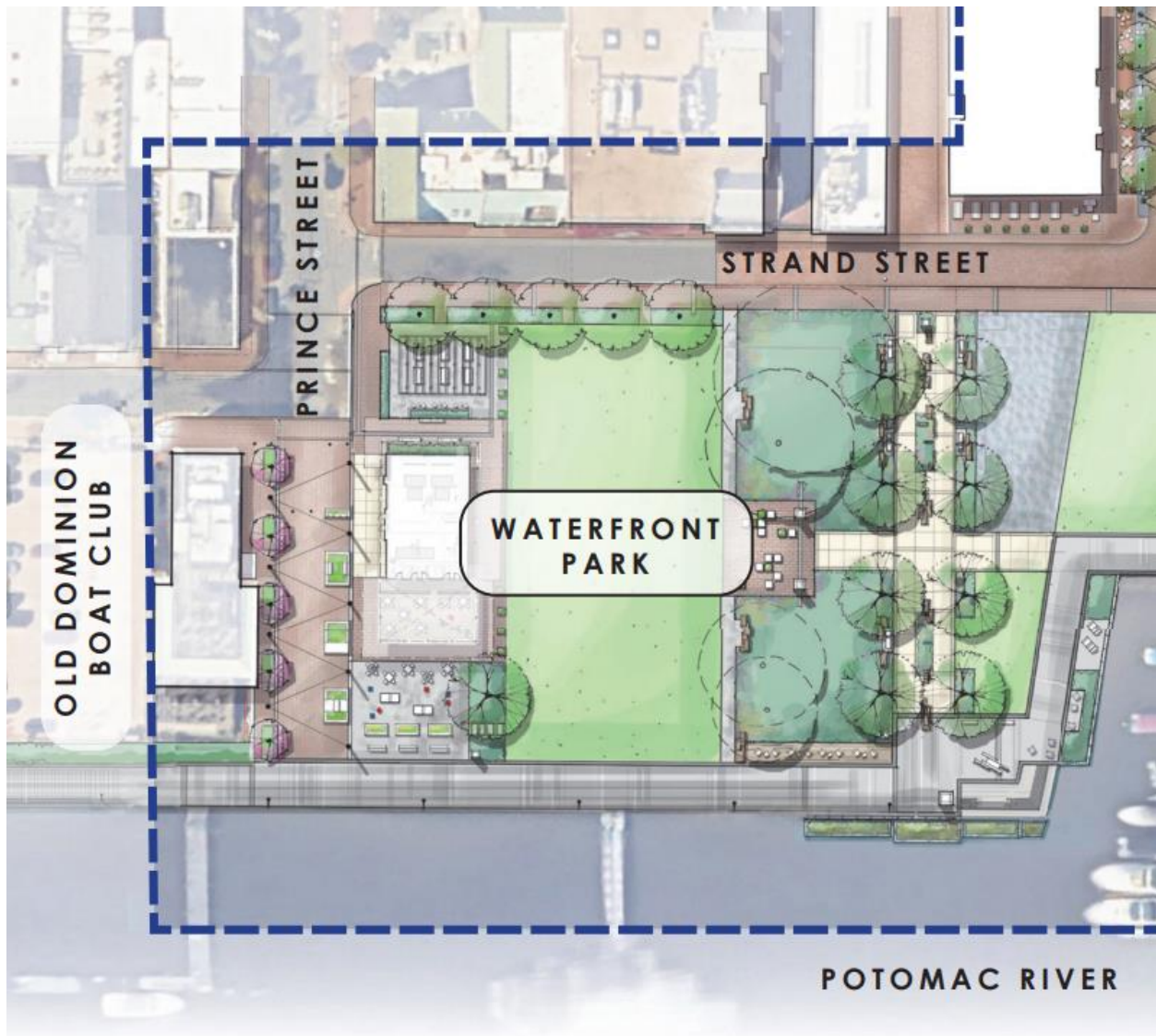


Figure 9: View of north side of Pump Station



Figure 10: View of Pump Station and Prince Street end park

The proposed pump station would include large underground tanks that require large water pumps and back-up diesel generators that are both noisy and emit carcinogenic diesel particulates and smog forming Oxides of Nitrogen. The pump station would be located in Waterfront Park immediately across Prince Street from the Old Dominion Boat Club.



II. What is wrong with the Pump Station and Location?

It should be intuitively obvious why a building like the one pictured above should not be placed in the City's most important waterfront park. But if not, here are some of the

many reasons that this project with little quantified benefit is arguably the worst project proposal in the history of Alexandria:

1. It Eliminates Public Park Land and Open Space for Recreation

City parkland, and open space in general, is a precious commodity in an urban environment. City Planners, City Councilors, local environmental conservationists, and historic preservationists have been working for nearly a century to expand the amount of public open space and parkland in the City of Alexandria available for public use and recreation. In no place has this effort been more important and impactful than on the City's waterfront. Placing this giant rusty metal box in this precious open space (or any other public open space) destroys a place of both historic and public interest and utility that has taken over 75 years to create.

In the 1970's the Alexandria waterfront was an industrial wasteland, and today it has been transformed into a beautiful focal point for residents to enjoy and serves as a magnet for over 3.5 million annual tourist visits that support a thriving local economy and tax base. The City holds these precious open spaces in trust for the current and future generations of Alexandrians, and it is violation of that public trust and stewardship for the City to construct what is essentially an industrial stormwater management facility in a public park.

2. It Blocks Critical Viewsheds of the Potomac River

Virtually all of the residents and tourists who visit the Alexandria Waterfront do not go swimming or boating, or otherwise get out on the River. Most of the millions of visitors come to simply to see the water views and views of activities on the water. The proposed two-story building blocks those views from many viewpoints.

The current proposal is a Brutalist concrete block structure partially clad in a rust-colored steel "scrim material" that blocks what is currently a view of the tall ship Providence and the Potomac River with what could be described as a rusty metal wall which relates to nothing architecturally in the area.

Waterfront Park is the park area connecting King Street to Prince Street at the heart of Old Town's historic axis focused on the Potomac River and is in the heart of Alexandria's most important center for tourism related to Alexandria's maritime history. This park is a unique catalyst for history, business, tourism and recreation that is unequalled by any other park in the City and now features the Tall Ship Providence which celebrates both the City's and the Nation's maritime history.

Placing the Pump Station along Prince Street, and close the River, maximizes the building's negative impact on this critical scenic viewshed. The view of the Potomac should be made as wide and expansive as possible, to celebrate its beauty, and to draw citizens and tourists from the west towards the water, and to all of the business and historic attractions that await citizens and tourists alike along the water. The waterfront promenade offers extraordinary 270-degree views of the Potomac, the relatively undisturbed Oxon Hill Maryland shore to the East, and an extraordinarily clear view of Washington, DC. from 8 miles away that includes the Capitol of the United States, the National Cathedral, and the Washington Monument to the North. The City's current proposal simply creates a wall that blocks much of that view from Prince and Union streets. The City should be making every effort to maintain that existing viewshed.

3. It Is Illegal and a Violation of the City's Deed Restrictions on the Property

Waterfront Park was deeded to the City from the Federal Government in 1981 after decades of litigation about the ownership of land along the Alexandria waterfront. This litigation culminated in a federal consent order entered by a federal judge in the District of Columbia to resolve the litigation between the U.S. Department of Justice and the City. The deed, the related Stipulation of Settlement, and Consent Judgement Order of the Court put specific restrictions on both what Waterfront Park can be used for, and exactly what can be built in it. Specifically, these legal documents, specify that the property must be used as a public park only. There is no reference to using the park for any industrial or municipal utility purpose, including for pump stations. Similarly, these legal documents also specify that no structure can be built in Waterfront Park that is above 15 feet high. The City's proposal, at 33 feet high, is more than double what that deed restriction allows.

4. It Will Cause a Massive Disruption to Traffic and Business Along The Waterfront during Multi-Year Construction

The current Pump Station plan includes plans to install an entirely new and massive "lateral" stormwater pipe to collect water from East-West pipes on Duke, Prince, King, and Cameron Streets that could otherwise be routed directly into the River by gravity. This pipe will transport rainwater from Founders' Park, where the residents successfully stopped the City's original plan for a second smaller pump station, down to Prince Street, where the residents in this area are now facing a disruption and eye sore much greater than the plan the City was willing to change for the benefit of the Founders' Park neighborhood. Exactly who decided that Founders' Park is more important than Waterfront Park, and when was that decision made? In addition to making the Pump

Station at Waterfront Park much larger (more than twice as big), this costly redesign requires this lengthy disruptive construction to install a new pipe to move water down several blocks of Union Street. This pipe is massive, up to 5 feet in diameter, and will need to be buried in a 15-foot trench cut down the middle of Union Street. Most critically, this represents over three-years of construction that will shut down portions of Union Street for long periods of time. It will create traffic and parking issues the City Manager said will reduce local business revenue by up to 40%. This will put many of our favorite local businesses and restaurants out of business, all for the purpose of “solution” that is much worse than the problem.

5. It Is Based On A Massive Overstatement of the Nuisance Flooding Problem it is Designed To Address

All of the waterfront land east of Union Street between Duke and Cameron was once underwater. The area was filled-in during the 18th and 19th centuries by enterprising land-owners seeking to increase their waterfront property and get closer to the Potomac River channel. It was filled before the invention of the internal combustion engine and modern construction equipment, and for over 200 years it has always periodically flooded. Every property owner for the last 200 years has bought and built in this floodplain with full knowledge of this historic flooding issue. In fact, buildings constructed over the last few decades are required to be designed to withstand both nuisance flooding and period Potomac River Flooding. For example, buildings like the Old Dominion Boat Club, 1 Prince, 110 Union and Water Mark Condominiums, are specifically designed to resist flooding as required by the City’s requirements for special flood hazard areas.

There are only three flood-prone historic buildings in the area between Duke and King that are subject to the nuisance flooding that is the basis of this entire project. The owners of all three of those buildings are members of the Alexandria Waterfront Alliance and have signed this letter in opposition to the Waterfront Park pump station. One alternative to this massive project is to simply add additional “flood proofing” or other mitigation measures to these three buildings at a fraction of the current cost. At the Council’s January 28, 2025 briefing, Council was informed that “Flood proofing buildings – allowing parks and streets to flood” was considered.³ After reviewing all of the posted project documents, we can find nothing that reports on the examination of that option,

³ See “Waterfront Flood Mitigation Pump Station Briefing” on January 28, 2025, slide 21 explaining that “Flood proofing buildings – allowing parks and streets to flood” was considered.

and affected property owners have not been informed of those less costly and disruptive options.

Equally important, the City has used extreme assumptions about the amount of rain the Pump Station and waterfront should be able to manage, which has driven up the size and costs of the proposed new infrastructure. Specifically, the City uses a hypothetical “10-year 24-hour 9-inch” rain event as the basis of its flood mitigation designs.⁴ This amount of rain is an extreme event with a probability of occurrence of only 10% in a given year. The City has acknowledged that this level and intensity of rain is “more than double the VDOT rate” that Virginia uses to design state highways and bridges. Similarly, it is from 15% to 52% higher than the updated values used in nearby Arlington County.⁵ Why did the City select this hypothetical rain event to design the project around? Is it justified based on the very small number of properties (three) most critically impacted by the current nuisance flooding?

6. There Has Been No Cost-benefit Analysis

In addition to exaggerating the need and benefits of the project, the City has not bothered to try to justify the costs of the project in relation to its benefits. It is irresponsible to spend over \$148 million dollars on a highly controversial construction project without a full analysis of the benefits compared to costs. The costs go far beyond the project price-tag and include extraordinary negative impacts on local businesses, many of whom will simply go out of business, and major impacts on the quality of life for local residents. As already stated, the owners of buildings most affected by rainfall-runoff flooding are opposed to the Pump Station in Waterfront Park.

7. The City’s Contract Has Created A Perverse Financial Incentive To Design and Build a Flood Mitigation and Pump Station Project That Affected Citizens and Businesses Do Not Want

The City granted the consortium of Skanska, JMT and LAI a “design build” contract worth over \$100 million dollars to implement this project. The project was developed over 10 years ago under a completely different set of assumptions, including the critical assumption that the City would build two much smaller pump stations in two different locations (none of which were inside a park at 0 Prince Street). Now, when citizens and businesses say they don’t want the project or do not like the location or design, it is

⁴ City of Alexandria Master Storm Water Management Plan, 2018.

⁵ See 2009 City of Alexandria Memorandum on Rain Fall Frequency Analysis (also explaining that Alexandria uses a 10-year intensity that is almost as high as Arlington and Fairfax County’s 100-year intensity without explanation for those extreme assumptions).

private citizens, who are not paid for their advocacy, who must fight a giant consortium that will make millions if the City ignores the will of the tax payers who are ultimately paying the bill for the contractor through our tax dollars. This is an absurd situation that only City Council can fix.

8. New Proposal is Inconsistent with the Waterfront Small Area Plan/Olin Plan

The design and location of stormwater pump stations were specifically addressed in the Waterfront Small Area Plan (more commonly known as the “Olin Plan”).⁶ The Olin Plan is currently the law of Alexandria with respect to construction along the waterfront. It was based on many years of professional design and analysis, extensive public review and comment, as well as complicated and hard-won compromises between myriad important stakeholders. The Olin Plan was ultimately voted on and approved by City Council. The Olin Plan included not one but two much smaller pump stations. This decision was recommended because it was determined critical for reliability, and because it enabled the construction of two small pump stations, about a half-mile apart, which would each have less visual impact on the locations where they were built. The size of the current proposal represents an abandonment of that key design element that has not been sufficiently explained to the public.

The location of the pump station near Waterfront Park was also specifically addressed in the Olin Plan, and it was proposed to be placed in the parking spaces along South Strand Street, on the far West side of Waterfront Park, not in the park itself.

9. Proposal Ignores Less Costly Alternatives That the Community and Directly Affected Property Owners and Businesses Can Fully Support

A review of past City evaluations of solutions to waterfront storm flooding reveals a simpler, and more cost-effective solution to the issues the City is trying to address that would be less costly, less disruptive to residents and local businesses, and legally consistent with both the Olin Plan, and the 1981 Deed Restrictions on the park.

This alternative has two major components, that work together to either radically reduce the required size of a pump station, which would enable it to be located outside of Waterfront Park, or may eliminate the need for it altogether. The components of this superior alternative are: 1) reducing the amount of rainwater that collects at the foot of King and Prince Streets in the first place; and 2) tempering the City’s design goals for

⁶ See Alexandria Waterfront: Small Area Plan, City of Alexandria (Feb. 25, 2012).

achieving an arbitrary number of “water free” hours and completely “dry feet” in Old Town.

A. Reducing the Volume of Rainfall-Runoff Water

A review the City’s website reveals a number of incremental steps that were once viewed by the City as both practical and effective at reducing the amount of water that collects in the low areas along Union Street. Employing these measures as a package would dramatically decrease the amount of water in the Union Street basin without pumping or moving water laterally along Union. These steps alone could either eliminate the need for a pump station or dramatically reduce the size of the Pump Station, enabling it to be relocated to a smaller space outside the park.

These features are as follows:

i. Complete the Olin Plan’s Sea Wall, Promenade and Park Improvements Including Raising Grades In the Lowest Areas

The Olin Plan included a number of significant improvements to Waterfront Park, the Park at the foot of King Street, and Point Lumley between Prince and Duke, that have not yet been implemented and are fully supported by the community. These improvements include the completion of a new sea wall/bulkhead and a waterfront promenade that will keep river flooding that does not overtop the seawall out of the Union Street “basin.” These improvements also include raising the grades of the street at the foot of King and Prince 6-12 inches, so that they would simply hold less water, make gravity drainage more effective, and reduce the size of the Union Street “basin” that currently collects excess rainwater. If the bottom of the basin is raised to the maximum extent, as proposed in the Olin Plan, it will hold less water and can facilitate running stormwater drains by gravity straight out through the new seawall at slightly higher elevations than the current system as discussed below.

ii. Run Storm Water From Fairfax Straight East to the Potomac River Bypassing Low-lying Areas

The proposed pump station is designed to pump rainwater that runs down steeply sloped blocks like the 100 and 200 blocks of Duke, Prince, King and Cameron streets and collects in low-lying areas at the foots (street-ends) of Prince and King Streets (for example). The City currently has a separate capital improvement project to rebuild these aging stormwater pipes in these East-West blocks. The project is already planned.

Instead of just replacing these pipes and continuing to allow the new ones to empty out into the low-spots along Union Street, these new East-West pipes should be routed to drain straight out into the Potomac River, and by-pass gutter drains below Union Street where they currently over-flow and back-flow. Running these pipes straight down these steeply sloped streets into the river and using gravity to drain water straight into the Potomac would eliminate the need for backflow preventers on these outfalls, which the City asserts have proven unreliable in keeping high river levels from flooding the Union Street basin. We note two points: high volumes of stormwater runoff are extremely unlikely to occur at the same time as base flooding of the Potomac River; and many waterfront communities around the nation and overseas successfully rely on backflow preventers, suggesting the City's experience may not be based on properly designed devices. The new seawall, with stormwater pipes that by-pass Union Street gutter drains, would eliminate flooding from the river below the six-foot elevation proposed for the new sea wall/promenade. Obviously not all the stormwater originates up-hill from Union Street, but these new gravity storm drains could reduce the amount of stormwater in the Union Street basin by well over 50%. This remaining smaller amount of water could be allowed to drain by a separate set of gravity outfalls on King and Prince Streets, or be pumped out using a significantly smaller pump system that would not need to be placed in a City park.

One of the most disruptive aspect of the current plan for local businesses and residents is a new giant (5-foot diameter) stormwater pipe designed to move water from Founder's Park (where a North Pump Station was planned) down Union Street to Prince Street. By diverting rainfall-runoff straight into the Potomac, this new giant lateral Union Street pipe can be eliminated, which would significantly reduce the amount of disruption to local residents and businesses, significantly reduce costs, and reduce construction time.

B. Modify the City's Arbitrary and Overly Conservative Design Goal- "How Dry is Dry Enough?"

The City's goal for the current project has never been to prevent all flooding in the affected Union Street basin. For example, under the City's current plan, during a hurricane or major rain event, when the river over-tops the proposed six-foot seawall, the entire waterfront will continue to flood as it does today, and as it has done for more than two centuries. While the pump station might expedite drainage of river flooding trapped as the Potomac recedes, the same drainage could occur through gravity drains through the sea wall.

The primary intent of the pump station is to simply marginally reduce the number of hours per-year that the lowest-lying areas are flooded and un-passable during heavy-rain events. Specifically, the City describes the current “baseline” state of stormwater flooding at the lowest lying areas in the vicinity of the intersection of King and Union Streets as nearly “3 feet deep for a period of close to two hours under existing conditions” and describes the design goal for the project as reducing flooding in that location to “down to 8 inches in less than one hour.”⁷ Importantly, these two flood levels and durations are based on the extreme “10 year storm rain event” with the very rare peak rain fall intensity of 9.0 inches per-hour for 2 straight hours that state and other nearby cities do not consider reasonable for design of stormwater management and drainage projects.

The City should modify both the design goals and the assumptions it uses to measure the capacity of the areas along Union Street and the waterfront to handle rain events. For example, what would the stormwater flooding look like if the City chose to use the values used by VDOT or Arlington County? As far back as 2009, it was noted that the City’s recommended design is even more than double VDOT’s rate, and on the order of 50 percent high than used by Arlington County. Similarly, what kind of design would be required if over 50% of the current drainage area was drained by gravity directly into the river? And what if raising the grades of the lowest lying areas as already proposed by the Olin Plan were included? And most importantly, would any additional infrastructure, like a pump station, be needed if these more sustainable design elements and weather assumptions are included? Why do the City Manager’s office and their highly paid consultants refuse to answer these simple questions?

By implementing the sustainable gravity-based steps listed above, the City could reduce the critical drainage area served by this project by over 50%, from approximately 10 city blocks, to less than 5 city blocks. Similarly, by increasing grade levels at the foot of Prince and King by 6-12 inches (even with the existing side-walks +/-), approximately 66,000 square feet of land that is currently the lowest flooding areas by the Union Street Starbucks, and Misha’s Coffee House would be lifted up and level with areas that flood very rarely. By reconsidering the overall objectives and implementing these steps, we think the City will find that either no pump station (and associated transfer pipe and underground storage) is needed, or a much smaller project could work in a different location.

⁷February 2023 City of Alexandria Waterfront Implementation Technical Memorandum 3, page 8, Figure 3.

CONCLUSION: The undersigned members of the Alexandria Waterfront Alliance think it is irresponsible for City Council to brush aside what we, the most affected citizens, consider reasonable options that should be examined rather than yield to apparent pressure from City staff and from consultants to invest in a proposed pump station project that will only marginally increase the number of hours per-year without any pooling water. But if the Council insists on spending millions of dollars on a Pump Station project that we the affected businesses and residents do not want, then in the interest of the City's fiduciary responsibility to wisely spend property owner and taxpayer money, Council should ask for documentation as to why the size and expense of that the project cannot be significantly reduced while still reducing street flooding. Further, if indeed a pump station is still required based on smaller design storm, then in no case should it be located in Waterfront Park or any other City parkland.

Respectfully submitted,



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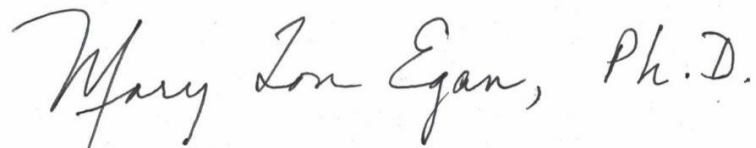
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