





Bioretention Area Inspection and Maintenance Checklist

Green Infrastructure Site Location and Address: Kendall & Larchmere GI Parking Retrofit, 12795 Larchmere Boulevard, Shaker Heights OH 44120		
Date and Time: 07/16/2019 10:59am	Weather Conditions: ☀️ Sunny	Date of Last Inspection: N/A
Inspector and Title: Chris Hartman, CPESC, CESSWI, CPSWQ, Stormwater Technical Specialist, Crystal Davis, Watershed Programs Specialist, Spencer Nash, Watershed Programs Intern		
Rain in Last 48 Hours: No If yes, list amount and timing: N/A		
Site Plan or As-Built Plan Available: Yes		

Inspection Item	Images
DEWATERING	
<p>Standing water is present after 24 hours. If yes, describe sheen, color, or smell. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>	 <p>Photo 1</p> <p>-----</p> <p>-----</p>
<p>Action needed. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>	
<p>Comments: No additional comments.</p>	
INLETS	
<p>Inlets are in poor structural condition. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>	 <p>Photo 2.</p> <p>-----</p> <p>-----</p>
<p>Sediment has accumulated and/or is blocking the inlets. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>	
<p>Erosion is occurring around the inlets. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>	
<p>Action needed. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>	
<p>Comments: No additional comments.</p>	
VEGETATION	
<p>Vegetation is wilting, discolored, or dying due to disease or stress. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>	
<p>Vegetation needs to be controlled through mowing or manual removal. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>	
<p>Action needed. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>	
<p>Comments: No additional comments.</p>	
BIORETENTION MAIN INFILTRATION AREA	

Trash and debris have accumulated. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Sediment has accumulated at the surface. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Topmost layer is caked or crusted over with sediment. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Erosion is evident. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Mulch is compacted. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Sinkholes or animal borrows are present. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Action needed. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Comments: No additional comments	
SIDE SLOPES AND EMBANKMENT	
Erosion is evident. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Sinkholes or animal borrows are present. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Action needed. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Comments: No additional comments.	
OUTLETS AND OVERFLOW STRUCTURE (i.e., catch basin)	
Outlets or overflow structures in poor structural condition. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Sediment, trash or debris is blocking the outlets or overflow structure. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Erosion is occurring around the outlets or overflow structure. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Height from surface of practice to top of overflow structure is insufficient to allow for ponding during rain events. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Action needed. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	
Action needed. Note: No additional comments.	
SUMMARY Please address the following items: 1. Monitor the sediment accumulation in the northern cell inlet. Overall, cells are in good condition	

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Inspector and Title: Chris Hartman, CPESC, CESSWI, CPSWQ, Stormwater Technical Specialist, Crystal Davis, Watershed Programs Specialist, Spencer Nash, Watershed Programs Intern		
Pavement Type: Permeable Interlocking Pavers		
Pretreatment: N/A		Other, specify: N/A
Site Plan or As-Built Plan Available: Yes		

Inspection Item	Images
PAVEMENT TRANSITION AREA Non-permeable transition area at pavement edges is unstable/deteriorating <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA Action needed. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA Comments: There is some slight heaving in the northeast portion of the permeable pavers.	
DEWATERING Standing water is present after 24 hours. If yes, describe sheen, color, or smell. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA Action needed. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA Comments: No additional comments.	Photo 1. ----- -----
PAVEMENT SURFACE AND JOINTS Sediment has accumulated on pavement surface. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA Trash and debris have accumulated on pavement surface or around curbing. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA Pavement has deteriorated, cracked, settled, or raveled. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA Sediment has accumulated in the joints of PICP. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA Vegetation is growing in the joints of PICP. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA Gravel is insufficient in the joints of PICP. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA Action needed. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
	Photo 2. ----- -----

Comments: Some leaves and debris have accumulated in the northeastern portion of the permeable pavers. Recommend to applicant that this area should be clear **(Refer to photo 3).**

Wet weather inspection to be conducted by NEORS

☐ Yes ☒ No ☐ NA

SUMMARY

Please address the following items:

1. There is evidence of a small portion of pavers heaving in the northeast portion of the permeable pavers. See **photo 1** for location. Remove debris that has settled in-between the joints (Replace stone in joints as necessary).
2. Leaves and debris have accumulated in the northeastern portion of the permeable pavers. Recommend to applicant that this area should be clear **(Refer to photo 3).**



Photo 3.