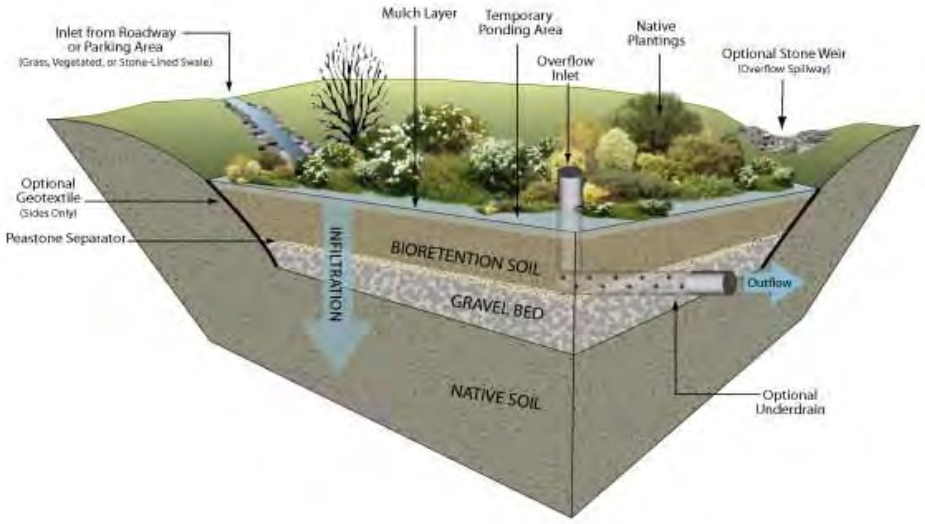
Ramsey Fine Arts Magnet
1152

Minneapolis
City of Lakes

Operations & Maintenance Plan

Bioretention / Raingarden

BMP ID		Location	Ramsey Fine Arts Magnet
Owner	Minneapolis Public Schools		
Date	xxxxx	Inspector	Metro Blooms



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Overview of Bioretention / Raingardens

Raingarden Operations:

Bioretention works by routing stormwater runoff into shallow, landscaped depressions. These landscaped depressions are designed to hold and remove many of the pollutants in a manner similar to natural ecosystems. During storms, runoff ponds above the mulch and engineered soil mix in the system. Runoff from larger storms is generally diverted past the facility to the storm drain system. The runoff remaining in the bioretention facility filters through the Engineered Soil Mix. The filtered runoff can either be designed to enhance groundwater infiltration or can be collected in an under drain and discharged per local stormwater management requirements.

Raingarden Inspection:

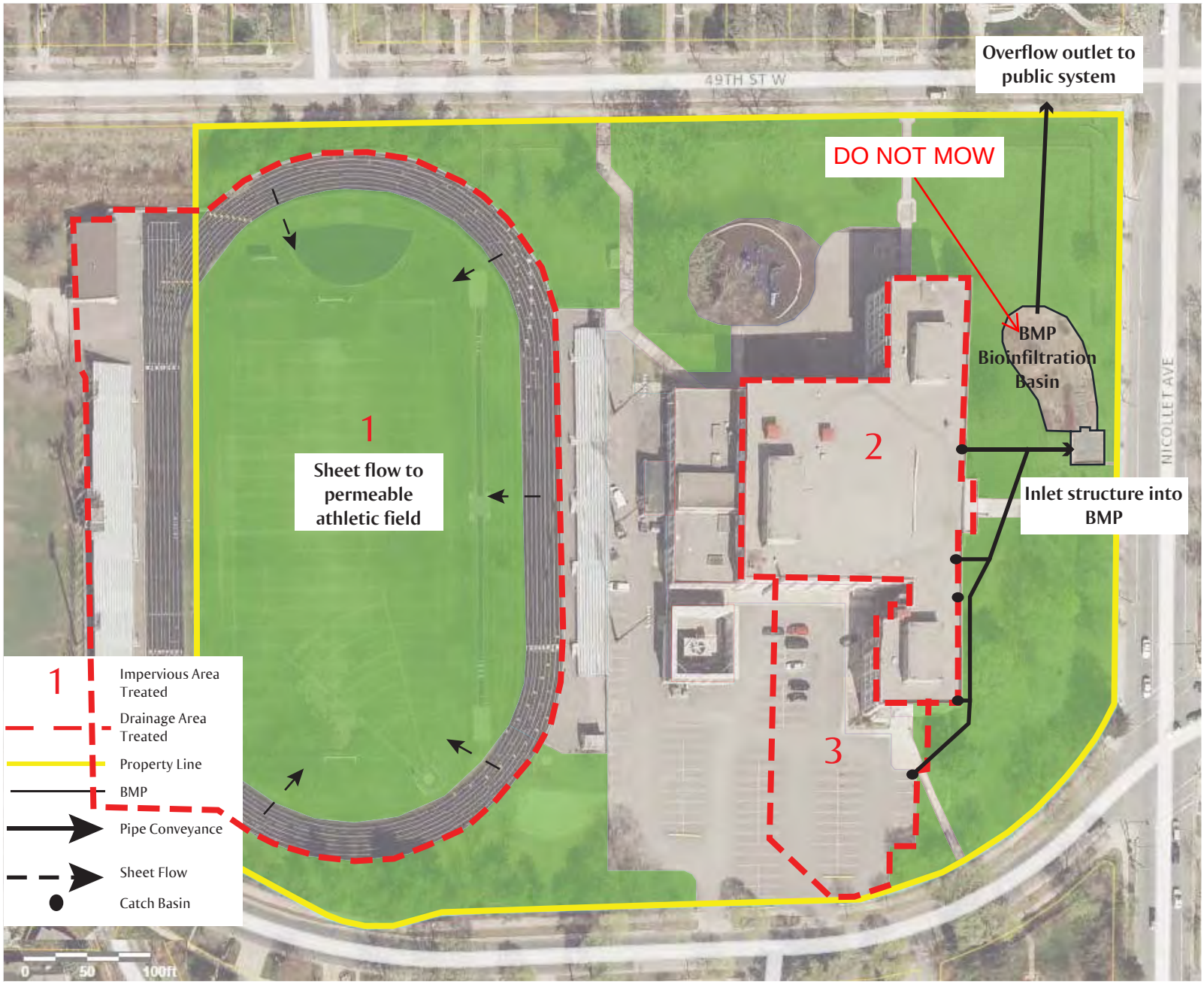
Inspection of the rain garden is required after each major rain (more than 1" of rainfall) or at least 4 times per year during the growing season (March - November).
During inspection the following should be noted on the inspection form

- *Presence of any trash, debris and soil accumulation*
- *Presence of weeds*
- *Depth of mulch material present*
- *Condition of plants (note any plants that appear to be dead or dying)*
- *Condition of rain garden overflow structure.*
- *Visible indication of rain garden clogging or overtopping.*

Raingarden Maintenance:

Routine rain garden maintenance shall be done as prescribed in the approved plan, and when an inspection reveals any of the following conditions:

- *Trash, debris and soil accumulation*
- *Soil accumulation*
- *Rain Garden Design depth is not sufficient*
- *Presence of weeds*
- *Presence of invasive plants or weeds (Canada Thistle, Garlic Mustard and any tree seedlings)*
- *Mulch depth less than 3 inches (Use only shredded hardwood mulch material)*
- *Overflow structure in need of cleaning (ex: grate covered with grass/leaves)*
- *Any damage to the inlet structure exists.*
- *Any indication that rain garden has insufficient capacity (debris on pavement surrounding the rain garden, etc.).*



TOTAL PROPERTY - 440,574 sq ft / 10.11 acre	
TOTAL IMPERVIOUS: 211,476 / 4.85 acre	IMPERVIOUS to BMP: 131,047 / 3.01 acre
building - 50,871 sq ft / 1.17 acre parking / drive - 53,388 sq ft / 1.23 acre sidewalk - 7,028 sq ft / .16 acre athletic track - 70,968 sq ft / 1.63 acre playground / bleachers - 29,220 sq ft / .67 acre	building - 41,574 sq ft / .95 acre parking / drive - 15,372 sq ft / .35 acre sidewalk - 3,133 sq ft / .07 acre athletic track - 70,968 / 1.63 acre
TOTAL PERVIOUS:	TOTAL IMPERVIOUS TREATED: 61.97%
turf / landscaping - 154,469 sq ft / 3.55 acre athletic field - 116,345 sq ft / 2.67 acre	30.98% Quality Credit Reduction

Ramsey Fine Arts Magnet

Stormwater Drainage Map

prepared by: Metro Blooms

for: Minneapolis Public Schools

Metro Blooms

City of Minneapolis Surface Waters and Sewers Stormwater Operation and Maintenance Plan

BMP ID: 1152 Justice Page Middle School		**Rain Garden/Bioretention**		
Inspection Date -- / -- / 20--		**Inspector:** Metro Blooms Design+Build		
Inspection Activity	**Observations/ Measurements**	**Maintenance**	**Maint. Required**	**Actions Required**
Inlets & Contributing Areas Inspect scupper pipes, vegetated swale inlet and contributing areas for dirt, trash, leaves, sediment buildup, erosion and cracks or damage.		Sweep or remove litter/debris and sediment. Seed, mulch, replant, sod or repair any bare or eroded areas contributing to the BMP. Determine repair work needed or who to notify if concrete or piping is damaged.	Yes No Yes No Yes No	Date Completed: / / Responsible Party:
Basin Check for sediment buildup and any erosion or bare spots in the basin.		Remove accumulated sediment and debris. Seed, plant, mulch or blanket and stabilize any bare or denuded areas.	Yes No Yes No	
Outlet Structure Inspect rock swale outlet for debris or trash and to verify if operating as designed.		Remove debris or vegetation from rock swale. Verify rock swale outlet pipe is unobstructed.	Yes No Yes No	Date Completed: / / Responsible Party:
Vegetation Visual inspection of edge, basin bottom and all landscaping adjacent to or contributing to the basin for dead or diseased plants, weeds and open areas.		Remove dead plants. Remove cat tails, invasive plants, weeds and volunteer woody vegetation. Prevent soil loss by protecting bare soils after weeding. Replace dead plants and vegetate open areas.	Yes No Yes No Yes No	
Mulch Inspect mulch condition and depth.		Add mulch whenever mulch levels are less than 3" using only a double-shredded hardwood mulch.	Yes No	
Dewatering Visual inspection for any standing water present in the basin.		*If standing water present 72-hours after storm event notify maintenance contractor. If unable to drain basin contact City of Minneapolis 612-673-2406.* Maintenance Contractor: Metro Blooms	Yes No	Date Completed: / / Responsible Party:

Basin condition in April during first trash pick up and inspection of the season. Foot traffic damage visible on east end near recess field

May - basin inundated during rain event

Basin being planted in June - prairie sage, curly styled wood sedge, purple love grass

Concrete inlet and holding bay condition in October

Pipe on east end of basin in April - fence pieces wedged inside by school kids

Pipe on east end of basin in October - fence pieces removed