



1932 First Avenue, Suite 201  
Seattle, WA 98101  
p. 206.725.1211  
f. 206.973.5344  
lpdengineering.com

## Memorandum

**Date:** August 16, 2017

**To:** City of Tacoma – Planning and Development Services

**Attn:** Environmental Services – Surface Water Management

**From:** Laurie Pfarr, P.E., LEED AP, CESCL, Principal

**Project:** **Browns Point Elementary School**  
LPD Project No: 188-15-01

**Subject:** **Stormwater Minimum Requirements Exemption for Offsite Improvements**

---

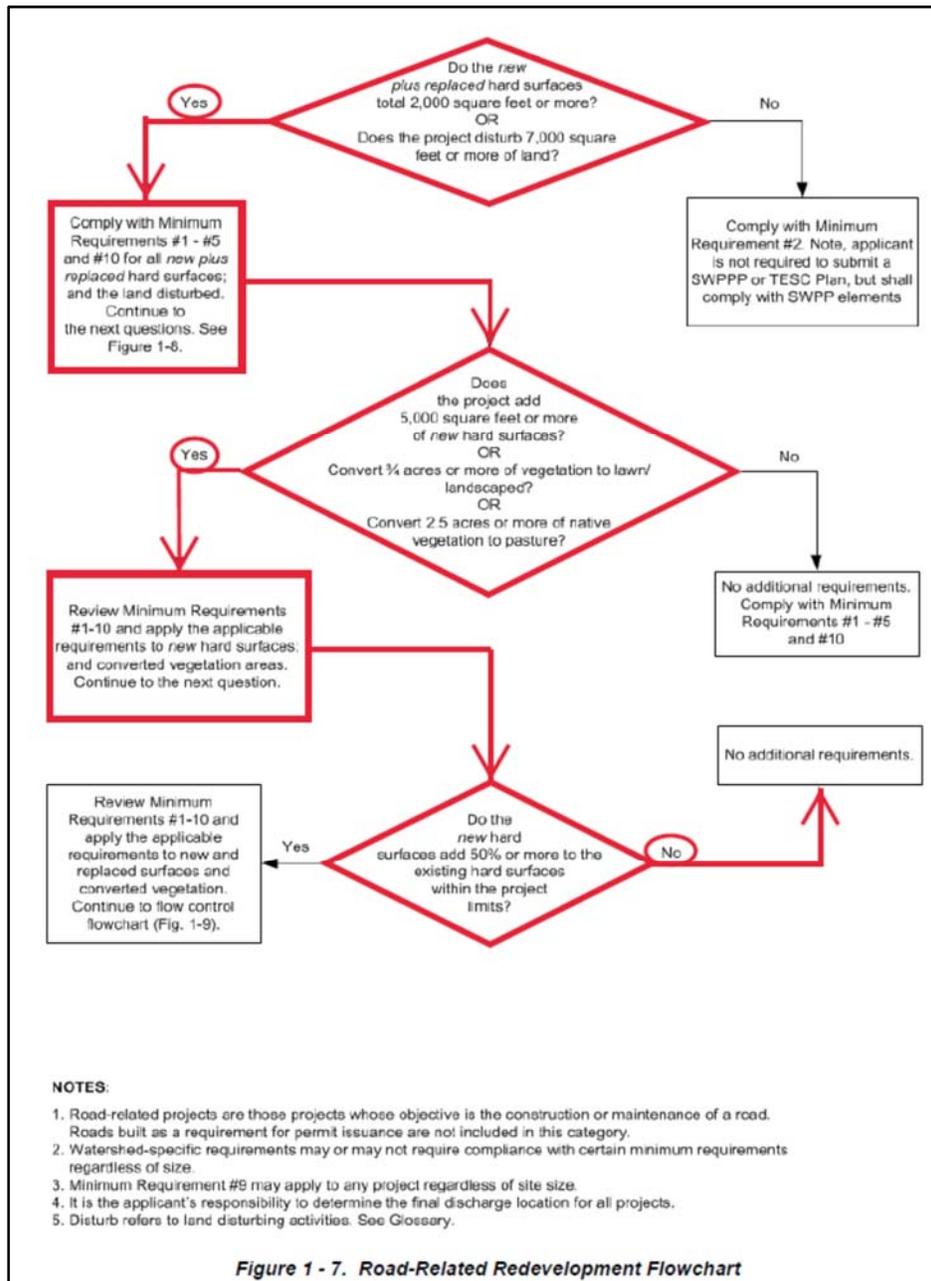
This memorandum outlines several factors in support of a request for an exemption to meet the minimum stormwater requirements for the proposed frontage improvements required as part of the redevelopment of Browns Point Elementary School in Tacoma, Washington. This exemption includes both phases of the frontage improvements, Phase 1 that will be constructed as part of the onsite school improvements, and Phase 2 that will be constructed at a later time after the completion of the school project. We are requesting an exemption from compliance with the Minimum Requirements outlined in the City of Tacoma's *2016 Stormwater Management Manual (2016 SWMM)*, specifically Minimum Requirement #6 – Water Quality Treatment and Minimum Requirement #7 – Flow Control, for the impervious surfaces associated with both phases of the frontage improvements required for the project.

The proposed project is for the replacement of the existing Browns Point Elementary School, located at 1526 51<sup>st</sup> Street NE, with a new approximately 56,000 SF, two-story elementary school facility as well as associated ancillary facilities that include parking and playfields. The total project site area is 170,300 SF. Due to the significant size of the property including the portion utilized by Metro Parks, the scope of the project includes proposed frontage improvements along 51<sup>st</sup> Street NE, Browns Point Boulevard NE as well as 49<sup>th</sup> Street NE. Per the City of Tacoma 2016 SWMM, off-site frontage improvements that are required as part of on-site development are held to the same stormwater minimum requirements for the onsite development, which would include MR #1 – MR#10 for all new and replaced impervious surfaces.

Our request for exemption from compliance with the stormwater minimum requirements #6 and #7 stems from the following three primary factors:

### 1. Road-Related Redevelopment Project Type

If the required frontage improvements were not associated with the onsite improvements and instead constructed as a standalone project, the target surfaces requiring stormwater minimum requirements would be different, as the project would be considered as a Road-Related Redevelopment project. Using Figure 1-7 of the 2016 City of Tacoma SWMM, which is shown below, Minimum Requirements #1 through #10 would only be required for only the new hard surfaces and converted vegetated surfaces.



Replaced hard surfaces would not be considered as a target surface for Minimum Requirements #6 and #7. The majority of the proposed improvements within the frontage include replacement of existing sidewalk or asphalt pavement within the roadway, which would be considered a replaced hard surface. Therefore, there is limited new hard surface, approximately 9,300 square feet (3,500 square feet considered as new PGHS) which includes the new sidewalks along Browns Point Boulevard and 49<sup>th</sup> Street NE, and also additional roadway pavement along Browns Point Boulevard. For Minimum Requirement #7, the project would be below the 10,000-square foot threshold for requiring flow control facilities. For Minimum Requirement #6, the project would be below the

5,000 square feet of new pollution generating hard surface (PGHS) for requiring water quality treatment facilities.

Therefore, if the project was considered road-related redevelopment work under the 2016 SWMM, the project would be exempt from requiring minimum requirements for flow control and water quality treatment. Based on the anticipated scope and specific improvement requested by the City of Tacoma, we assert that the proposed site work aligns with various exemption practices listed for road-related redevelopment projects; therefore, an exemption from the minimum requirements is applicable.

## **2. Infrastructural Infeasibility**

Due to spatial constraints as a result of the existing utilities and the infrastructure within the right-of-way along both 51<sup>st</sup> Street NE and Browns Point Boulevard, implementing and locating detention and water quality treatment facilities along these frontages would be infeasible. For 51<sup>st</sup> Street, there is an existing 36-inch public storm drain main, 12-inch sanitary sewer main, and gas mainline that are located within the southern half of the roadway with insufficient space between the utilities for stormwater facilities. Similarly, for Browns Point Boulevard, there is an existing 8-inch sanitary sewer main, existing storm drainage and underground telecommunication utilities along the western half of the roadway with limited space between the utilities for additional stormwater infrastructure.

Additionally, locating stormwater facilities onsite to serve these frontages along the 51<sup>st</sup> Street frontage is infeasible due to onsite infrastructure along the north side of the school property, and if located along the northeast corner of the site for the Browns Point Boulevard frontage would prevent the optimal use of the school site and facilities.

To integrate these facilities into the existing right of way would require a significant restructuring of the utilities within the roadway. Relocating these facilities would have significant cost, as stated in a further argument as well as have significant impact on the surrounding community.

Additionally, the development of a preliminary drainage approach to meet the minimum requirements for the frontage improvements confirmed the inefficiency and minimal effectiveness of locating detention and water quality facilities in the right-of-way for both streets. Through the development of this initial design, it was determined that right of way had significant constraints to the adequate implementation of these costs. Challenges to the implementation of the detention and water quality system for the frontage include the following components:

- Due to the existing topography and grades along both streets, it is physically impossible to separately collect and treat only the new and replaced hard surfaces associated with the frontage improvements and route these flows to a single point for treatment.
- If the detention and water quality treatment facilities were integrated into the existing storm drain main lines, there would be a significant amount of upstream basin that would flow through the detention system. There is approximately 20.5 acres of upstream area tributary to the existing drainage system along Browns Point Boulevard. The target surface area (new and replaced hard surfaces) that would require mitigation total approximately 1.1 acres. Therefore, the detention facility would not function efficiently due to a large amount of flow through, and would provide minimal effectiveness in mitigation of flows.

### 3. Cost

This is a school project for a public entity (Tacoma School District) that has an established project budget based on a specifically defined scope of work and public bond measure. As stated above, significant size of the parcel due to the type of facility and the shared use with Metro Parks, the frontages impacted are significant. Similar to the City of Tacoma, as a public entity with limited flexibility in diverting from the approved budget for the project or in securing additional funds to accommodate project scope modifications, meeting the requirements outlined above would impose undue economic hardship on the Tacoma School District. Furthermore, the negative economic impacts of integrating additional stormwater facilities within the existing project scope would undermine the District's efforts to maintain its budget, and also, meet clearly defined project and organizational goals that support the future, quality, and capacity of its educational programs to serve the Tacoma community. Incorporating these potential modifications in the existing scope in order to meet the City's minimum requirements would also have a significant impact on the project schedule, which also would affect project costs for the district.

It is anticipated that the cost of just the stormwater improvements (without regard for the infeasibility of location or the need to relocated existing infrastructure) is on the order of magnitude of half million dollars. The requirement to relocate infrastructure could easily double that cost increasing the cost impact to 1 million dollars.

Based upon the three factors outlined above, we have provided strong arguments regarding the impracticality and hardship of meeting the minimum stormwater requirements for the required frontage improvements associated with the redevelopment of Browns Point Elementary School. Our assertions clearly describe the anticipated functional deficiencies of locating stormwater facilities in the proposed right of way; the alignment in scope with road-related redevelopment projects; and the significant adverse economic impacts on the school district that support our request for exemption from meeting the City's minimum stormwater requirements. Additionally, granting an exemption would not significantly alter the performance of the existing stormwater system.

Please contact me with any questions regarding the content of this memorandum. Thank you in advance for your time, as well as your consideration and evaluation of this request for an exemption from the Minimum Stormwater Requirements as they apply specifically to the required frontage improvements associated with the Browns Point Elementary School redevelopment project.

Sincerely,



Laurie J. Pfarr, PE, Principal/Owner  
LPD Engineering



Ben Hughes, PE, Project Manager  
LPD Engineering



1932 First Avenue, Suite 201  
Seattle, WA 98101  
p. 206.725.1211  
f. 206.973.5344  
lpdengineering.com

## Memorandum

**Date:** September 4, 2018

**To:** City of Tacoma – Planning and Development Services

**Attn:** Mieke Hopkin, P.E.  
Environmental Services – Surface Water Management

**From:** Marc J. Servizi, PE, Sr Project Manager | Laurie Pfarr, P.E., LEED AP, CESCL, Principal

**Project:** **Browns Point Elementary School**  
Work Order Permit #WO17-0093  
Site Development Permit #SDEV17-0056

**Subject:** **Request for Amendment to Stormwater Minimum Requirements Exemption Request, dated September 29, 2017**

---

This memorandum requests an Amendment to a Stormwater Minimum Requirements Exemption Request, dated September 29, 2017 for the above-mentioned project.

The City of Tacoma has directed the project to include removal and replacement of the north half of 51<sup>st</sup> Street and the east half of Brown's Point Blvd. Therefore, the following changes are requested to the original request dated September 8, 2017. There are no other changes to the request. Further, there are no required changes to words within the Decision to Grant Request, September 29, 2017.

Changes to the request are **Bold and underlined:**

### Page 1

*In summary, the required frontage improvements for both phases include:*

- Full removal and replacement of the asphalt paving for the south half **and north half of 51<sup>st</sup> Street**
- Full removal and replacement of the asphalt paving for the west half **and east half** of Browns Point Blvd

### Page 2

*The total new and replaced impervious surface associated with the frontage improvements is approximately ~~52,000~~ **80,000** square feet (~~1.19~~ **1.84** acres), of which ~~41,000~~ 69,000 SF (0.94 **1.58** acres) is considered as new and replaced pollution generating hard surface (PGHS).*

\_\_\_\_\_ End of Memorandum \_\_\_\_\_