STORMWATER OPERATION & MAINTENANCE PLAN
43 RIVER ROAD
NEWTON, MASSACHUSETTS

Long-Term Maintenance Responsibilities

Inspections should be performed by the owner and by independent individual such as the design engineer or other experienced individual in the field.

The maintenance of the Drainage System is the exclusive responsibility of the Property Owner. The actual work can be manually accomplished by the owner or subcontracted to a company that specializes in the cleaning of storm drainage facilities as part of a long-term maintenance program.

Annual reports (see the form, below) should be submitted to the Town Engineer every January for the prior year.

System Components

The major system components are:

- Roof drain system
- Driveway trench drain at the opening at River Road that discharges into a manhole structure with 4-foot sump that discharges to the infiltration system
- Infiltration system
    - a Stormtech recharge (infiltration) system of 12 StormTech 310 Recharge units encased by 14' x 34' - 1-1/2 inch stone in the side (left) yard.
    - Note: Stormwater from the front section and rear side of the house roof discharges to this system as well.

These facilities will need to be cleaned periodically as noted below. Cleaning of these structures shall be done by the property owner or via a specialty contractor with appropriate cleaning ability and or landscaping knowledge as part of a long-term maintenance program.

In addition to the facilities noted below, the property owner should maintain any roof gutters/drains on a regular basis to prevent clogging and overflow of the gutters. The following outlines the major maintenance issues associated with the project:

Roof gutters, leaders and manifold:

The pipe network collects roof drainage and discharges to one of the 12 Stormtech recharger units (Infiltration system) below grade. This pipe network should be inspected after completion of construction to assure that all debris were removed and no construction material will be cause the system to clog or restrict the outlet. Maintenance of this system is subject to continuous monitoring after storm events to determine frequency of maintenance needs. The roof gutters and leaders should be cleaned manually, after all major storms or as a minimum, and seasonally to remove accumulated solids and debris. This is required to prevent clogging and overflow of the infiltration units and potential overtopping the drain and discharging offsite. Assuming that the manifold is maintained and cleaned routinely, the roof runoff should be routed to the infiltration system.

The drainage through the gutters, leaders, and manifold should be inspected after major storm events, but no longer than a quarterly basis to note if slow to drain flow, standing water or sediment buildup is an issue. Visually inspect the gutters for signs of sediment, or leaf litter.

Monitoring should include noting flow of stormwater out of the gutter laterals during storm events to determine that the water is being collected. Initial observations should be compared to later observations to determine the loss of flow. Each leader is fitted with an overflow outlet just above grade.

Driveway and Sediment Basin (trap)

The property has a proposed sediment basin with 4-foot sump and oil/water separators at the driveway off River Road. The proposed plan shows that the trench drains will collect stormwater from the driveways and discharge to the "trap" and eventually to the infiltration system (side yard). The sediment basin (trap) is subject to monitoring during storm events in order to determine frequency of maintenance needs. During construction the basin and sumps will be monitored and cleaned regularly and when the sump is at half capacity (maximum allowed condition).

After construction, driveway sweeping shall occur after a rain event deposit sediment into the driveway, and on regular seasonal schedule (January, April, July, and October minimum) for prevention; but more often if basin is determined by observation to fill with sediment. The sump will be continued to be monitored and cleaned when the sumps reach a maximum of ½ capacity.

Monitoring and cleanouts of the trap are accessible at the basin cover. Open the cover and visually inspect the structure, use a tape measure to determine how much sediment has accumulated. Sediment should be no closer than 2-feet from the outlet pipe. Use of a clam shell shovel or vactor system are the preferred method of to clean the trap.

Infiltration System (Stormtech 310 Rechargers, System 1)

The Infiltration system (aka system 1) consists of 12- Stormtech 310 Recharge units surrounded by 1-1/2" aggregate (14' x 34' bed). The stone bed on which the Stormtech units are placed should be inspected after completion of construction to assure that all debris was removed, and no construction material will be cause the system to clog. Filter fabric is designed to separate the parent and fill soil materials from the infiltration system stone.

The Infiltration system has observation ports in the center of each Stormtech 310 Recharger unit. These ports can be unscrewed and accessed to observe if standing water or sediment remains underground and may be fitted with a vacuum system that can clean sediment on the bottom. It is not expected that these types of cleanouts will be warranted on a regular basis, but will need to be managed if the preceding prescribed maintenance is not followed regularly.

The system should be inspected after major storm events, but no longer than a quarterly basis to note if sediment buildup is an issue. Monitoring should include noting flow of stormwater out of the gutter laterals during storm events to determine that the water is surcharging the Infiltration units. Initial observations should be compared to later observations to determine the loss of infiltration capacity. Check if overflows are occurring at the closest roof leader that is attached to the gutters.

ANNUAL STORMWATER MANAGEMENT REPORT for (address) _43 River Road_, Newton, MA

Submit this report to Newton Engineering every January for the prior year.

ANNUAL INSPECTION REPORT

Inspection Firm:_____

Inspector's Name: _____ Signature: _____

Components Inspected (Dates and Comments)

- ◯ Gutters _____
- ◯ Downspouts _____
- ◯ Driveway _____
- ◯ Manifold and other pipes _____
- ◯ Catch Basin and traps _____
- ◯ Recharge system _____
- ◯ Yard/plants _____

ANNUAL SYSTEM MAINTENANCE

Maintenance Firm: _____

Maintainer's Name: _____ Signature: _____

Components Maintained (Dates and Comments)

- ◯ Gutters cleaned _____
- ◯ Downspouts flushed _____
- ◯ Driveway swept _____
- ◯ Manifold and other pipes Cleaned _____
- ◯ Catch Basin and traps cleaned _____
- ◯ Recharge system cleaned _____
- ◯ Yard/plants maintained _____

MATERIAL DISPOSAL

Material Removed: (Type) _____ (Amount) _____

(Type) _____ (Amount) _____

Disposal Location(s):_____

Other Comments:_____