

Appendix J - Preliminary Operation and Maintenance Manual for Post Construction SMPs

The NYC Department of Education will be responsible for long term operation and maintenance of post construction practices.

Contact information for responsible party is as listed below:

Name: _____

Phone Number: _____

The general “Maintenance Summary” guidelines below shall be followed for the Green Roof, Precast Concrete Retention Tank and stormwater system as a whole. A “Post-Construction Inspection and Maintenance Form” is also provided below for use documenting inspections. Inspections shall take place 48 hours after every 1.5 inch storm, or a minimum of every month.

The below Preliminary Operation and Maintenance instructions should be stored on-site in the Custodian Engineer’s office, along with a log book containing all post-construction inspections including documented “Inspection Reports”.

SMP-1: Green Roof - Maintenance Summary

Task	Description	Frequency
Watering	Watering of new plantings during the first two years of establishment	During extended dry periods of no significant precipitation within 7 days, or as needed based on plant condition
Weeding	Removal of non-native or undesirable vegetation	Quarterly at minimum during the growing season or more frequently based on ongoing inspections
Vegetation Management	Removal of detrital herbaceous vegetation from the previous growing season	Annually or as needed depending on the type of green roof vegetation
Fertilization	Use of slow-release fertilization capsules to supply plant nutrients; may only be done in the first year of establishment	As necessary based on visual observation of plant health or soil fertility testing
Outlet Cleaning	Removal of sediment from drain outlets including rooftop drains, gutters, downspouts and secondary overflows	Twice a year or as needed based on ongoing inspections
Erosion Control	Stabilization of eroded soil areas via vegetative or mechanical means	During the growing season for plant materials and as warranted for mechanical methods based on annual and ongoing inspections

SMP-2 & 5: Stormwater Detention System - Maintenance Summary

Task	Description	Frequency
Outlet Cleaning	Cleaning of gutters and downspouts	Twice a year or more frequently based on ongoing and annual inspections
Catch Basin and Storm Inlet Cleaning	Vacuum cleaning of accumulated sediment within catch basin and storm inlet sumps	Minimum annually or more frequently if debris accumulation is rapid based on ongoing and annual inspections
Sediment Removal from Tank	Vacuum cleaning of accumulated sediment from primary storage piping	As warranted based on annual inspections
Pipe Cleaning	Hydraulic cleaning of inflow and outflow piping	As warranted based on video pipe inspections conducted every three years

SMP-3 & 4: Stormwater Planters - Maintenance Summary

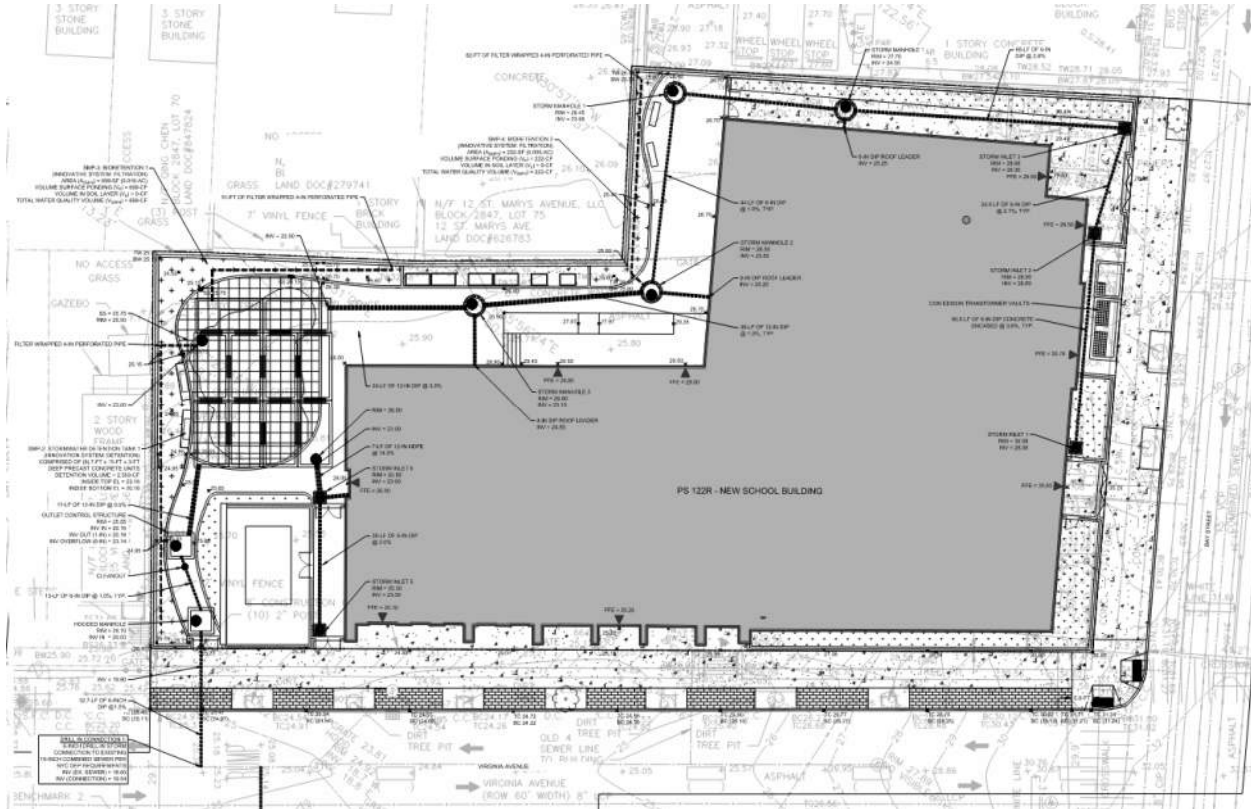
Task	Description	Frequency
Watering	Watering of new plantings during the first two years of establishment	During extended dry periods of no significant precipitation within 7 days, or as needed based on plant condition
Weeding	Removal of non-native or undesirable vegetation	Quarterly at minimum during the growing season or more frequently based on ongoing inspections
Mulching	Mulching of planting beds	Once annually for the first two growing seasons or until beds have filled in
Vegetation Management	Cutting and trimming of detrital herbaceous vegetation from the previous growing season to four to six inches above the ground	Annually in late winter or early spring prior to break in dormancy
Sediment Removal	Removal of accumulated sediment and debris from practice areas	Twice per year or more frequently if needed based on ongoing inspections (note: leaves and other natural materials can be left in place if they do not impede conveyance)
Pipe Cleaning	Hydraulic cleaning of underdrain piping	As warranted based on video pipe inspections conducted every three years
Erosion Control	Stabilization of eroded soil areas with vegetative or mechanical means	As warranted based on ongoing inspections

R122 New Building - Post-Construction Inspection and Maintenance Form

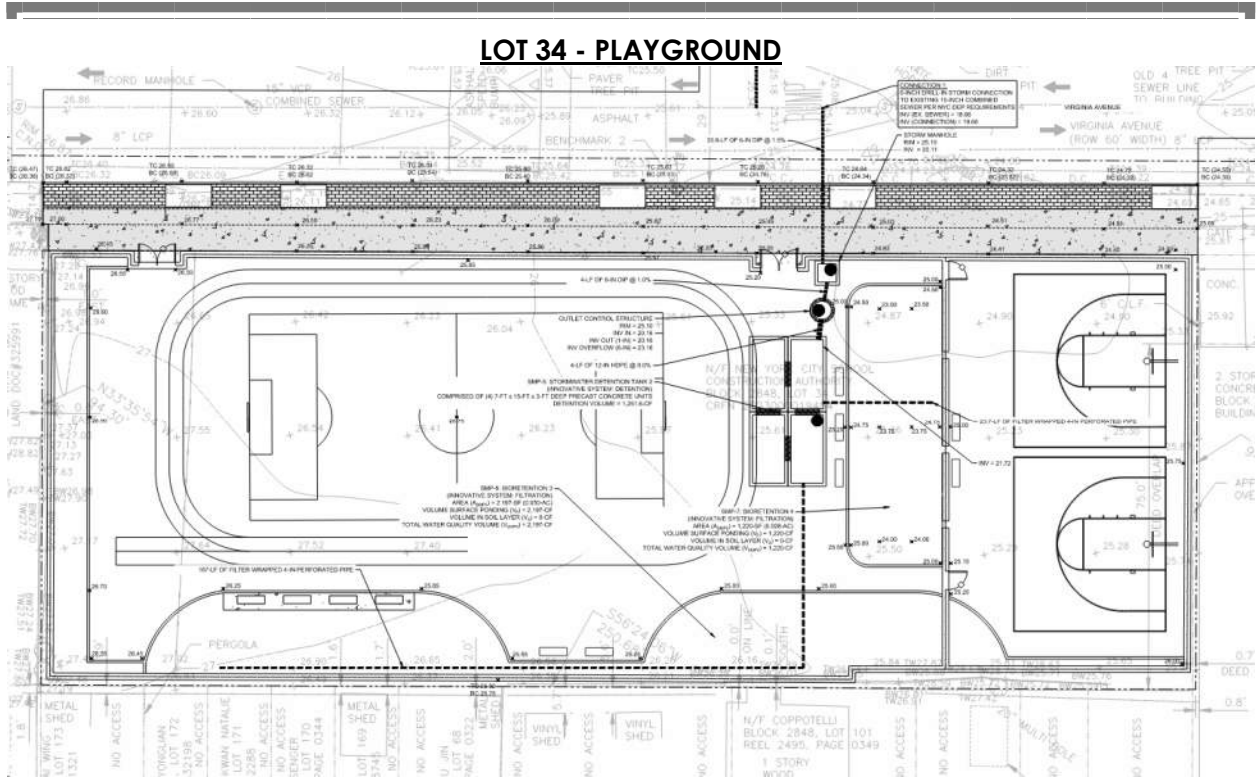
SITE PLAN/SKETCH:

(REPLACE PLAN BELOW WITH AS-BUILT SITE PLAN)

LOT 86 – NEW BUILDING



COMMENTS & CORRECTIVE MEASURES:



COMMENTS & CORRECTIVE MEASURES:

Inspector (Print name)

Date of Inspection

Post-Construction Inspection and Maintenance Form

INSPECTION CHECKLIST:

48hrs After Every 1.5-in Storm / High Wind Events

- Check green roof for any rain or wind damage and repair as required.
- Inspect detention tank access manhole to verify there is no standing water in the tank and that detention tank is emptying properly

Monthly

- Inspect detention tank access manhole to verify there is no standing water in the tank and that detention tank is emptying properly
- Inspect roof drains to verify if free of debris or if cleaning is required
- Inspect storm inlets to verify debris accumulation, and clear grates of any debris
- Inspect Green Roof to determine if removal of weeds is required

Quarterly

- Inspect stormwater planters to determine if weeding is required
- Inspect stormwater planters to determine if removal of accumulated sediment and debris from practice areas is required

Yearly

- Inspect Detention Tank Sump to verify if vacuum cleaning of accumulated sediment and debris is required
- Inspect stormwater planters to determine if removal of detrital herbaceous vegetation from the previous growing season is required
- Inspect green roof to determine if removal of detrital herbaceous vegetation from the previous growing season is required
- Inspect stormwater planters to determine if stabilization of eroded soil areas via vegetative or mechanical means is required
- Inspect green roof to determine if stabilization of eroded soil areas via vegetative or mechanical means is required

PHOTOGRAPHS:

(ADD PHOTOGRAPHS FROM EACH INSPECTION BELOW)

Appendix K – SMP Installation Inspection Checklist

SMP Installation Inspection Checklist

Project Name: R122 New Building (PS13R Annex)
Location: 11 Virginia Avenue, Staten Island, NY 10305
Date: _____
Time _____
Inspector: _____

SMP-1: GREEN ROOF

Inspection Item	Satisfactory/ Unsatisfactory	Comments
Green roof locations per drawings		
Mineral wool water retention layer per drawings and specifications		
6" minimum extensive growing media per drawings and specifications		
Sedum mat per drawings and specifications		
Green roof shall have 80% uniform, perennial vegetative cover		

Comments:

Actions to be Taken:

SMP-2: DETENTION TANK 1 AND SYSTEM

Inspection Item	Satisfactory/ Unsatisfactory	Comments
Detention tank location as per drawings		
Detention tank number of units and dimensions as per drawings		
Access manholes installed at correct elevation and as per drawings and specifications		
Inlet and outlet pipes installed at correct elevations		
Outlet control structure and associated Inlet and outlet pipes installed at correct elevations and sizes		

Comments:

Actions to be Taken:

SMP-3: STORMWATER PLANTER 1

Inspection Item	Satisfactory/ Unsatisfactory	Comments
Stormwater Planter, size, location and dimensions as per drawings		
Excavation does not compact subsoils		
Geotextile Fabric installed per drawings and specifications		
Soil layer thickness and elevations indicated on plan, material as per specifications		
Topsoil complies with specifications		
Plantings comply with specifications		

Comments:

Actions to be Taken:

SMP-4: STORMWATER PLANTER 2

Inspection Item	Satisfactory/ Unsatisfactory	Comments
Stormwater Planter, size, location and dimensions as per drawings		
Excavation does not compact subsoils		
Geotextile Fabric installed per drawings and specifications		
Soil layer thickness and elevations indicated on plan, material as per specifications		
Topsoil complies with specifications		
Plantings comply with specifications		

Comments:

Actions to be Taken:

SMP-5: DETENTION TANK 2 AND SYSTEM

Inspection Item	Satisfactory/ Unsatisfactory	Comments
Detention tank location as per drawings		
Detention tank number of units and dimensions as per drawings		
Access manholes installed at correct elevation and as per drawings and specifications		
Inlet and outlet pipes installed at correct elevations		
Outlet control structure and associated Inlet and outlet pipes installed at correct elevations and sizes		

Comments:

Actions to be Taken:
