

Site Operations and Maintenance Plan

For the Proposed:
14,000 SF Building

Located at:
48 Giles Avenue
North Haven, Connecticut

Prepared for Submission to:
Town of North Haven, Connecticut

January 2022

Prepared for:
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48 Giles Avenue
North Haven, Connecticut

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GENERAL OVERVIEW

This Operations and Maintenance Plan has been prepared for a proposed new building to be located at 48 Giles Avenue North Haven, CT. The existing parcel is currently developed with a 14,200 SF building and associated improvements including utilities, stormwater collection, paving, fencing, and landscaping. Proposed improvements include the construction of a 9,800 SF single story building (Phase 1) and future expansion of 4,200 SF (Phase 2), new paved parking areas, utilities, stormwater collection, treatment, and detention, as depicted on the site plans. The overall existing drainage onsite will be improved with the use of Best Management Practices (BMPs) for water quality and runoff management through treatment, detention, and infiltration.

To mitigate the increase in peak runoff caused by the proposed development, underground detention/infiltration facilities have been designed and are proposed to be located onsite. The detention/infiltration facilities attenuate the peak runoff flows up to a 100-year design storm. The intent of the onsite stormwater management systems is to mimic the pre-development drainage patterns to the maximum extent practical. The site stormwater system provides stormwater detention and water quality improvements through the use of hydrodynamic separators, underground stormwater management systems (detention chambers), catch basins with hoods, a swale, and a formalized sweeping program to treat the impervious surfaces. These measures have been designed in accordance with the *North Haven Zoning Regulations*, the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, and the *2004 Connecticut Stormwater Quality Manual*.

The following Operations and Maintenance Plan, hereby referred to as Plan, was prepared specifically for the development located in the Town of North Haven, Connecticut. The Plan was developed to satisfy the requirements of the Connecticut Department of Energy and Environmental Protection's *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*.

Purpose & Goals

The purpose of this Plan is to ensure that the stormwater management components are operated in accordance with all approvals and permits. The primary goal is to inform all property managers on how the system operates and what maintenance items are necessary to ensure the continued long-term efficiency of the overall system. The secondary goal is to provide a practical, efficient means of maintenance, planning, and record keeping, verifying permit compliance. A copy of this plan shall be kept on file with the Town of North Haven Land Use office in the project file.

Responsible Parties

The Property Owner, and other parties as listed below, will be responsible for implementing the Plan for the subject property.

Company:	Locust Realty Associates, LLC
Business Address:	48 Giles Avenue North Haven, CT

Maintenance inspections shall be performed by a qualified professional. The property owner may retain a management company to oversee the maintenance of the site. A contact name and phone number for the Facility Manager responsible to follow and adhere to this plan will be kept on file with this plan and provided to the Town of North Haven Land Use office.

Some utilities located on the site will be owned and maintained by various utility companies in accordance with their standards. The property owner may maintain the service connections and shall coordinate with the corresponding utility provider for additional information.

List of Permits & Special Conditions

The project will seek several permits, which may contain special conditions that require compliance by the property owner and maintenance contractors. These permits may include the following:

- Town of North Haven Permits –
 - Planning and Zoning Commission: CAM & Site Plan Permit
 - Building Department: Building Permit

Maintenance Logs and Checklists

The property owner will keep a record of all maintenance procedures performed, date of inspection/ cleanings, etc. Copies of inspection reports and maintenance records shall be kept on-site and be readily available if requested by local municipalities or state authorities.

Forms

The following forms will be developed for annual maintenance. Copies of the forms will be kept on-site as part of the Stormwater System Operation and Maintenance Plan.

- Annual Checklist

- Quarterly Checklist
- Monthly Checklist

Employee Training

The property owner will have an employee-training program, with annual updates, to ensure that the qualified employees charged with maintaining the buildings and grounds do so in accordance with the approved permit conditions. All sub-contractors (Vactor, landscaping, snowplowing, etc.) will be informed of requirements and responsibilities

Spill Prevention, Response and Clean-up Procedures

These procedures provide guidance for the prevention of spills of hazardous materials, and the notification, clean-up, and reporting of releases should they occur at the site. A formal plan shall be prepared and kept on site in the Facility Manager's office.

Hazardous Materials Storage

All hazardous materials, if kept on site, shall be stored high and dry in secure locked areas. A list of hazardous materials on-site should be maintained and updated as required. All hazardous products, shall be transported, stored, and used in compliance with applicable labels, regulations, and permit conditions. No incompatible materials shall be mixed or stored together. Compliance with all applicable regulations, including those relating to proper labeling, retention of MSDS sheets, compatibility requirements, containers, and housekeeping shall be the responsibility of the contractor. Drums and containers will be clearly labeled and stored with all labels visible. All flammable products will be stored away from heat and/or ignition sources. All transportation of hazardous materials shall occur in compliance with all applicable federal, state, and local regulations and permit conditions.

Equipment and Materials

The Facility Manager shall keep on-hand appropriate equipment, supplies, and materials for containment and clean-up of chemicals, in the event of a spill. These materials may include but are not limited to:

- Spill Kits for Equipment.
- Sorbents for containment and quick pickup of spilled liquids.
- Drums, barrels, temporary storage bags for containment and transportation.
- Absorbent pads, oil booms, mats, or equivalent.
- Washable, reusable rags for cleaning up small leaks.
- Sheet plastic.
- The above listed materials and dry powder and any other material for use in oil spill clean-up will be stored onsite in a secure area. All personnel will be notified of the location of materials used to contain spills.

Site Management and Spill Prevention

The following measures should be implemented to ensure the proper storage and disposal of wastes:

- Designate waste collection areas.
- Cover waste containers.
- Schedule waste collection at appropriate intervals to prevent overfilling of containers;
- Clean up any spills immediately and dispose of in accordance with applicable state and local laws.
- Maintain adequate spill prevention materials (e.g., absorbent pads, booms) on-site.
- Storage areas and waste containers should be included in the regular inspection program of the site.

Inspection and Leak Detection

Facility Manager and/or designated staff shall conduct routine inspections of equipment and facilities, and any other potential sources of hazardous releases. Equipment and facilities will be inspected on a routine basis for leaks of potential hazardous materials and for integrity of containment should where applicable.

Stormwater Washouts

If any unanticipated stormwater washouts occur on site that are not covered under general maintenance of any of the Stormwater Management Facilities listed below the facility manager shall contact the engineer of record for recommendations on corrective actions to be performed. A log of washouts and corrective actions taken, including dates, shall be included with the general maintenance logs.

STORMWATER MANAGEMENT MAINTENANCE

System Components

The stormwater management system has several components that are shown on the Grading and Drainage Plan (GD-1) and perform various functions in capturing, routing, and treating stormwater runoff.

A - Catch Basins and Manholes

Catch Basins are inlets which trap road sand and floatable debris prior to draining through the storm sewer system. The proposed catch basins (CBs) are equipped with sumps with sump depths 2' below the outlet pipe, and hoods over the outlet pipes.

The property owner is responsible for cleaning the catch basins and manholes on the site. A Connecticut Licensed hauler shall clean the sumps and dispose of removed sand legally. The road sand may be reused for winter sanding but may not be stored on-site. As part of the hauling contract, the hauler shall notify the property owner in writing where the material is being disposed.

Each catch basin shall be inspected every four months, with one inspection occurring during the month of April. Any debris occurring within one foot from the bottom of each sump shall be removed by Vacuum "Vactor" type of maintenance equipment.

During the inspection of each of the catch basin sumps, the hoods (where provided) on each of the outlet pipes shall also be observed. In the event that a hood is damaged or off the hanger, it shall be reset or repaired.

B - Hydrodynamic Separators (or approved equal)

Hydrodynamic separators are underground concrete structures which trap road sand, fine sediment, metals, oils, grease, and floatable debris that wash off the parking lots via storm sewers prior to discharge.

The hydrodynamic separator access manhole shall be opened and inspected and will be cleaned periodically during construction, and at the end of construction once the landscaped areas are fully stabilized.

For the first year of operation following construction, inspect each manhole once each month for the months of January, February, March and April, and once every four months thereafter. A graduated measuring device (stadia rod) shall be inserted into each grit chamber and measurements of any accumulations shall be recorded. Any debris, which has accumulated to within one foot of the water surface inside the grit chamber portion of each tank, shall be removed by vacuum "Vactor" type of equipment. Oils scum and floatables shall also be removed from the unit on the same schedule as the grit removal.

After the first year of operation, each manhole shall be inspected at a minimum, three times yearly with one inspection occurring in the month of April in the same manner as described above for the first season of operation. Any accumulations found to be occurring within one foot of the water surface shall be removed from the manhole and properly disposed off-site. Also, any floating material discovered during inspections shall be removed from the separator.

A detailed maintenance logbook shall be kept for each unit. Information is to include, but not be limited to, the date of inspection, record of grit depth, condition of baffles, observation of any floatable, and date of cleaning performed.

C - Underground Detention Systems and Piping

The underground detention system has been designed to collect flows from building roof and landscape areas and shall be inspected every six months in the months of April and October. Each of the inspection manholes and observation provided shall be opened and visually checked from the surface. Observation of grit inside of the detention system shall be noted and any deposits found to be 2 inches or more, as measured from the invert of pipe, shall be cleaned and removed. The underground detention system qualifies as a Confined Space under OSHA regulations, and any maintenance involving entry into the pipes should comply with OSHA Confined Space Entry Regulations. The system will be visually inspected through the manholes. If deemed necessary, the system can be TV inspected.

D – Swale

The swale located in the southwest corner of the site shall be inspected every four (4) months, with one (1) inspection occurring during the month of April. This includes the banks of the impounded water and the rip rap berm. during the inspection, any signs of erosion or degradation in water quality shall be documented and restored to existing conditions prior to erosion occurring.

Parking Lots

Parking lots, driveways and sidewalks shall be swept regularly by the property owner to clean trash and other debris. The property owner will sweep parking lots on its property in the spring to remove winter accumulations of road sand.

Landscaping

The property owner will maintain landscaped areas. Normally the landscaping maintenance will consist of pruning, mulching, planting, mowing lawns, raking leaves, etc. It is expected that all landscaping is to remain in healthy condition that is consistent with approved plans. Trees/landscaping that die must be replaced. Use of fertilizers and pesticides will be controlled and limited to minimal amounts necessary for healthy landscape maintenance.

The lawn areas, once established, will be maintained at a typical height of 2½"-3". This will allow the grass to be maintained with minimal impact from weeds and/or pests.

Pesticides will only be used as a control method when a problem has been clearly identified and other natural control methods are not successful. All pesticide applications shall be by licensed applicators, where necessary. Invasive vegetation is to be removed.

Topsoil, brush, leaves, clippings, woodchips, mulch, and other material shall be stored off site.

Snow Removal & Storage

Snow shall be shoveled and plowed from sidewalks, driveways and parking areas as soon as practical during and after winter storms and stored in snow storage areas on site where practical. No snow shall be pushed behind the snow storage areas towards downgradient areas. No sodium chloride shall be used for ice or snow control on the site. Areas downgradient of the snow removal deposition areas will be checked and maintained after the winter season by removal of any debris and sand and restored to original condition after seasonal winter conditions. Vegetation will be raked and if needed, pruned or reseeded.

Outdoor Storage

There will be no outdoor storage of hazardous chemicals, fertilizer, pesticides, or herbicides anywhere in the site.

UTILITIES

Sanitary Sewer System

All of the on-site sanitary sewer collection system will be owned and maintained by the property owner.

On-Site Collection Sewer: The property owner will annually inspect the manholes within the on-site sewer system on the property and check for debris and blockages. Any low-flow lines with accumulations will be cleaned with water-jetting.

Water System

The on-site mains and fire hydrants will be owned and maintained by the property owner. The off-site mains are owned and maintained by The South Central Connecticut Regional Water Authority. The property owner will be responsible for maintaining the domestic and fire service lines to the buildings.

Gas\Electric\Telephone\Cable TV System

The electric system will be owned and maintained up to the transformer by United Illuminating. The gas system on site will be owned and maintained by the property owner and gas will be provided by Southern Connecticut Gas. The property owner will maintain the secondary electric lines from the transformers to the buildings. The telephone system will be owned and maintained by Frontier up to the buildings.

Site Lighting

The property owner is responsible for maintaining the parking lot, driveway and building-mounted lights on the property.

CATCH BASIN / CATCH BASIN INSERT INSPECTION LOG

Name of Inspector:

Date:

Catch Basin ID	Condition (circle one)		Debris above 1' within sump? (If yes then catch basin is to be cleaned)		Date of Catch Basin Cleaning (if debris is greater than 1')		Condition of Hood (if applicable)	Comments:
	Excellent							
	Fair	Poor	Yes	No	Yes	No		
	Excellent							
	Fair	Poor	Yes	No	Yes	No		
	Excellent							
	Fair	Poor	Yes	No	Yes	No		
	Excellent							
	Fair	Poor	Yes	No	Yes	No		
	Excellent							
	Fair	Poor	Yes	No	Yes	No		
	Excellent							
	Fair	Poor	Yes	No	Yes	No		

On-site Procedures for Inspection and Maintenance of Catch Basin Inserts

- Secure traffic and pedestrian traffic with cones, barrels, etc.
- Clean surface area around each catch basin
- Remove grates and set aside
- Clean grates, remove litter and debris that may be trapped within the grate
- Remove by vacator hose the debris that has been trapped in the trough area. Dispose of in accordance with local, state and federal regulatory agency requirements. Most debris that is captured in the trough or sump area will fall into the non-hazardous waste category.
- Visually inspect and check the condition of the trough area.
- Replace grate and lockdown as needed.
- Un-secure traffic control area.
- Complete service report and submit to facility owner.

MAINTENANCE SCHEDULE

During the First Year of Operation:		
Task:	Completion Date:	Manager's Initials:
JANUARY:		
Employee Training Program with Spill Program		
*Stormwater Management Basins (Underground) & Hydrodynamic Separators		
FEBRUARY:		
* Stormwater Management Basins (Underground) & Hydrodynamic Separators		
MARCH:		
* Stormwater Management Basins (Underground) & Hydrodynamic Separators		
APRIL:		
*Catch Basins/Pipe Inlets & Outlets		
* Stormwater Management Basins (Underground) & Hydrodynamic Separators		
*Sanitary Inspection		
Shrub Fertilization		
AUGUST:		
*Catch Basin/Pipe Inlets & Outlets		
* Stormwater Management Basins (Underground) & Hydrodynamic Separators		
OCTOBER:		
* Stormwater Management Basins (Underground) & Hydrodynamic Separators		
Tree and Lawn Fertilization		
DECEMBER:		
*Catch Basin/Pipe Inlets & Outlets		
* Stormwater Management Basins (Underground)		

*NOTE: Use appropriate worksheet found in this plan to conduct the inspection.

After the First Year of Operation:			
FOR YEAR _____			
Task:		Completion Date:	Manager's Initials:
JANUARY:			
Employee Training Program with Spill Program			
APRIL:			
*Catch Basin/Pipe Inlets & Outlets			
* Stormwater Management Basins (Below Ground) & Hydrodynamic Separators			
*Sanitary Inspection			
Shrub Fertilization			
AUGUST:			
*Catch Basin/Pipe Inlets & Outlets			
OCTOBER:			
* Stormwater Management Basins (Below Ground) & Hydrodynamic Separators			
Tree and Lawn Fertilization			
DECEMBER:			
*Catch Basin/Pipe Inlets & Outlets			

*NOTE: Use appropriate worksheet found in this plan to conduct the inspection.