AGREEMENT FOR
STORM WATER SYSTEM MAINTENANCE

This Agreement is made on March 31, **2009**, by Osman Realty, LLC dba MAQ Properties, a Michigan Limited Liability Company, of 640 Pine Valley Way, Bloomfield Hills, Michigan 48302 ("Developer"), and the CITY OF ROCHESTER HILLS (the "City"), whose address is 1000 Rochester Hills Drive, Rochester Hills, Michigan 48309.

WHEREAS, Developer owns and proposes to develop the Property described in attached Exhibit A; and

WHEREAS, the proposed development of the Property will alter the natural flow of surface and storm water drainage; and

WHEREAS, Developer has proposed, and the City has approved, a storm water drainage and detention system (the "System") comprised of storm water detention and water quality treatment facilities and devices, storm sewer pipe, catch basins, and manholes, for the Property as described and depicted in the Storm Water System Plan attached as Exhibit B; and

WHEREAS, the parties will benefit from the proper operation, use and maintenance of the System and enter into this agreement to provide for the same.

THEREFORE, the parties agree:

1. **Use of the System:**

Components of the System, including any and all water conveyance, detention and water quality treatment facilities and devices, storm sewer pipe, catch basins, and manholes, shall be used solely for the purpose of conveying, detaining and treating storm and surface drainage on the property until such time as: (i) The City determines and notifies Developer or Developer's successors, grantees or assigns, in writing, that it is no longer necessary to convey, detain or treat the storm and surface drainage; and (ii) An adequate alternative for conveying, detaining and treating storm and surface drainage has been provided which is acceptable to the City and which includes the granting of any easements to the City or third parties as may be required or necessary for the alternative drainage system.

2. **Maintenance:**

A. Developer shall be responsible for the proper maintenance, repair and replacement of the System and all parts thereof as detailed in the Maintenance Plan attached as Exhibit C.

B. Proper maintenance of the System shall include, but is not limited to: (i) Removing accumulated sediment, trash and debris from the detention system and at inlet pipes; (ii) Maintaining storm sewer, structures and safety features; (iii) Controlling the effects of erosion; (iv) Inspection and cleaning of the water quality treatment devices; (v) Inspection of inlet and outlet pipes and structures for structural integrity; (vi) Inspection and cleaning of the storm sewer and catch basins upstream from the detention system; and (vii) Any other maintenance that is reasonable and necessary to facilitate and continue the proper operation and use of the System.

3. **Action by City:**

If, at any time, Developer or Developer's successors, grantees or assigns neglect or fail to properly maintain the System or any part thereof, the City may notify Developer or Developer's successors, grantees or assigns. The notice shall be in writing and shall list and describe maintenance deficiencies and demand that they be corrected within thirty (30) days.

The notice shall further specify a date and place for a hearing to be held at least fourteen (14) days after the date of the notice before City Council, or such other board or official as the City Council may designate. At the hearing, the City Council (or other designated board or official) may affirm or modify the list and description of maintenance deficiencies and, for good cause shown, may extend the time for the deficiencies to be corrected.

Thereafter, if the maintenance deficiencies are not corrected within the time allowed, the City may undertake the necessary corrective actions, and the City may maintain the System for up to one (1) year. Such maintenance of the System by the City shall not be construed to be a trespass or a taking of the Property, nor shall the City's actions vest in the public any right to enter or use the Property. Thereafter, if Developer or Developer's successors, grantees or assigns do not properly maintain the System, the City may, after providing similar written notice, schedule and hold another hearing to determine whether the City should maintain the System for another year, and subject to a similar notice, hearing and determination in subsequent years.

In the event the City determines an emergency condition caused by or relating to the System threatens the public health, safety or general welfare, the City shall have the right to immediately and without notice enter the Property and undertake appropriate corrective action.

4. **Charges:**

The City shall charge to the current owner of the Property the cost of maintenance or other corrective action undertaken by the City under this Agreement, plus a ten percent (10%) administrative fee. If not timely paid, the City may place the charges in the City's tax roll, which charges shall be a lien on the real property and shall be collectable and enforceable in the same manner general property taxes are collected and enforced.

5. **Notice:**

Any notices required under this Agreement shall be sent by certified mail to the address for each party set forth below, or to such other addresses as such party may notify the other parties in writing:

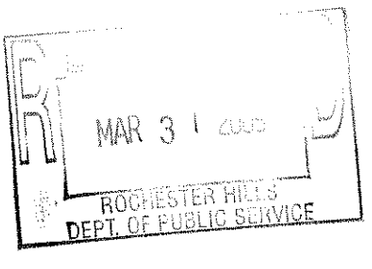
To Osman Realty, LLC dba MAQ Properties:

640 Pine Valley Way
Bloomfield Hills, Michigan 48302
Attention: Farhat Osman

John Staiman
DPS
3-25-09

To the City:

City Clerk
City of Rochester Hills
1000 Rochester Hills Drive
Rochester Hills, Michigan 48309



6. **Successors and Assigns:**

This Agreement shall bind and inure to the benefit of the parties and their respective successors, grantees and assigns. The benefits, burdens, rights, obligations and responsibilities hereunder shall run with the land and shall bind all current and future owners of the Property and any divisions thereof.

7. **Recording of Agreement:**

This Agreement shall be recorded at the Oakland County Register of Deeds.

OSMAN REALTY, LLC dba MAQ PROPERTIES

By: F. Osman
Farhat Osman
Its: Member

CITY OF ROCHESTER HILLS

By: _____
Bryan K. Barnett, Mayor

By: _____
Jane Leslie, Clerk

STATE OF MICHIGAN
COUNTY OF _____

This Agreement was acknowledged before me on March 31, **2009**, by Farhat Osman, Member of Osman Realty, LLC dba MAQ Properties, a Michigan Limited Liability Company.

Josy A Foisy
JOSY A FOISY
Notary Public, State of Michigan
County of Oakland
My commission expires 09/23/2012
Acting in the county of Oakland

_____, Notary Public
_____ County, Michigan
My commission expires: _____

STATE OF MICHIGAN
COUNTY OF OAKLAND

This Agreement was acknowledged before me on _____, **2009**, by Bryan Barnett, Mayor, and Jane Leslie, Clerk, of the City of Rochester Hills, on behalf of the City.

_____, Notary Public
_____ County, Michigan
My commission expires: _____

Drafted By:
Nathan P. Robinson, P.E.
Horizon Engineering LLC
P.O. Box 182158
Shelby Township, Michigan 48318

When Recorded Return To:
City Clerk
City of Rochester Hills
1000 Rochester Hills Drive
Rochester Hills, Michigan 48309

RECEIVED
MAR 31 2009
ROCHESTER HILLS
DEPT. OF PUBLIC SERVICE

EXHIBIT 'A'

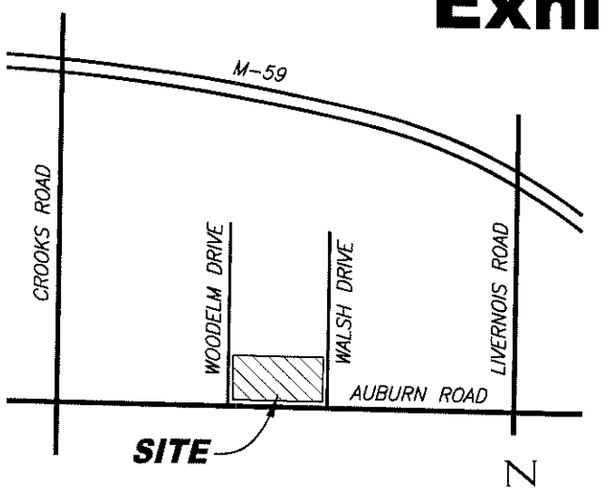
PROPERTY DESCRIPTION:

BLOCKS 9 AND 10, ALSO LOTS 1 AND 8 OF BLOCK 87 OF "SUPERVISOR'S REPLAT OF GLIDEWELL SUBDIVISION", A SUBDIVISION OF PART OF THE S.E. 1/4 OF SECTION 28, TOWN 3 NORTH, RANGE 11 EAST, AVON TONWSHIP (NOW CITY OF ROCHESTER HILLS), OAKLAND COUNTY, MICHIGAN, AS RECORDED IN LIBER 52 OF PLATS, PAGE 28, OAKLAND COUNTY RECORDS. CONTAINING A NET AREA OF 0.97 ACRES MORE OR LESS.

PARCEL NO.: 70-15-28-476-067

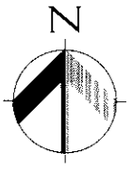
ADDRESS: 1220 AUBURN ROAD

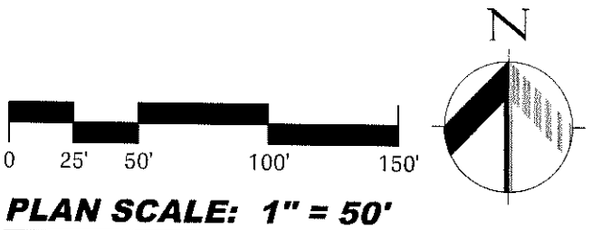
Exhibit 'B'



LOCATION MAP

(NO SCALE)



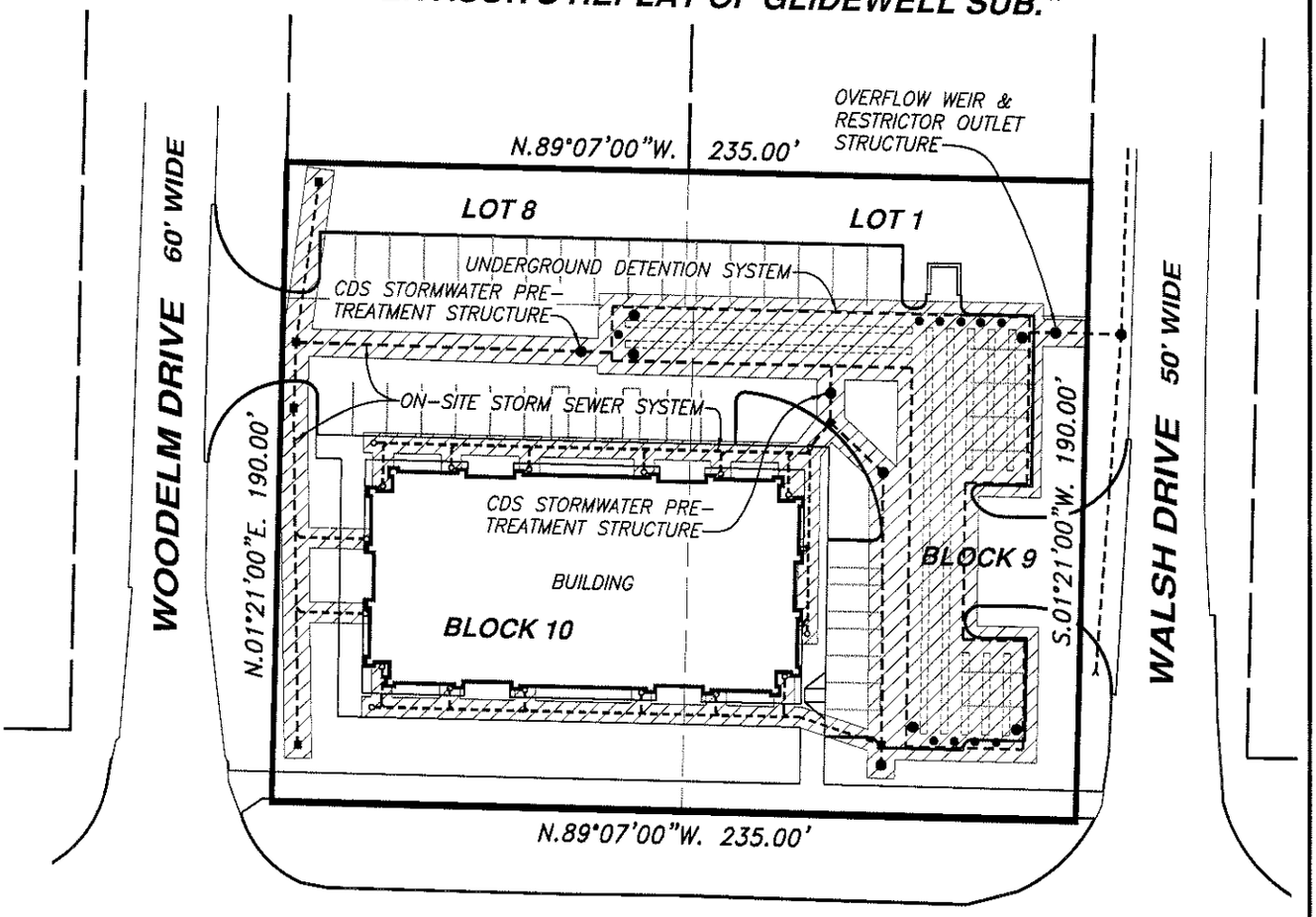


PLAN SCALE: 1" = 50'

LEGEND

OSMAN REALTY LLC STORM SEWER SYSTEM MAINTENANCE RESPONSIBILITY

"SUPERVISOR'S REPLAT OF GLIDEWELL SUB."



SOUTH LINE OF SECTION 28, 2307.12' TOTAL

S. 1/4 COR. SECTION 28 T.3N., R.11E.

W. AUBURN ROAD
WIDTH VARIES

S.E. CORNER SECTION 28 T.3N., R.11E.

HORIZON
ENGINEERING LLC
CIVIL ENGINEERING, SITE PLANNING & LAND DEVELOPMENT CONSULTING
P.O. Box 182158, Shelby Township, Michigan 48318
Phone 586.453.8097 Fax 586.580.0053

PROJECT:
Storm Water System Plan
PARCEL 70-15-28-476-067
#1220 AUBURN ROAD
PART OF THE S.E. 1/4 OF SECTION 28, T.3N., R.11E., CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MI

CLIENT:
FARHAT OSMAN
OSMAN REALTY LLC
640 PINE VALLEY WAY
BLOOMFIELD HILLS, MI 48303
(248) 884-8890

JOB NO: 09-016
DATE: 3-24-09
DRAWN BY: NPR
CHECKED BY: NPR

EXHIBIT 'C'

MAINTENANCE PLAN

For the Storm Water Drainage and Detention System, located at the

AUBURN MEDICAL OFFICE BUILDING

in the

CITY OF ROCHESTER HILLS, MICHIGAN

Property Description:

Blocks 9 and 10, also Lots 1 and 8 of Block 87 of "Supervisor's Replat of Glidewell Subdivision", a subdivision of part of the S.E. 1/4 of Section 28, Town 3 North, Range 11 East, Avon Township (now City of Rochester Hills), Oakland County, Michigan, as recorded in Liber 52 of Plats, Page 28, Oakland County Records. Containing a net area of 0.97 acres more or less.

Parcel No.: 70-15-28-476-067
Address: 1220 Auburn Road

Property Owner:

Osman Realty, LLC dba MAQ Properties
640 Pine Valley Way
Bloomfield Hills, Michigan 48302
Phone: (248) 884-8890
Contact: Dr. Farhat Osman

Prepared By:

Horizon Engineering LLC
P.O. Box 182158
Shelby Township, Michigan 48318
Phone: (586) 453-8097
Contact: Nathan P. Robinson, P.E.

OPERATIONS AND MAINTENANCE MANUAL

INTRODUCTION:

In order to comply with local regulations and best management practices ("BMP's"), this manual has been prepared to serve as a minimum performance standard for the operation and maintenance of the on-site storm water management system, including the underground detention system, underground storm sewer pipe system, outlet control structure and water quality pre-treatment devices as incorporated into and detailed on the approved Construction Plans as prepared by Land Engineering Services, Inc. This manual should be retained intact and reviewed in its entirety by all parties responsible for the operations and maintenance of the on-site BMP's.

STORM WATER SYSTEM PLAN:

The Storm Water System Plan can be found as Exhibit 'B' of the Storm Water System Maintenance Agreement. The Plan provides a basic representation of all components of the storm water system. This system is subject to the long-term operation and maintenance responsibilities detailed in this Manual. The system includes:

- Underground Storm Sewer Pipes.
- Storm Sewer Structures (manholes, catch basins, inlets, risers, cleanouts, overflow weir and restrictor outlet control structure, etc.).
- Underground Detention Pipe System.
- Water Quality Treatment Devices ("CDS units").

INSPECTIONS:

The frequency of inspections outlined in this Manual should be considered the minimum, if no events warrant additional inspections. The frequency of inspections should be reviewed and adjusted accordingly over time as specific system functions become more familiar, and the rate at which certain maintenance operations need to be performed is better known. Maintenance Inspection Checklists are provided for each of the BMP's in this system. Inspections should be performed by personnel responsible for maintenance and may need to be certified for confined space entry, depending on the component being inspected. Operation of the storm water system may need to be inspected and/or reviewed by a licensed professional or other qualified individual familiar with its operation.

Records of all routine inspections and any work performed on the system for maintenance, repair or replacement should be kept by the owner for a minimum of ten (10) years. A copy of all records should be provided to the City of Rochester Hills Department of Public Services. The records should include this Manual, all inspection sheets, approved Construction Plans and as-built documentation, a maintenance log of work performed to the system and contact information for the system inspector, certified storm water operator, contractor, licensed professional or other qualified individual(s) involved with the system.

STORM WATER SYSTEM MAINTENANCE:

Regular inspection and maintenance of the storm water system and BMP's is essential to ensure their proper function. Failure to maintain these systems is not only a violation of local regulations, but can also cause adverse impacts to surrounding properties, such as an increase in surface water pollution and downstream flooding.

Maintenance is the responsibility of the property owner. Failure to properly maintain the system is cause for the local municipality to step in and perform all necessary work at the owner's expense. Refer to the Agreement for Storm Water System Maintenance for additional detail.

General Maintenance Items:

Trash and Debris Removal:
Removal of trash and debris from all areas of the property should be performed on a weekly basis. Removal of these items is necessary for aesthetic purposes, as well as to prevent being washed into the storm water system during rainfall events. All trash and debris should be disposed of and/or recycled according to applicable governing regulations.

Storm Water System Maintenance Items:

Each of the components of the storm water system shall be maintained as indicated below.

Storm Sewer Pipes, Structures, and Overflow Weir and Restrictor Outlet Structure:
Catch basins, inlets, manholes and sewer pipes should be inspected to check for sediment accumulation, clogging, debris, vegetation, etc. Special attention should also be directed to the restrictor pipe at the bottom of the overflow weir in the outlet structure. All structures and sewers should also be observed during wet weather conditions to ensure their proper operation. Accumulated sediment and debris should be removed on an annual basis or as needed based on observed conditions. Structural repairs or maintenance should occur as needed based on observed conditions such as cracks, spalling, joint failure, leakage, and misalignment or settlement of structures. A licensed professional or other qualified individual should be retained if problems are thought to exist. An inspection checklist is included in this Manual.

Storm Water Pre-Treatment Devices (CDS units):
Refer to the "Operations and Maintenance Guidelines for CDS Units" from the manufacturer, included in this Manual, for all inspection and maintenance requirements for the CDS units.

Underground Detention System:
The underground detention system consists of a network of underground pipes for detaining storm water and also includes two inlet pipes, an outlet pipe, and several risers and cleanouts. The underground detention's structural elements should be, at a minimum, inspected annually. Several of the structural elements may need more frequent inspections. Refer to the inspection checklist for more detail. The inspections should include the following:

- The inside of the structure should be inspected for cracks, spalling, joint failure or leaks a minimum of once per year. If signs of cracks, leaks, misalignment, sagging or settlement of the structure or relay pipe are observed, a licensed professional or other qualified individual should be retained.
- The orifices should be inspected and relay pipes should be inspected for debris or sediment accumulation after every major storm event. Any sediment or debris removal should be removed to prevent blockage.
- The outlet pipe and storage pipes should be visually inspected for sagging and alignment a minimum of once per year.

The ground surface should be inspected a minimum of once per year. Visual inspection should be done in areas where any underground storage devices are located. If there are any signs of sink holes, a licensed professional or other qualified individual should be retained to determine the probable cause and recommended remediation.

Sediment shall be removed from all points of inlet to and outlet from the detention field and detention pipes by means of a vacuum truck and power jetting when it is determined by inspection to have significant sediment deposits. The minimum criteria for sediment removal are:

- When the sump of the restricted catch basin reaches 6 inches, or
- Any other sump is 75% full, or
- When sediment in the pipes reaches 3 inches, or
- As determined by the certified storm water operator, licensed professional, or other qualified individual.

An inspection checklist is included in this Manual.

SUPPLEMENTALS:

The following pages include an inspection checklist for the storm water system components listed above, as well as the manufacturer's manual for the CDS unit.

Inspection Checklist for Storm Water System.

Date: _____ Time: _____ Weather Conditions: _____

Inspector's Name: _____

MAINTENANCE ACTIVITIES (monitoring/inspection)	SYSTEM COMPONENTS: Catch Basins, Inlets, Cleanouts, Risers, and Manholes	Storm Sewer Pipes	Overflow Weir & Restrictor Outlet Structure	Underground Detention System	FREQUENCY	COMMENTS
Inspect for sediment accumulation	X	X	X	X	Annually	
Inspect for floatables, vegetation, debris	X	X	X	X	Annually and after major rainfall	
Inspect all components during wet weather conditions and compare to as-built plans	X	X	X	X	Annually	
Inspect inside of structures and pipes for cracks, spalling, joint failure, settlement, sagging, misalignment and leaks.	X	X	X	X *	Annually (*every 6 months for first year)	
Inspect ground surface for sink holes				X	Annually	
Monitor maintenance accessibility	X	X	X	X	Annually	
PREVENTATIVE MAINTENANCE						
Remove accumulated sediment	X	X	X	X	Annually or as needed	
Remove floatables, vegetation, debris	X	X	X	X	Annually or as needed	
REMEDIAL ACTIONS						
Structure repairs	X	X	X	X	As needed	
Make adjustments/repairs to ensure proper functioning	X	X	X	X	As needed	

SUMMARY:

Inspector's Comments: _____

_____

Recommended Actions: _____

_____

Dates any maintenance or repairs must be completed by: _____

OPERATIONS AND MAINTENANCE GUIDELINES FOR CDS UNITS

(Continuous Deflective Separation Unit)

INTRODUCTION

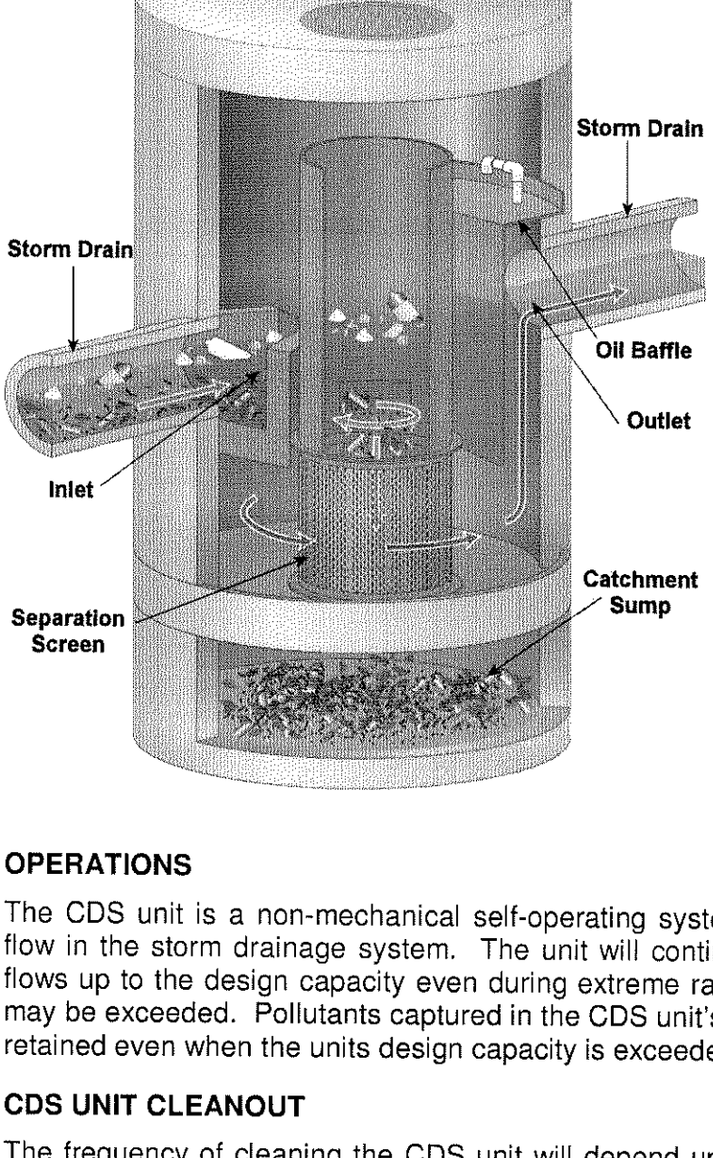
The CDS unit is an important and effective component of your storm water management program and proper operation and maintenance of the unit are essential to demonstrate your compliance with local, state and federal water pollution control requirements.

The CDS technology features a patented non-blocking, indirect screening technique developed in Australia to treat water runoff. The unit is highly effective in the capture of suspended solids, fine sands and larger particles. Because of its non-blocking screening capacity, the CDS unit is un-matched in its ability to capture and retain gross pollutants such as trash and debris. In short, CDS units capture a very wide range of organic and in-organic solids and pollutants that typically result in tons of captured solids each year such as: Total suspended solids (TSS) and other sedimentary materials, oil and greases, trash, and other debris (including floatables, neutrally buoyant, and negatively buoyant debris). These pollutants will be captured even under very high flow rate conditions.

CDS units are equipped with conventional oil baffles to capture and retain oil and grease. Laboratory evaluations show that the CDS units are capable of capturing up to 70% of the free oil and grease from storm water. CDS units can also accommodate the addition of oil sorbents within their separation chambers. The addition of the oil sorbents can ensure the permanent removal of 80% to 90% of the free oil and grease from the storm water runoff.

INSPECTION AND CLEANOUT OVERVIEW

Once pollutants are captured in CDS units, they will be retained until clean out. Floatable and neutrally buoyant contaminants are held within the separation chamber while negatively buoyant debris is stored in the sump. Frequency of cleanout depends on the nature of the drainage basin. Because of the high efficiency of pollutant removal, drainage basins discharging large amounts of pollutants will require more frequent cleanouts. Maintenance personnel may expect that floatable materials will typically require removal up to twice a year. Settled solids should be cleaned out at least one time per year.



The visual inspection should ascertain that the unit is functioning properly and that there are no blockages or damage to the inlet, separation chamber or separation screen. The quantities of captured pollutants within the separation chamber and solids storage sump should be assessed.

The amount of solids in the sump may be estimated using a calibrated measuring rod or tape. If floatables accumulate more rapidly than the settleable solids, the floatables should be removed with a vacuum or skimming net.

During the initial rainfall season, the unit should be visually inspected once every 30 days. Floatable materials should be removed before the layer exceeds 12-inches thick. Settled solids should be removed when the sump is 75% full.

CDS cleanout procedures entail opening the access to the screening chamber / sump and removing the trapped pollutants. Visual verification that the cleanout is complete by the equipment operator is easily done due to the open nature of the CDS unit.

OPERATIONS

The CDS unit is a non-mechanical self-operating system and will function any time there is flow in the storm drainage system. The unit will continue to effectively capture pollutants in flows up to the design capacity even during extreme rainfall events when the design capacity may be exceeded. Pollutants captured in the CDS unit's separation chamber and sump will be retained even when the units design capacity is exceeded.

CDS UNIT CLEANOUT

The frequency of cleaning the CDS unit will depend upon the generation of trash and debris and sediments in your application. Cleanout and preventive maintenance schedules will be determined based on operating experience unless precise pollutant loadings have been determined. The unit should be periodically inspected to determine the amount of accumulated pollutants and to ensure that the cleanout frequency is adequate to handle the predicted pollutant load being processed by the CDS unit. The recommended cleanout of solids within the CDS unit's sump should occur at 75% of the sump capacity. However, the sump may be completely full with no impact to the CDS unit's performance.

Access to the CDS unit is typically achieved through two manhole access covers – one allows inspection and cleanout of the separation chamber (screen/cylinder) & sump and another

allows inspection and cleanout of sediment captured and retained behind the screen. The PSW & PSWC off-line models have an additional access cover over the weir of the diversion vault. For units possessing a sizable depth below grade (depth to pipe), a single manhole access point would allow both sump cleanout and access behind the screen.

CDS Technologies Recommends One of The Following:

NEW INSTALLATIONS – Check the condition of the unit after every runoff event for the first 30 days after installation. The visual inspection should ascertain that the unit is functioning properly (no blockages or obstructions to inlet and/or separation screen), measuring the amount of solid materials that have accumulated in the sump, the amount of fine sediment accumulated behind the screen, and determining the amount of floating trash and debris in the separation chamber. This can be done with a calibrated "dip stick" so that the depth of deposition can be tracked. Refer to the "Cleanout Schematic" **(Appendix B)** for allowable deposition depths and critical distances. Schedules for inspections and cleanout should be based on storm events and pollutant accumulation.

ONGOING OPERATION – Prior to the onset of rain season visual inspection should be done annually. The floatables should be removed and the sump cleaned when the sump is 75-85% full. If floatables accumulate more rapidly than the settleable solids, the floatables should be removed using a vactor truck or dip net before the layer thickness exceeds one foot.

Cleanout of the CDS unit at the end of a rainfall season is recommended because of the nature of pollutants collected and the potential for odor generation from the decomposition of material collected and retained. This end of season cleanout will assist in preventing the discharge of pore water from the CDS® unit during summer months.

USE OF SORBENTS – It should be emphasized that the addition of sorbents is not a requirement for CDS units to effectively capture oil and grease from storm water runoff. The CDS unit separation chamber effectively captures free oil and grease and CDS units are also equipped with a conventional oil baffle for the capture of gross quantities. However, the addition of sorbents is a unique capability of CDS units that enables enhanced oil and grease capture efficiencies beyond that obtainable by conventional oil baffle systems as well as permanent retention of captured oil and grease in solid form that prevents emulsification and conveyance.

Under normal operations, CDS units will provide effluent concentrations of oil and grease that are less than 15 parts per million (ppm) for all dry weather spills where the volume is less than or equal to the spill capture volume of the CDS unit. During wet weather flows, the oil baffle system can be expected to remove between 40 and 70% of the free oil and grease from the storm water runoff.

CDS Technologies only recommends the addition of sorbents to the separation chamber if there are specific land use activities in the catchment watershed that could produce exceptionally large concentrations of oil and grease in the runoff, or for large amounts that may be subjected to extended periods of inattention. If site evaluations merit an increased control of free oil and grease then oil sorbents can be added to the CDS unit to thoroughly address these particular pollutants of concern.

Recommended Oil Sorbents

Rubberizer® Particulate 8-4 mesh or OARS™ Particulate for Filtration, HPT4100 or equal. Rubberizer® is supplied by Haz-Mat Response Technologies, Inc. 4626 Santa Fe Street, San Diego, CA 92109 (800) 542-3036. OARS™ is supplied by AbTech Industries, 4110 N. Scottsdale Road, Suite 235, Scottsdale, AZ 85251 (800) 545-8999.

The amount of sorbent to be added to the CDS separation chamber can be determined if sufficient information is known about the concentration of oil and grease in the runoff.

Frequently the actual concentrations of oil and grease are too variable and the amount to be added and frequency of cleaning will be determined by periodic observation of the sorbent. As an initial application, CDS recommends that approximately 4 to 8 pounds of sorbent material be added to the separation chamber of the CDS units per acre of parking lot or road surface per year. Typically this amount of sorbent results in a ½ inch to one (1") inch depth of sorbent material on the liquid surface of the separation chamber. The oil and grease loading of the sorbent material should be observed after major storm events. Oil Sorbent material may also be furnished in pillow or boom configurations.

The sorbent material should be replaced when it is fully discolored by skimming the sorbent from the surface. The sorbent may require disposal as a special or hazardous waste, but will depend on local and state regulatory requirements.

CLEANOUT AND DISPOSAL

A vactor truck is recommended for cleanout of the CDS unit and can be easily accomplished in less than 30-40 minutes for most installations. Standard vactor operations should be employed in the cleanout of the CDS unit. Disposal of material from the CDS unit should be in accordance with the local municipality's requirements. Disposal of the decant material to a POTW is recommended. Field decanting to the storm drainage system is not recommended. Solids can be disposed of in a similar fashion as those materials collected from street sweeping operations and catch-basin cleanouts.

MAINTENANCE

The CDS unit should typically be pumped down once a year and a thorough inspection of the separation chamber (inlet/cylinder and separation screen) and oil baffle performed. The unit's internal components should not show any signs of damage or any loosening of the bolts used to fasten the various components to the manhole structure and to each other. Ideally, the screen should be power washed during the maintenance. If any of the internal components are damaged or if any fasteners appear to be damaged or missing, please contact CONTECH Stormwater Solutions, Inc. to make arrangements to have the damaged items repaired or replaced:

CONTECH Stormwater Solutions, Inc.
Phone, Toll Free: (800) 548-4667 ex 157
Direct (707) 987-8500
Fax: (800) 561-1271

The screen assembly is fabricated from Type 316 stainless steel and fastened with Type 316 stainless steel fasteners that are easily removed and/or replaced with conventional hand tools. The damaged screen assembly should be replaced with the new screen assembly placed in the same orientation as the one that was removed.

CONFINED SPACE

The CDS unit is a confined space environment and only properly trained personnel possessing the necessary safety equipment should enter the unit to perform particular maintenance and/or inspection activities beyond normal procedure. Inspections of the internal components can, in most cases, be accomplished by observations from the ground surface.

VECTOR CONTROL

Most CDS units do not readily facilitate vector infestation. However, for CDS units that may experience extended periods of non-operation (stagnant flow conditions for more than approximately one week) there may be the potential for vector infestation. In the event that these conditions exist, the CDS unit may be designed to minimize potential vector habitation through the use of physical barriers (such as seals, plugs and/or netting) to seal out potential vectors. The CDS unit may also be configured to allow drain-down under favorable soil conditions where infiltration of storm water runoff is permissible. For standard CDS units that show evidence of mosquito infestation, the application of larvicide is one control strategy that is recommended. Typical larvicide applications are as follows:

SOLID B.t.i. LARVICIDE: ½ to 1 briquet (typically treats 50-100 sq. ft.) one time per month (30-days) or as directed by manufacturer.

SOLID METHOPRENE LARVICIDE (not recommended for some locations): ½ to 1 briquet (typically treats 50-100 sq. ft.) one time per month (30-days) to once every 4-½ to 5-months (150-days) or as directed by manufacturer.

RECORDS OF OPERATION AND MAINTENANCE

CDS Technologies recommends that the owner maintain annual records of the operation and maintenance of the CDS unit to document the effective maintenance of this important component of your storm water management program. The attached **Annual Record of Operations and Maintenance** form (see **Appendix A**) is suggested and should be retained for a minimum period of three years.

APPENDIX A

CDS UNIT RECORD OF

OPERATIONS & MAINTENANCE

CDS UNIT RECORD OF
OPERATION & MAINTENANCE

OWNER _____
ADDRESS _____
OWNER REPRESENTATIVE _____ **PHONE** _____

CDS INSTALLATION:

MODEL DESIGNATION _____ DATE _____
SITE LOCATION _____
DEPTH FROM COVER TO BOTTOM OF SUMP (SUMP INVERT) _____
VOLUME OF SUMP _____ CU YD VOLUME/INCH DEPTH _____ CU FT
VOLUME/FOOT DEPTH _____ CU YD

INSPECTIONS:

DATE/INSPECTOR	SCREEN/INLET INTEGRITY	FLOATABLES DEPTH	DEPTH TO SEDIMENT (inches)	SEDIMENT VOLUME* (CUYDS)	SORBENT DISCOLORATION

***Calculate Sediment Volume = (Depth to Sump Invert – Depth to Sediment)*(Volume/inch)**

OBSERVATIONS OF FUNCTION: _____

_____

_____

_____

CLEANOUT:

DATE	VOLUME FLOATABLES	VOLUME SEDIMENTS	METHOD OF DISPOSAL OF FLOATABLES, SEDIMENTS, DECANT AND SORBENTS

OBSERVATIONS:_____

_____

_____

_____

SCREEN MAINTENANCE:

DATE OF POWER WASHING, INSPECTION AND OBSERVATIONS:

_____

CERTIFICATION:_____TITLE:_____ DATE:_____

APPENDIX B

CDS UNIT

INSPECTION CHECKLIST

Date_____

INSPECTION CHECKLIST

COMPLETED

1. During the initial rainfall season, visually inspect and check condition of unit once every 30 days (as needed, typically once a year thereafter) ☐
2. Ascertain that the unit is functioning properly (no blockages or obstructions to inlet and/or separation screen) ☐
3. Measure amount of solid materials that have accumulated in the sump (Unit should be cleaned when the sump is 75-85% full) ☐
4. Measure amount of fine sediment accumulated behind the screen ☐
5. Measure amount of floating trash and debris in the separation chamber ☐

MAINTENANCE CHECKLIST

1. Inspect unit at the beginning of rainfall season and maintain at the end of the rainfall season ☐
2. Pump down unit (at least once a year) and thoroughly inspect separation chamber, separation screen and oil baffle ☐
3. No visible signs of damage or loosening of bolts to internal components observed * ☐

- If there is any damage to the internal components or if any fasteners are damaged or missing please contact CONTECH Stormwater Solutions,Inc.
  11835 NE Glenn Widing Drive
  Portland, OR. 97220
  Toll Free (800)548.4667 ext. 157