THE TOWN OF FARMINGTON

INCORPORATED 1645

TOWN HALL
1 MONTEITH DRIVE
FARMINGTON, CONNECTICUT 06032-1053

INFORMATION (860) 675-2300
FAX (860) 675-7140
"TOWN TALK" (860) 675-2301

January 11, 2006

Stormwater Permit Coordinator
Bureau of Water Management
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

RE: Town of Farmington
Municipal Storm Sewers

Sir or Madame:

With this letter we are transmitting the 2004 Annual Report required by subsection (i)(2) of Section 6 of the *General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit)*. We have included an Amended Part B Registration Form as part of the report. The Amended Part B Registration effectively updates the data included in Part VIB of the Part B Registration Form officially filed on July 8, 2004. However, you should note that Part I of the Part B Registration Form has also been amended to document that John H. McGrane is no longer the primary contact for departmental correspondence and inquires. We sent the municipal plan review fee in the amount of $187.50 (check#220218) as required by subsection (i)(2)(i) of Section 6 of the *MS4 General Permit* on January 6. 2006.

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute.

Sincerely,

Russell M. Arnold, Jr., P.E.
Director of Public Works/Town Engineer

pc Salvatore A. Palaia, P.E., LEA

enclosures

2005 ANNUAL REPORT

Municipal Separate Storm Sewer System
Farmington, Connecticut

December 29, 2005

Prepared for

TOWN OF FARMINGTON
1 Monteith Drive
Farmington, Connecticut 06032

Prepared by

LOUREIRO ENGINEERING ASSOCIATES, INC.
100 Northwest Drive
Plainville, Connecticut, 06062

An Employee Owned Company

Comm. No. 28FA406.003

Table of Contents

1. PURPOSE AND SCOPE

This Annual Report is required by subsection (i)(2) of Section 6 of the *General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit)*. The *MS4 General Permit* was issued by the Department of Environmental Protection (DEP) on January 9, 2004 and it is applicable to storm sewer facilities owned or operated by the Town of Farmington. The municipal storm sewer facilities owned by the Town of Farmington were registered by the filing of Part A and Part B of the required registration forms. This report is the vehicle by which the Town of Farmington is required to annually report to the DEP Stormwater Permit Coordinator on the status of compliance with the *MS4 General Permit* and to submit the monitoring data collected and analyzed during the year. Much of the information that must be included in the annual report is being provided by updating the Part B registration form to reflect the current status of the program implementation, especially with respect to the list of Best Management Practices (BMPs) enumerated in Part V of the original Part B registration form. The updated Part B registration form can be found in Attachment A. The data in the updated Part B is supplemented by narrative text in Section 2 of this report. The monitoring data can be found in Attachment B, and mapping of the locations where the samples that were analyzed were collected can be found in Attachment C. The certification required by subsection (e) of Section 7 of the *MS4 General Permit* is presented in Section 3 of this report.

2. BEST MANAGEMENT PRACTICES

2.1 Public Education

The Town of Farmington has a newsletter, the *Farmington Town Letter*, that is published and distributed quarterly to all postal customers, i.e., residences and businesses, with mailing addresses within the town. It is also posted on the town website. A separate article covering the municipal stormwater program is being prepared for publication during the winter of 2006. The articles published in the newsletter during 2005 were limited to notifications concerning the Household Hazardous Waste Collection Day held on May 14, 2005 and notifications concerning the annual leaf and bulky waste collection program held during the period extending from the last week of October through Thanksgiving.

A number of brochures on stormwater management published by the Environmental Protection Agency (EPA) have been purchased for distribution to local schools and libraries, and three copies of the EPA video *After the Storm* have been distributed to town libraries for resident use. Three copies of the video *After the Storm* have also been distributed for use in public schools and the video has been aired by teachers in some public school classrooms. A display is also being prepared by the Planning Division. The display will be exhibited at both of the pubic libraries in the town. Distribution brochures will be part of those displays. Additional brochures have been ordered from the EPA for those displays. The plan to air the video *After the Storm* on Public Access TV has not yet been realized.

Contact has been maintained with other organizations involved with the stormwater program. These include the Department of Environmental Protection (DEP), the Department of Transportation (DOT), the Farmington River Watershed Association (FRWA) and the University of Connecticut education program known as the Nonpoint Education for Municipal Officials (NEMO) program. Two organizations have been added to the listing in the updated Part B, the Central Connecticut Regional Planning Agency (CCRPA) and the Pequabuck River Watershed Association (PRWA). The CCRPA is taking the lead in the development of a Pequabuck River Watershed Management Plan. The preparation of a Pequabuck River Watershed Management Plan was a primary recommendation of "The Pequabuck River State of the Watershed Report" in December of 2004. The staffs of the CCRPA, the FRWA and the PRWA were the editors who compiled the watershed report. The Town of Farmington is the most downstream town in the Pequabuck River Watershed which drains parts of the Towns of Harwinton, Plymouth, Burlington, Bristol, Plainville and Farmington. Small parts of the land area within the Town of Farmington drain into Bristol and Plainville via tributaries of the Pequabuck River.

2.2 Public Participation

A yearly schedule for the implementation of a public participation program is being developed by the Planning Division. The schedule prepared during 2005 covered all of the pubic education and public participation activities implemented or planned during 2004 and 2005.

The plan to hold a workshop developed by the staff of the University of Connecticut education program known as the NEMO program during the fall has been deferred. It may be held during the winter of 2005-06 or later during 2006. The attached amended Part B has been adjusted to reflect the change.

During the spring, an Annual Farmington Clean-up, sponsored by the Farmington Garden Club, was conducted; and the Conservation Commission sponsored a Household Hazardous Waste Collection Program jointly with The Metropolitan District Commission. During the fall, school children from the Town of Farmington participated in the Annual Farmington River Clean-up sponsored by the Farmington River Watershed Association and the public at large participated in a seasonal town-wide clean-up by placing accumulated leaves collected from private property adjacent to roadway gutters for collection by the Highway and Grounds Division.

2.3 Illicit Discharge Detection & Elimination

The mapping of municipal storm sewer outfalls within the Town of Farmington is proceeding on schedule. Although it is not required, the present plan is to map all public, institutional and private storm sewers and outfalls and to differentiate the storm sewer outfalls and sewers tributary to them on the basis of ownership. The specific size and area oriented requirements of the *MS4 General Permit* are being addressed as minimum objectives with respect to time. The attached amended Part B registration form has been adjusted to show that the mapping of outfalls greater than 15 inches owned or maintained by the Town of Farmington in urbanized areas has been completed and the period beyond the required completion date has been amended to show "work in progress" in recognition of the fact that storm sewer and storm water outfall mapping will be a continuing mapping maintenance activity. The above described mapping reflects a choice to approach the program requirements as components of a broader town-wide effort to control pollution occurring due to both non-point and point source discharges that directly affect surface water quality and discharges conveyed by storm sewers or other types of storm water conveyance. The program that is being developed relies heavily on the use of the State Building Code to establish and enforce a required local review and approval of new storm sewer connections to municipal, institutional, private and state-owned storm sewers and, in addition, the construction of new privately owned storm sewer outfalls. The adoption of an ordinance is being considered.

2.4 Construction Site Runoff

The Zoning Regulations, in Article IV, Section 11, requires the submission and approval of an erosion and sediment control plan whenever more than one half acre of land will be disturbed. The regulations also reference the *Connecticut Guidelines for Soil Erosion and Sediment Control* as amended. In addition, the regulations establish enforceable performance standards for construction activity that does not require the submission of an erosion and sediment control plan. These regulatory requirements continue to be enforced.

2.5 Post Construction Runoff Control

During 2005, a post construction best management strategy has been developed and it is being implemented. It is based on the enforcement of Section 25 of Article IV of the existing Zoning Regulations. It has been determined that these regulations are sufficient and no new ordinances are planned.

Where there is a specific need for the maintenance of construction site runoff controls installed and maintained by an applicant during a post construction period, provisions to ensure the applicant understands the obligation to maintain those controls are being included in the zoning approval. Where post construction maintenance of storm sewer systems by private owners is necessary to ensure continuous effective operation and the avoidance of adverse water pollution impacts, the submission of maintenance programs is being required as a function of the approval process.

In addition, an inventory of privately owned storm sewers is being developed in conjunction with the mapping of all storm sewers within the town. An evaluation of the need for periodic reports being filed with town officials by the private owners of such systems will be performed. Authority to require private owners to develop and submit maintenance programs for review and approval and for the filing of periodic reports is provided by the existing regulations.

2.6 Good Housekeeping

A training program for municipal employees is in the process of being developed. Training to date has been limited to on-the-job instruction and training by supervisors and consultants. It is expected that the primary focus of the training will be the cross training of existing employees within the divisions that make up the Department of Public Works aimed at ensuring a broader understanding of the roles of each member of the staff assigned specific stormwater management responsibilities and how those activities are integrated to meet the obligations of the stormwater general permit.

The practice of sweeping paved streets that are sanded for skid control during the winter as soon as practical after snowmelt has been implemented.

The need to sweep paved streets more than once a year is being considered as a function of the development of the Farmington Stormwater Management Plan that is scheduled to be completed before January 9, 2009.

The evaluation and cleaning of stormwater structures and the evaluation and prioritization of the need to upgrade and repair stormwater structures have always been routine activities within the Department of Public Works. Those activities will be continued and the effectiveness of the effort can be expected to improve as a result of the focus created by the stormwater general permit and the stormwater management training program that is being developed. No additional staff are being added to materially expand the programs outside of the normal annual budget process.

The schedule set forth in the Part B registration form has been amended to reflect the above to the extent possible. The entries for the BMP's identified as 6-4 and 6-5 are marked as being "Done". The measurable goal for both BMP's now read "Program implementation".

2.7 Monitoring

The monitoring of six outfalls was planned and completed during the fall of 2005. The monitoring site locations are identified on maps presented in Attachment C, and the sample analysis results are presented in Attachment B. The individual sample analysis results can be correlated with the mapped monitoring site locations by reference to the following table. The sampling data are presented in the same order as the site location identifiers listed below.

Site Location Identifier	Sample Number	Laboratory Number
2005 R-1 (Residential)	1086021	AEL05009886
2005 R-3 (Residential)	1086022	AEL05009887
2005 C-1 (Commercial)	1086023	AEL05009888
2005 C-3 (Commercial)	1086024	AEL05009889
2005 I-3 (Industrial)	1086025	AEL05009890
2005 I-4 (Industrial)	1086026	AEL05009891

All of the 2005 samples were collected during a rain storm that began with intermittent shower activity during the morning of November 16, 2005. The samples were collected from the identified outfalls between 10:10 PM and 11:40 PM, starting soon after it was judged that sufficient flow would be discharging from the selected outfalls. The rainfall generated by the storm was not constant and the intensity did not increase significantly until about 7:00 PM. Local records indicate that the storm only generated 0.02 inches of rainfall during the morning.

The total rainfall produced by the storm was measured at 0.56 inches. The event was a qualifying event since the preceding rainfall event occurred on November 10, 2005.

Two of the sampling locations, R-1 and C-1, were sampled during 2004, and sampling location R-3 was immediately upstream of sampling location R-2 which was also sampled during 2004. The measured Escherica coliform levels at these 2004 sampling sites were unexpectedly high leading to a decision to resample in 2005. The choice to use a sampling location upstream of the R-2 location used in 2004 was aimed at isolating the sampling location from a state highway bleed off that contributed a considerable portion of the runoff flow to the R-2 sampling location.

The discharge at sampling location R-1, which was reported to be murky (brown) with high apparent turbidity when sampled in 2004, was reported to be visually clear with no odors or discoloration in 2005. These observations were supported by the sample analysis results; however the concentration of Escherica coliform was markedly higher in 2005 than in 2004. The runoff area that drains to this outfall is part of a relatively dense housing area. There are over sixty homes on small lots in the area with no sanitary sewers and very limited storm drainage facilities. Most of the lots drain overland. Consideration is being given to evaluating the need for sanitary sewers by conducting a sanitary survey.

The coliform levels at the other locations that were resampled due to higher than expected coliform levels in 2004, R-3 as a surrogate for R-2 and C-1, were lower and close to nominal levels in 2005; but the levels were still much higher than the other locations that were sampled. The 2005 analysis results at sampling location C-1 exhibited relatively higher specific conductivity and hardness and higher concentrations of calcium and magnesium suggesting the probability that there is a water treatment wastewater discharge to the storm sewer in the area.

The analysis did not reveal any apparent problems at sampling site C-3 or I-3, other than a concentration of iron bacteria to the I-3 outfall. The discharge at site I-4 did appear visually turbid, and the analysis results reflected that observation. There was also a septic odor in the area, but the coliform analysis did not suggest the presence of sewage. Both sampling locations are within an area that has been historically mined for sand and extensively regraded to create industrial lots that are still being developed.

Consideration of implementing an alternative sampling plan has been deferred in time. It is presently shown as an activity during permit year three on the amended Part B registration form that is attached.

3. CERTIFICATION

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute.

Russell M. Arnold, Jr., P.E.
Director of Public Works/Town Engineer

ATTACHMENT A

Amended Part B Registration Form

Part B - General Permit Registration Form for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4)

Please complete this form in accordance with the general permit (DEP-PED-GP-021) in order to ensure the proper handling of your registration. Print or type unless otherwise noted.

DEP USE ONLY
Application No. _____
Permit No. _____
Town I.D. _____

Part I: Registrant Information

1. Name of Town/City: **Farmington**

   Name of Chief Elected Official (CEO) or Principal Executive Officer (PEO):

   Kathleen Eagen Title: **Town Manager**

   Mailing Address: **1 Monteith Drive**

   City/Town: **Farmington** State: **CT** Zip Code: **06032-1053**

   Business Phone: **675-2350** ext. Fax: **673-8233**

   Contact Person: **Russell M. Arnold, Jr.** Title: **Director of Public Works**

   ☒ Check here if there are adjacent towns or other entities with which you will be coordinating implementation of your Stormwater Management Plan for a portion of your MS4 (See Section 6(b)(3) of the general permit). If so, label and attach additional sheet(s) with the required information as supplied above.

2. List primary contact for departmental correspondence and inquiries, if different than the CEO/PEO

   Name: **Russell M. Arnold, Jr., Director of Public Works & Dev. Ser.**

   Mailing Address: **1 Monteith Drive**

   City/Town: **Farmington** State: **CT** Zip Code: **06032-1053**

   Business Phone: **675-2330** ext. Fax: **675-2319**

   E-Mail: **ArnoldR@Farmington-CT.org**

   Contact Person: **Russell M. Arnold, Jr.** Title: **Director of Public Works**

3. List any engineer(s) or other consultant(s) employed or retained to assist in preparing the registration.

   ☐ Check here if additional sheets are necessary, and label and attach them to this sheet.

   Name: **Loureiro Engineering Associates, Inc.**

   Mailing Address: **100 Northwest Drive**

   City/Town: **Plainville** State: **CT** Zip Code: **06062**

   Business Phone: **747-6181** ext. Fax: **747-8822**

   E-Mail: **sapalaia@loureiro.com**

   Contact Person: **Salvatore A. Palaia, P.E.** Title: **Senior Project Manager**

   Service Provided: **General Consulting**

Part II: Site Information

1. Is there any activity included in your Stormwater Management Plan that would adversely affect properties listed or eligible for listing in the National Register of Historic Places? ☐ Yes ☒ No

   If yes, the registrant must be in compliance with requirements of the National Historic Preservation Act and must coordinate with the appropriate State Historic Preservation Officer to avoid or minimize impacts from any necessary activities.

2. Is there any activity included in your Stormwater Management Plan that is located within the coastal boundary as delineated on DEP approved coastal boundary maps? ☐ Yes ☒ No

   If yes, and this application is for a new authorization or for a modification of an existing permit, you must submit a *Coastal Consistency Review Form* (DEP-APP-004) with your application as Attachment A.

   For forms or assistance, please call the Permit Assistance Office at 860-424-3003.

3. Is there any activity included in your Stormwater Management Plan that is located within an area identified as a habitat for endangered, threatened or special concern species as identified on the "State and Federal Listed Species and Natural Communities Map"?

   ☐ Yes ☒ No Date of Map: **2003**

   If yes, complete and submit a *Connecticut Natural Diversity Data Base* (CT NDDB) *Review Request Form* (DEP-APP-007) to the address specified on the form.

   When submitting this permit application, please include copies of any correspondence to the NDDB, including copies of the completed CT NDDB Review Request Form, any field surveys, and any other information which may lead you to believe that endangered or threatened species may or may not be located in the area of your existing or proposed permitted activity, as Attachment B.

   Has a field survey been conducted to determine the presence of any endangered, threatened or special concern species? ☐ Yes ☒ No If yes, provide:

   Biologist's Name:

   Address:

   and submit a copy of the field survey with your application as an Attachment as specified above.

Part III: Supporting Documents

Please check the attachments submitted as verification that *all* applicable attachments have been submitted with this application form. When submitting any supporting documents, please label the documents as indicated in this part (e.g., Attachment A, etc.) and be sure to include the applicant's name as indicated on the *Permit Application Transmittal Form*.

☐	Attachment A:	Coastal Consistency Review Form: Activities within the state's coastal area, which includes the coastal boundary, must be consistent with the Connecticut Coastal Management Act (Sections 22a-90 through 22a-112 CGS). You may be required to complete a *Coastal Consistency Review Form* (DEP-APP-004) to demonstrate that the activity is consistent with the standards and policies of the Connecticut Coastal Management Act.
☒	Attachment B:	CT NDDB Information: Submit copies of any correspondence provided to or received from the CT NDDB program, including a copy of a completed *CT NDDB Request Form* (DEP-APP-007) and copies of any field surveys previously conducted to determine the presence of any endangered, threatened or special concern species.

Part IV: Registrant Certification

The registrant *and* the individual(s) responsible for actually preparing the registration must sign this part. A registration will be considered incomplete unless all required signatures are provided.

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief.

I certify that this permit registration is on complete and accurate forms as prescribed by the Commissioner without alteration of the text.

I also certify under penalty of law that I have read and understand all requirements of the General Permit for the Discharge of Stormwater from a Municipal Separate Storm Sewer System issued on January 9, 2004 and that all requirements for authorization under the general permit are met and that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit for the municipality. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowingly making false statements."

Signature of CEO/PEO or designee [as specified in RCSA Section 22a-430-3(b)(2)(B)]	**Original Signed - 7/8/2004** Date
John H. McGrane Name of CEO/PEO or designee (print or type)	**Director of Public Works** Title (if applicable)
Signature of Preparer (if different than above)	**Original Signed - July 7, 2004** Date
Salvatore A. Palaia, P.E. Name of Preparer (print or type)	**Senior Project Manager** Title (if applicable)

☐ Check here if additional signatures are necessary.
If so, please reproduce this sheet and attach signed copies to this sheet.

Note: Please submit the Registration Form and all Supporting Documents to:

STORMWATER PERMIT COORDINATOR
BUREAU OF WATER MANAGEMENT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

Part V: Best Management Practice List (BMP)

BMP ID	Public Education	Responsible Dept. or Person	Measurable Goal
1-1	Publish article in the Town Letter once per year	Planning	Article published
1-2	Obtain educational videos for Library distribution	Planning	Videos available
1-3	Air educational videos in schools and on Public Access TV	Planning	Videos aired
1-4	Coordinate with others: DEP, DOT, FRWA, NEMO, CCRPA, PRWA	Planning	Annual summary/report
1-5			
1-6			
1-7			
1-8			
1-9			
1-10			
BMP ID	**Public Participation**	**Responsible Dept. or Person**	**Measurable Goal**
2-1	Develop public involvement/participation program	Planning	Prepare yearly schedule
2-2	Comply with state and local public notice and FOI requirements	Public Works	Maintain compliance
2-3	Hold meetings/workshops to educate and involve the public	Planning	Hold meetings/workshops
2-4	Organize/implement community clean-up days: Town, FRWA	Planning	Hold community clean-ups
2-5			
2-6			
2-7			
2-8			
2-9			
2-10			
BMP ID	**Illicit Discharge Detection & Elimination**	**Responsible Dept. or Person**	**Measurable Goal**
3-1	Map outfalls greater than 15" in Urbanized Area (Year 2)	Engineering	Mapping completed
3-2	Map outfalls greater than 15" in town-wide (Year 3)	Engineering	Mapping completed
3-3	Map outfalls greater than 12" in Urbanized Area (Year 4)	Engineering	Mapping completed
3-4	Develop program to detect and eliminate illicit discharges	Public Works	Program implemention
3-5	Develop illicit discharge ordinance	Public Works	Determine need
3-6			
3-7			
3-8			
3-9			
3-10			

BMP ID	Construction Site Runoff Control	Responsible Dept. or Person	Measurable Goal
4-1	Review land use regulations to meet requirements of MS4 permit and E&S Guidelines	Planning	Review completed
4-2			
4-3			
4-4			
4-5			
4-6			
4-7			
4-8			
4-9			
4-10			
BMP ID	**Post Construction Runoff Control**	**Responsible Dept. or Person**	**Measurable Goal**
5-1	Review land use regulations to meet requirements of MS4 permit and E&S Guidelines	Planning	Review completed
5-2	Develop post-construction ordinance or regulation	Planning	Determine need
5-3	Develop and implement post-construction BMP strategy	Planning	Program implemention
5-4	Develop program to ensure long-term operation and maintenance of BMPs	Planning	Program implemention
5-5			
5-6			
5-7			
5-8			
5-9			
5-10			
BMP ID	**Good Housekeeping**	**Responsible Dept. or Person**	**Measurable Goal**
6-1	Develop training program for municipal employees	Public Works	Program implemention
6-2	Sweep streets at least once a year as soon as possible after snowmelt	Highway	Program implemented
6-3	Evaluate Urbanized Area for possible sweeping more than once a year	Public Works	Evaluation completed
6-4	Develop program to evaluate and clean stormwater structures at least once a year	Public Works	Program implementation
6-5	Develop program to evaluate and prioritize system for upgrade and/or repair	Public Works	Program implementation
6-6			
6-7			
6-8			
6-9			
6-10			
BMP ID	**Monitoring**	**Responsible Dept. or Person**	**Measurable Goal**
S-1	Sample 6 outfalls once a year	Public Works	Completion
S-2	Alternate sampling plan	Public Works	Consideration completed

Part VIA: Best Management Practice Timeline

BMP ID	Permit Year One				Permit Year Two				Permit Year Three				Permit Year Four				Permit Year Five				Next Permit
	Spring 2004	Summer 2004	Fall 2004	Winter 2004-05	Spring 2005	Summer 2005	Fall 2005	Winter 2005-06	Spring 2006	Summer 2006	Fall 2006	Winter 2006-07	Spring 2007	Summer 2007	Fall 2007	Winter 2007-08	Spring 2008	Summer 2008	Fall 2008	Winter 2008-09	
Public Education																					
1-1				Done		Done			----						—			----			
1-2			Done				Done					—									
1-3				Done		Done					----		----						—		
1-4								Done	----	—	----	----	—	----	----	----	----				
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1-10																					
Public Participation																					
2-1				Done				Done				----				—				—	
2-2				Done				Done	----	—	----	----	—	----	—	----	----	----	----	----	
2-3								----			—				----				----		
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2-9																					
2-10																					
Illicit Discharge Detection & Elimination																					
3-1								Done	—	----	—	—	----	—	—	—	—	—	----	—	----
3-2								—	----	—	----	----									
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3-5			—	—																	
3-6																					
3-7																					
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3-10																					

---- Work in Progress X Task Completed as a One-time Event During that Quarter **Done** Task Completed

BMP ID	Permit Year One				Permit Year Two				Permit Year Three				Permit Year Four				Permit Year Five				Next Permit
	Spring 2004	Summer 2004	Fall 2004	Winter 2004-05	Spring 2005	Summer 2005	Fall 2005	Winter 2005-06	Spring 2006	Summer 2006	Fall 2006	Winter 2006-07	Spring 2007	Summer 2007	Fall 2007	Winter 2007-08	Spring 2008	Summer 2008	Fall 2008	Winter 2008-09	
Construction Site Runoff Control																					
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4-2																					
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Post Construction Runoff Control																					
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5-4							—	—	—	—	—	—	—	—	—	—	—	—	—	—	
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5-10																					
Good Housekeeping																					
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6-8																					
6-9																					
6-10																					
Monitoring																					
S-1		X	X			X	X			—	—			—	—			—	—		
S-2									—	—	—	—									

Part VIB: Sample Best Management Practice Timeline

BMP ID	Permit Year One				Permit Year Two				Permit Year Three				Permit Year Four				Permit Year Five				Next Permit
	Spring 2004	Summer 2004	Fall 2004	Winter 2004-05	Spring 2005	Summer 2005	Fall 2005	Winter 2005-06	Spring 2006	Summer 2006	Fall 2006	Winter 2006-07	Spring 2007	Summer 2007	Fall 2007	Winter 2007-08	Spring 2008	Summer 2008	Fall 2008	Winter 2008-09	
Public Education																					
1-1	----	----	Done																		
1-2				----	----	----	----	----	Done												
1-3			----	----	----	----	Done														
1-4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
1-5									----	----	----	----	----	----	Done						
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1-9																					
1-10																					
Public Participation																					
2-1	----	----	----	----		X				X				X				X			
2-2	X				X				X				X				X				
2-3					----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	
2-4									----	----	----	----	----	----	----	----	Done				
2-5																					
2-6																					
2-7																					
2-8																					
2-9																					
2-10																					
Illicit Discharge Detection & Elimination																					
3-1					----	----	----	Done													
3-2									----	----	----	Done									
3-3													----	----	----	Done					
3-4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	
3-5	----	----	----	Done																	
3-6		X				X				X				X				X			
3-7																					
3-8																					
3-9																					
3-10																					

---- Work in Progress

X Task Completed as a One-time Event During that Quarter

Done Task Completed

BMP ID	Permit Year One				Permit Year Two				Permit Year Three				Permit Year Four				Permit Year Five				Next Permit
	Spring 2004	Summer 2004	Fall 2004	Winter 2004-05	Spring 2005	Summer 2005	Fall 2005	Winter 2005-06	Spring 2006	Summer 2006	Fall 2006	Winter 2006-07	Spring 2007	Summer 2007	Fall 2007	Winter 2007-08	Spring 2008	Summer 2008	Fall 2008	Winter 2008-09	
Construction Site Runoff Control																					
4-1			----	---	----	Done															
4-2							----	----	---	Done											
4-3													----	----	----	Done					
4-4																					
4-5																					
4-6																					
4-7																					
4-8																					
4-9																					
4-10																					
Post Construction Runoff Control																					
5-1		----	----	---	Done																
5-2					---	----	---	Done													
5-3									----	---	----	Done									
5-4													----	---	---	Done					
5-5			X				X				X				X				X		
5-6																					
5-7																					
5-8																					
5-9																					
5-10																					
Good Housekeeping																					
6-1	---	---	----	---				X				X				X				X	
6-2	X				X				X				X				X				
6-3	---	---	---														----	---	Done		
6-4		---	----	---	---				X				X				X				
6-5									----	---	---	Done									
6-6																					
6-7																					
6-8																					
6-9																					
6-10																					
Monitoring																					
S-1		----	----			---	----			---	---			----	---			----	---		
S-2																					

ATTACHMENT B

Stormwater Monitoring Report Forms

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2005)R-1: Lat 41-43-10.579, Long 72-46-18.207

Located on Orchard Road about 1250 feet south of the intersection with South Road

Please circle the appropriate area description: Industrial, Commercial, or (Residential)

Receiving Water (name, basin): Unnamed Brook, 4401-00-1-L2

Time of Start of Discharge: 7:00 p.m.

Date/Time Collected: November 16, 2005/10:11 p.m. Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Russell Arnold

Storm Magnitude (inches): 0.56 Storm Duration (hours): 5(approx)

Date of Previous Storm Event: November 11, 2005

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	7.4 units	Sample ID#1086021 AEL #AEL05009886
Rain pH	EPA 150.1	5.3 units	Sample ID#1086021 AEL #AEL05009891
Hardness	SM 2340 B	52.7 mg/L CaCO3	Sample ID#1086021 AEL #AEL05009886
Conductivity	EPA 120.1	140 micromhos/cm	Sample ID#1086021 AEL #AEL05009886
Oil & Grease	EPA 1664A	< 1.7 mg/L	Sample ID#1086021 AEL #AEL05009886
COD	EPA 410.4	63 mg/L	Sample ID#1086021 AEL #AEL05009886
Turbidity	EPA 180.1	24 NTU	Sample ID#1086021 AEL #AEL05009886
TSS	EPA 160.2	89.3 mg/L	Sample ID#1086021 AEL #AEL05009886
TP	EPA 365.2	0.302 mg/L as P	Sample ID#1086021 AEL #AEL05009886
Ammonia	EPA 350.2	< 0.10 mg/L	Sample ID#1086021 AEL #AEL05009886
TKN	EPA 351.3	2.0 mg/L	Sample ID#1086021 AEL #AEL05009886
NO_3+NO_2	EPA 300.0	0.51 mg/L	Sample ID#1086021 AEL #AEL05009886
E. coli	SM 9222 B	13000 per 100 mL	Sample ID#1086021 AEL #AEL05009886

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold, Jr., P.E., Director of Public Works/Town Engineer

Signature: Russell M Arnold Jr. Date: January 3, 2006

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2005) R-3: Lat 41-44-43.751, Long 72-51-45.227 Located on Knollwood Road about 175 feet northeast of the intersection with Farmington Avenue

Please circle the appropriate area description: Industrial, Commercial, or (Residential)

Receiving Water (name, basin): Unnamed Brook, 4300-00-4+R17

Time of Start of Discharge: 7:00 p.m.

Date/Time Collected: November 16, 2005/11:40 p.m. Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Russell Arnold

Storm Magnitude (inches): 0.56 Storm Duration (hours): 5(approx)

Date of Previous Storm Event: November 11, 2005

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	6.6 units	Sample ID#1086022 AEL #AEL05009887
Rain pH	EPA 150.1	5.3 units	Sample ID#1086021 AEL #AEL05009891
Hardness	SM 2340 B	3.4 mg/L CaCO3	Sample ID#1086022 AEL #AEL05009887
Conductivity	EPA 120.1	12 micromhos/cm	Sample ID#1086022 AEL #AEL05009887
Oil & Grease	EPA 1664A	< 1.8 mg/L	Sample ID#1086022 AEL #AEL05009887
COD	EPA 410.4	21 mg/L	Sample ID#1086022 AEL #AEL05009887
Turbidity	EPA 180.1	19 NTU	Sample ID#1086022 AEL #AEL05009887
TSS	EPA 160.2	38.0 mg/L	Sample ID#1086022 AEL #AEL05009887
TP	EPA 365.2	0.156 mg/L as P	Sample ID#1086022 AEL #AEL05009887
Ammonia	EPA 350.2	< 0.10 mg/L	Sample ID#1086022 AEL #AEL05009887
TKN	EPA 351.3	< 1.0 mg/L	Sample ID#1086022 AEL #AEL05009887
NO_3+NO_2	EPA 300.0	< 0.50 mg/L	Sample ID#1086022 AEL #AEL05009887
E. coli	SM 9222 B	1200 per 100 mL	Sample ID#1086022 AEL #AEL05009887

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold, Jr., P.E. /Director of Public Works/Town Engineer

Signature: Russell M Arnold Jr. Date: January 3, 2006

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2005) C-1: Lat 41-42-34.649, Long 72-47-51.183

Located on Batterson Pk Rd, 1450 ft north of intersection of Fienemann Rd

Please circle the appropriate area description: Industrial (Commercial) or Residential

Receiving Water (name, basin): Unnamed Brook, 4401-00-1-L1

Time of Start of Discharge: 7:00 p.m.

Date/Time Collected: November 16, 2005/10:25 p.m. Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Russell Arnold

Storm Magnitude (inches): 0.56 Storm Duration (hours): 5(approx)

Date of Previous Storm Event: November 11, 2005

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	6.9 units	Sample ID#1086023 AEL #AEL05009888
Rain pH	EPA 150.1	5.3 units	Sample ID#1086021 AEL #AEL05009891
Hardness	SM 2340 B	93.2 mg/L CaCO3	Sample ID#1086023 AEL #AEL05009888
Conductivity	EPA 120.1	270 micromhos/cm	Sample ID#1086023 AEL #AEL05009888
Oil & Grease	EPA 1664A	< 1.9 mg/L	Sample ID#1086023 AEL #AEL05009888
COD	EPA 410.4	21 mg/L	Sample ID#1086023 AEL #AEL05009888
Turbidity	EPA 180.1	9.2 NTU	Sample ID#1086023 AEL #AEL05009888
TSS	EPA 160.2	21.0 mg/L	Sample ID#1086023 AEL #AEL05009888
TP	EPA 365.2	0.089 mg/L as P	Sample ID#1086023 AEL #AEL05009888
Ammonia	EPA 350.2	< 0.10 mg/L	Sample ID#1086023 AEL #AEL05009888
TKN	EPA 351.3	< 1.0 mg/L	Sample ID#1086023 AEL #AEL05009888
NO_3+NO_2	EPA 300.0	< 0.50 mg/L	Sample ID#1086023 AEL #AEL05009888
E. coli	SM 9222 B	2000 per 100 mL	Sample ID#1086023 AEL #AEL05009888

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold, Jr., P.E., Director of Public Works/Town Engineer

Signature: Russell M Arnold Date: January 3, 2006

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2005) C-3: Lat 41-44-07.109, Long 72-50-35.502 Located just south west of the cul-de-sac at the south end of Melrose Drive

Please circle the appropriate area description: Industrial (Commercial) or Residential

Receiving Water (name, basin): Farmington River, 4300-00-5-R-1

Time of Start of Discharge: 7:00 p.m.

Date/Time Collected: November 16, 2005/11:20 p.m. Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Russell Arnold

Storm Magnitude (inches): 0.56 Storm Duration (hours): 5(approx)

Date of Previous Storm Event: November 11, 2005

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	6.3 units	Sample ID#1086024 AEL #AEL05009889
Rain pH	EPA 150.1	5.3 units	Sample ID#1086021 AEL #AEL05009891
Hardness	SM 2340 B	2.8 mg/L CaCO3	Sample ID#1086024 AEL #AEL05009889
Conductivity	EPA 120.1	19 micromhos/cm	Sample ID#1086024 AEL #AEL05009889
Oil & Grease	EPA 1664A	< 1.7 mg/L	Sample ID#1086024 AEL #AEL05009889
COD	EPA 410.4	35 mg/L	Sample ID#1086024 AEL #AEL05009889
Turbidity	EPA 180.1	4.1 NTU	Sample ID#1086024 AEL #AEL05009889
TSS	EPA 160.2	20.0 mg/L	Sample ID#1086024 AEL #AEL05009889
TP	EPA 365.2	0.109 mg/L as P	Sample ID#1086024 AEL #AEL05009889
Ammonia	EPA 350.2	< 0.10 mg/L	Sample ID#1086024 AEL #AEL05009889
TKN	EPA 351.3	1.3 mg/L	Sample ID#1086024 AEL #AEL05009889
NO_3+NO_2	EPA 300.0	< 0.50 mg/L	Sample ID#1086024 AEL #AEL05009889
E. coli	SM 9222 B	200 per 100 mL	Sample ID#1086024 AEL #AEL05009889

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold, Jr., P.E./Director of Public Works/Town Engineer

Signature: Russell M. Arnold Jr. Date: January 3, 2006

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2005) I-3: Lat 41-41-47.351, Long 72-51-34.191

~~Located southeast of Hyde Road at the intersection with New Britain Avenue~~ COPPS CREEK OUTLET

Please circle the appropriate area description: Industrial, Commercial, or Residential

Receiving Water (name, basin): Unnamed Pond on Scott Swamp Brook, 4315-13-2-L2

Time of Start of Discharge: 7:00 p.m.

Date/Time Collected: November 16, 2005/11:00 p.m. Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Russell Arnold

Storm Magnitude (inches): 0.56 Storm Duration (hours): 5(approx)

Date of Previous Storm Event: November 11, 2005

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	6.7 units	Sample ID#1086025 AEL #AEL05009890
Rain pH	EPA 150.1	5.3 units	Sample ID#1086021 AEL #AEL05009891
Hardness	SM 2340 B	11.9 mg/L CaCO3	Sample ID#1086025 AEL #AEL05009890
Conductivity	EPA 120.1	66 micromhos/cm	Sample ID#1086025 AEL #AEL05009890
Oil & Grease	EPA 1664A	< 1.7 mg/L	Sample ID#1086025 AEL #AEL05009890
COD	EPA 410.4	21 mg/L	Sample ID#1086025 AEL #AEL05009890
Turbidity	EPA 180.1	3.6 NTU	Sample ID#1086025 AEL #AEL05009890
TSS	EPA 160.2	7.7 mg/L	Sample ID#1086025 AEL #AEL05009890
TP	EPA 365.2	0.027 mg/L as P	Sample ID#1086025 AEL #AEL05009890
Ammonia	EPA 350.2	< 0.10 mg/L	Sample ID#1086025 AEL #AEL05009890
TKN	EPA 351.3	< 1.0 mg/L	Sample ID#1086025 AEL #AEL05009890
NO_3+NO_2	EPA 300.0	< 0.50 mg/L	Sample ID#1086025 AEL #AEL05009890
E. coli	SM 9222 B	50 per 100 mL	Sample ID#1086025 AEL #AEL05009890

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold, Jr., P.E., Director of Public Works/Town Engineer

Signature: Russell M Arnold Jr. Date: January 3, 2006

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2005) I-4: Lat 41-41-46.490, Long 72-51-25.068

~~Located southeast of Hyde Road at the intersection with New Britain Avenue~~ Rear of #20 Executive Drive

Please circle the appropriate area description: (Industrial) Commercial, or Residential

Receiving Water (name, basin): Unnamed Pond on Scott Swamp Brook, 4315-13-2-L2

Time of Start of Discharge: 7:00 p.m.

Date/Time Collected: November 16, 2005/10:45 p.m. Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Russell Arnold

Storm Magnitude (inches): 0.56 Storm Duration (hours): 5(approx)

Date of Previous Storm Event: November 11, 2005

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	7.2 units	Sample ID#1086026 AEL #AEL05009891
Rain pH	EPA 150.1	5.3 units	Sample ID#1086021 AEL #AEL05009891
Hardness	SM 2340 B	11.1 mg/L CaCO3	Sample ID#1086026 AEL #AEL05009891
Conductivity	EPA 120.1	22 micromhos/cm	Sample ID#1086026 AEL #AEL05009891
Oil & Grease	EPA 1664A	< 1.8 mg/L	Sample ID#1086026 AEL #AEL05009891
COD	EPA 410.4	30 mg/L	Sample ID#1086026 AEL #AEL05009891
Turbidity	EPA 180.1	59 NTU	Sample ID#1086026 AEL #AEL05009891
TSS	EPA 160.2	49.0 mg/L	Sample ID#1086026 AEL #AEL05009891
TP	EPA 365.2	0.150 mg/L as P	Sample ID#1086026 AEL #AEL05009891
Ammonia	EPA 350.2	0.21 mg/L	Sample ID#1086026 AEL #AEL05009891
TKN	EPA 351.3	< 1.0 mg/L	Sample ID#1086026 AEL #AEL05009891
NO_3+NO_2	EPA 300.0	< 0.50 mg/L	Sample ID#1086026 AEL #AEL05009891
E. coli	SM 9222 B	200 per 100 mL	Sample ID#1086026 AEL #AEL05009891

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold, Jr., P.E./ Director of Public Works/Town Engineer

Signature: Russell M Arnold Date: January 3, 2006

AVERILL ENVIRONMENTAL LABORATORY, INC.

CT Laboratory ID No. PH-0513
MA Laboratory ID No. M-CT0513
NY Laboratory ID No. 11599

100 Northwest Drive, Plainville, Connecticut 06062
(860) 747-0676 Fax: (860) 747-8264
Lawton S. Averill - Director

CT ONLY 1-(800) 870-7904
Alan G. Jacobs - Co-Director

NH Laboratory ID No. 2506
ME Laboratory ID No. CT029
EPA Laboratory ID No. CT00029

REPORT ON LABORATORY EXAMINATIONS

To Client: Loureiro Engineering Associates
100 Northwest Drive
Plainville, CT 06062

ATTN: Ryan Hines

Report Date: Wednesday, December 15, 2004
Received Date: Wednesday, November 24, 2004
Collect Date: Wednesday, November 24, 2004
Collect Time: 4:05 PM
Collected By: LEA

AEL Lab#: AEL04010645 **Project#:** 28FA406 **Client Sample ID:** 1057471

Source: Farmington, CT 2004
Sample ID: Stormwater Discharge Sample R-1 **Sample Matrix:** Wastewater

Test		Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids		250	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	<	0.20	mg/L	CC	12/1/04	EPA 300.0
pH		7.1	units	JF	11/24/04	EPA 150.1
Specific Conductivity		84	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated		42.5	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand		210	mg/L	MTK	12/8/04	EPA 410.4
Ammonia Nitrogen as N	L	0.22	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P		0.647	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli		3000	per 100 mL	JF	11/29/04	SM 9222 B
Total Kjeldahl Nitrogen		3.5	mg/L	CC	12/10/04	EPA 351.3
Turbidity		91	NTU	JF	11/24/04	EPA 180.1
Calcium		10.0	mg/L	RR	12/2/04	EPA 200.7
Magnesium		4.22	mg/L	RR	12/2/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	<	1.9	mg/L	WCH	12/6/04	EPA 1664A

L- Flag results above MDL and less than quantitation Limit as estimated.
H- Flag results above calibration range as estimated.

Lawton S. Averill (MAP)
Laboratory Director

N:\2004\LEA\04645.rep

AVERILL ENVIRONMENTAL LABORATORY, INC.

CT Laboratory ID No. PH-0513 | 100 Northwest Drive, Plainville, Connecticut 06062 | NH Laboratory ID No. 2506
MA Laboratory ID No. M-CT0513 | (860) 747-0676 Fax: (860) 747-9254 | CT ONLY 1-(800) 870-7904 | ME Laboratory ID No. CT029
NY Laboratory ID No. 11599 | Lawton S. Averill - Director | Alan G. Jacobs - Co-Director | EPA Laboratory ID No. CT00029

REPORT ON LABORATORY EXAMINATIONS

To Client: Loureiro Engineering Associates
100 Northwest Drive
Plainville, CT 06062

ATTN: Ryan Hines

Report Date: Wednesday, December 15, 2004
Received Date: Wednesday, November 24, 2004
Collect Date: Wednesday, November 24, 2004
Collect Time: 5:00 PM
Collected By: LEA

AEL Lab#: AEL04010646 **Project#:** 28FA405 **Client Sample ID:** 1057472

Source: Farmington, CT 2004
Sample ID: Stormwater Discharge Sample R-2 **Sample Matrix:** Wastewater

Test		Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids		44.0	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	<	0.20	mg/L	CC	12/1/04	EPA 300.0
pH		6.3	units	JF	11/24/04	EPA 150.1
Specific Conductivity		60	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated		8.2	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand		65	mg/L	MTK	12/8/04	EPA 410.4
Ammonia Nitrogen as N		0.76	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P		0.240	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli		5000	per 100 mL	JF	11/29/04	SM 9222 B
Total Kjeldahl Nitrogen		2.0	mg/L	CC	12/10/04	EPA 351.3
Turbidity		42	NTU	JF	11/24/04	EPA 180.1
Calcium		2.09	mg/L	RR	12/6/04	EPA 200.7
Magnesium		0.73	mg/L	RR	12/6/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	<	1.8	mg/L	WCH	12/8/04	EPA 1664A

L- Flag results above MDL and less than quantitation Limit as estimated.
H- Flag results above calibration range as estimated.

Lawton S. Averill (MAP)
Laboratory Director

...0010646.xsp

AVERILL ENVIRONMENTAL LABORATORY, INC.

CT Laboratory ID No. PH-0513
MA Laboratory ID No. M-CT0513
NY Laboratory ID No. 11599

100 Northwest Drive, Plainville, Connecticut 06062
(860) 747-0678 Fax (860) 747-9264
Lawton S. Averill - Director

CT ONLY 1-(800) 870-7904
Alan G. Jacobs - Co-Director

NH Laboratory ID No. 2508
ME Laboratory ID No. CT029
EPA Laboratory ID No. CT00029

REPORT ON LABORATORY EXAMINATIONS

To Client: Loureiro Engineering Associates
100 Northwest Drive
Plainville, CT 06062

ATTN: Ryan Hines

Report Date: Wednesday, December 15, 2004
Received Date: Wednesday, November 24, 2004
Collect Date: Wednesday, November 24, 2004
Collect Time: 5:31 PM
Collected By: LEA

AEL Lab#: AEL04010642 Project#: 28FA406 Client Sample ID: 1057468

Source: Farmington, CT
Sample ID: Stormwater Discharge Sample 2004 I-1

Sample Matrix: Wastewater

Test		Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids		2.6	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	<	0.20	mg/L	CC	12/1/04	EPA 300.0
pH		5.0	units	JF	11/24/04	EPA 150.1
Specific Conductivity		11	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated		1.3	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand	<	20	mg/L	MTK	12/8/04	EPA 410.4
Ammonia Nitrogen as N	<	0.10	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P		0.025	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli	<	50	per 100 mL	JF/CC	11/24/04	SM 9222 B
Total Kjeldahl Nitrogen	<	1.0	mg/L	CC	12/10/04	EPA 351.3
Turbidity		3.8	NTU	JF	11/24/04	EPA 180.1
Calcium	<	1.00	mg/L	RR	12/6/04	EPA 200.7
Magnesium	<	0.50	mg/L	RR	12/6/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	<	1.7	mg/L	WCH	12/2/04	EPA 1664A

L- Flag results above MDL and less than quantitation Limit as estimated.
H- Flag results above calibration range as estimated.

Lawton S. Averill (MAP)
Laboratory Director

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AVERILL ENVIRONMENTAL LABORATORY, INC.

CT Laboratory ID No. PH-0513
MA Laboratory ID No. M-CT0513
NY Laboratory ID No. 11599

100 Northwest Drive, Plainville, Connecticut 06062
(860) 747-0676 Fax (860) 747-9264
Lawton S. Averill - Director

CT ONLY 1-(800) 870-7904
Alan G. Jacobs - Co-Director

NH Laboratory ID No. 2506
ME Laboratory ID No. CT029
EPA Laboratory ID No. CT00029

REPORT ON LABORATORY EXAMINATIONS

To Client: Loureiro Engineering Associates
100 Northwest Drive
Plainville, CT 06062

ATTN: Ryan Hines

Report Date: Wednesday, December 15, 2004
Received Date: Wednesday, November 24, 2004
Collect Date: Wednesday, November 24, 2004
Collect Time: 5:47 PM
Collected By: LEA

AEL Lab#: AEL04010643 **Project#:** 28FA406 **Client Sample ID:** 1057469

Source: Farmington, CT 2004
Sample ID: Stormwater Discharge Sample I-2

Sample Matrix: Wastewater

Test		Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids		9.5	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	<	0.20	mg/L	CC	12/1/04	EPA 300.0
pH		5.9	units	JF	11/24/04	EPA 150.1
Specific Conductivity		17	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated		2.4	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand	<	20	mg/L	MTK	12/6/04	EPA 410.4
Ammonia Nitrogen as N	<	0.10	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P		0.066	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli		200	per 100 mL	JF/CC	11/24/04	SM 9222 B
Total Kjeldahl Nitrogen	<	1.0	mg/L	CC	12/10/04	EPA 351.3
Turbidity		11	NTU	JF	11/24/04	EPA 180.1
Calcium	<	1.00	mg/L	RR	12/6/04	EPA 200.7
Magnesium	<	0.50	mg/L	RR	12/6/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	<	1.6	mg/L	WCH	12/2/04	EPA 1664A

L- Flag results above MDL and less than quantitation Limit as estimated.

H- Flag results above calibration range as estimated.

Lawton S. Averill (MAP)
Laboratory Director

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Alan G. Jacobs - Co-Director

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ME Laboratory ID No. CT029
EPA Laboratory ID No. CT00029

REPORT ON LABORATORY EXAMINATIONS

To Client: Loureiro Engineering Associates
100 Northwest Drive
Plainville, CT 06062

ATTN: Ryan Hines

Report Date: Wednesday, December 15, 2004
Received Date: Wednesday, November 24, 2004
Collect Date: Wednesday, November 24, 2004
Collect Time: 4:28 PM
Collected By: LEA

AEL Lab#: AEL04010647 **Project#:** 28FA406 **Client Sample ID:** 1057473

Source: Farmington, CT 2004
Sample ID: Stormwater Discharge Sample C-1 **Sample Matrix:** Wastewater

Test		Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids		26.5	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	<	0.20	mg/L	CC	12/1/04	EPA 300.0
pH		6.5	units	JF	11/24/04	EPA 150.1
pH of Rain		6.8	units	JF	11/24/04	EPA 150.1
Specific Conductivity		35	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated		8.0	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand	<	20	mg/L	MTK	12/8/04	EPA 410.4
Ammonia Nitrogen as N		0.73	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P		0.084	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli		8000	per 100 mL	JF	11/29/04	SM 9222 B
Total Kjeldahl Nitrogen		1.7	mg/L	CC	12/10/04	EPA 351.3
Turbidity		16	NTU	JF	11/24/04	EPA 180.1
Calcium		2.17	mg/L	RR	12/6/04	EPA 200.7
Magnesium		0.62	mg/L	RR	12/6/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	<	1.7	mg/L	WCH	12/8/04	EPA 1664A

L- Flag results above MDL and less than quantitation Limit as estimated.

H- Flag results above calibration range as estimated.

Lawton S. Averill (MAP)
Laboratory Director

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AVERILL ENVIRONMENTAL LABORATORY, INC.

CT Laboratory ID No. PH-0513
MA Laboratory ID No. M-CT0513
NY Laboratory ID No. 11599

100 Northwest Drive, Plainville, Connecticut 06062
(860) 747-0676 Fax: (860) 747-9264
Lawton S. Averill - Director

CT ONLY 1-(800) 870-7904
Alan G. Jacobs - Co-Director

NH Laboratory ID No. 2506
ME Laboratory ID No. CT029
EPA Laboratory ID No. CT00029

REPORT ON LABORATORY EXAMINATIONS

To Client: Loureiro Engineering Associates
100 Northwest Drive
Plainville, CT 06062

ATTN: Ryan Hines

Report Date: Wednesday, December 15, 2004
Received Date: Wednesday, November 24, 2004
Collect Date: Wednesday, November 24, 2004
Collect Time: 4:34 PM
Collected By: LEA

AEL Lab#: AEL04010644 Project#: 28FA406 Client Sample ID: 1057470

Source: Farmington, CT
Sample ID: Stormwater Discharge Sample 2004 C-2

Sample Matrix: Wastewater

Test		Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids		56.0	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	<	0.20	mg/L	CC	12/1/04	EPA 300.0
pH		6.7	units	JF	11/24/04	EPA 150.1
Specific Conductivity		39	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated		8.5	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand		33	mg/L	MTK	12/8/04	EPA 410.4
Ammonia Nitrogen as N		1.00	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P		0.149	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli		300	per 100 mL	JF	11/29/04	SM 9222 B
Total Kjeldahl Nitrogen	L	1.1	mg/L	CC	12/10/04	EPA 351.3
Turbidity		30	NTU	JF	11/24/04	EPA 180.1
Calcium		2.05	mg/L	RR	12/6/04	EPA 200.7
Magnesium		0.82	mg/L	RR	12/6/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	<	2.6	mg/L	WCH	12/8/04	EPA 1664A

Lawton S. Averill (MAP)
Laboratory Director

L- Flag results above MDL and less than quantitation Limit as estimated.

H- Flag results above calibration range as estimated.

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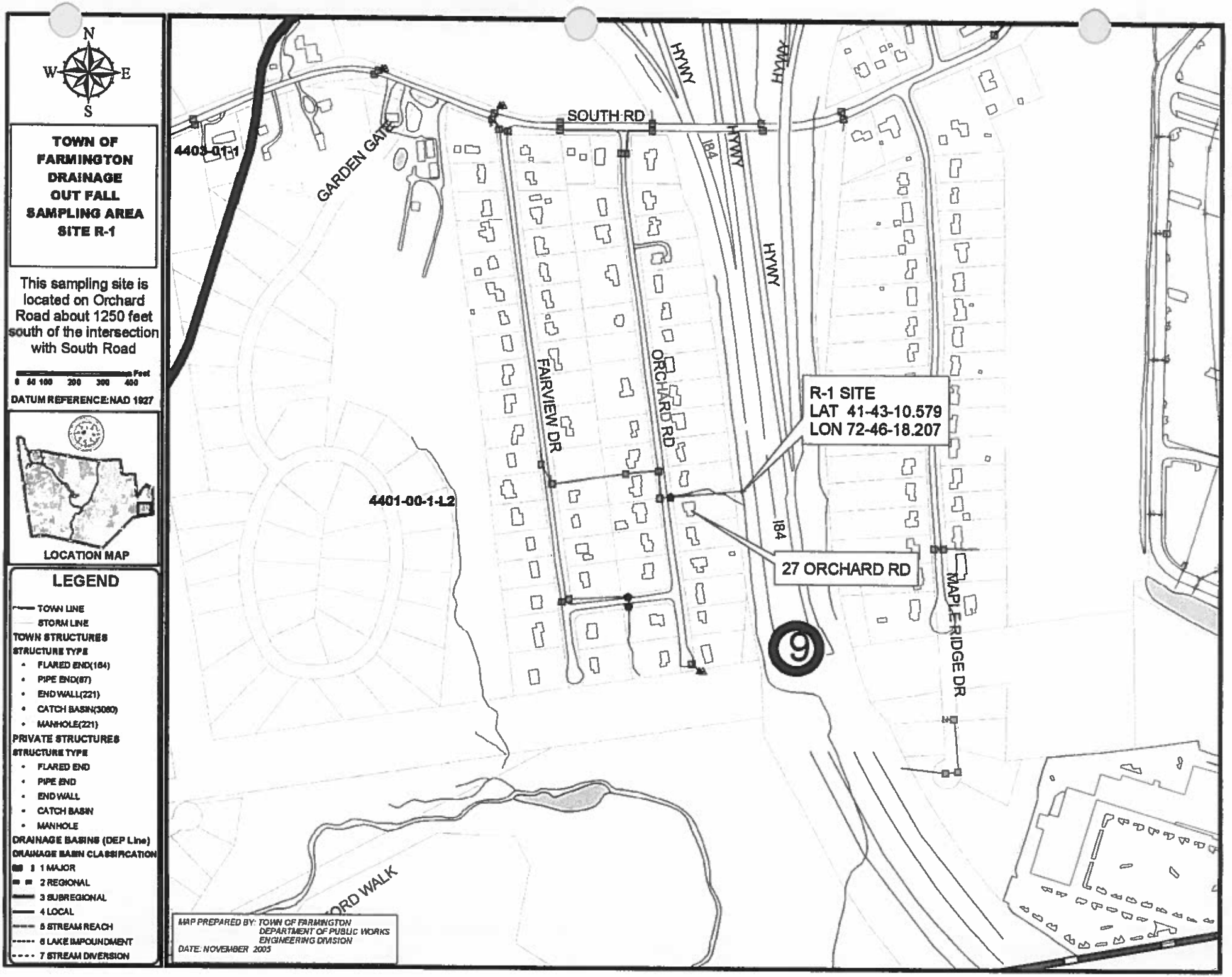
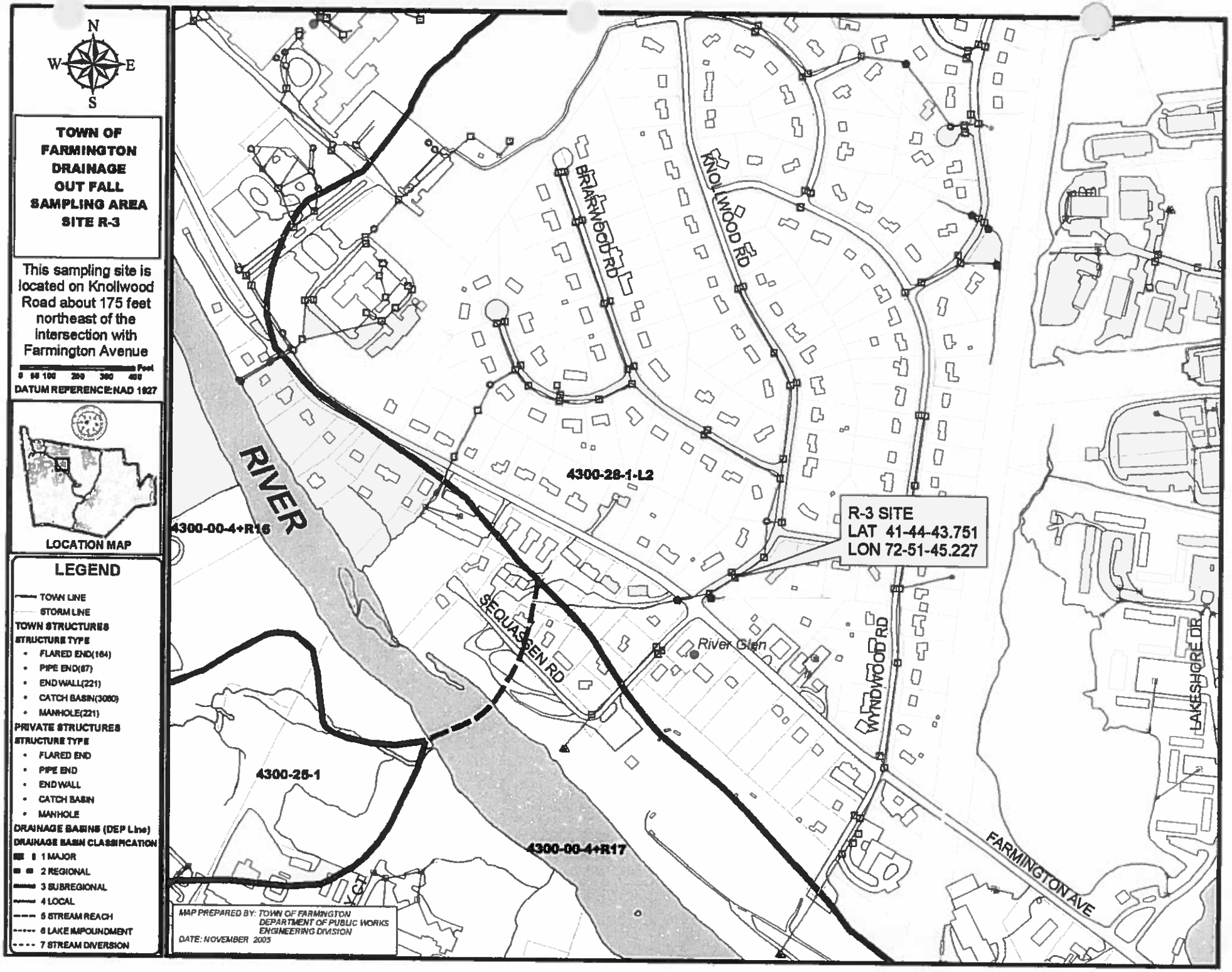
ATTACHMENT C

Monitoring Site Location Mapping


N
W
E
S
TOWN OF FARMINGTON DRAINAGE OUT FALL SAMPLING AREA SITE R-1
This sampling site is located on Orchard Road about 1250 feet south of the intersection with South Road
0 50 100 200 300 400 Feet
DATUM REFERENCE:NAD 1927
LOCATION MAP
LEGEND
TOWN LINE
STORM LINE
TOWN STRUCTURES
STRUCTURE TYPE
FLARED END(184)
PIPE END(87)
END WALL(221)
CATCH BASIN(3080)
MANHOLE(221)
PRIVATE STRUCTURES
STRUCTURE TYPE
FLARED END
PIPE END
END WALL
CATCH BASIN
MANHOLE
DRAINAGE BASINS (DEP Line)
DRAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION
SOUTH RD
GARDEN GATE
4403-01-1
HYWY
184
FAIRVIEW DR
ORCHARD RD
4401-00-1-L2
R-1 SITE
LAT 41-43-10.579
LON 72-46-18.207
27 ORCHARD RD
MAPLERIDGE DR
9
MAP PREPARED BY: TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
DATE: NOVEMBER 2005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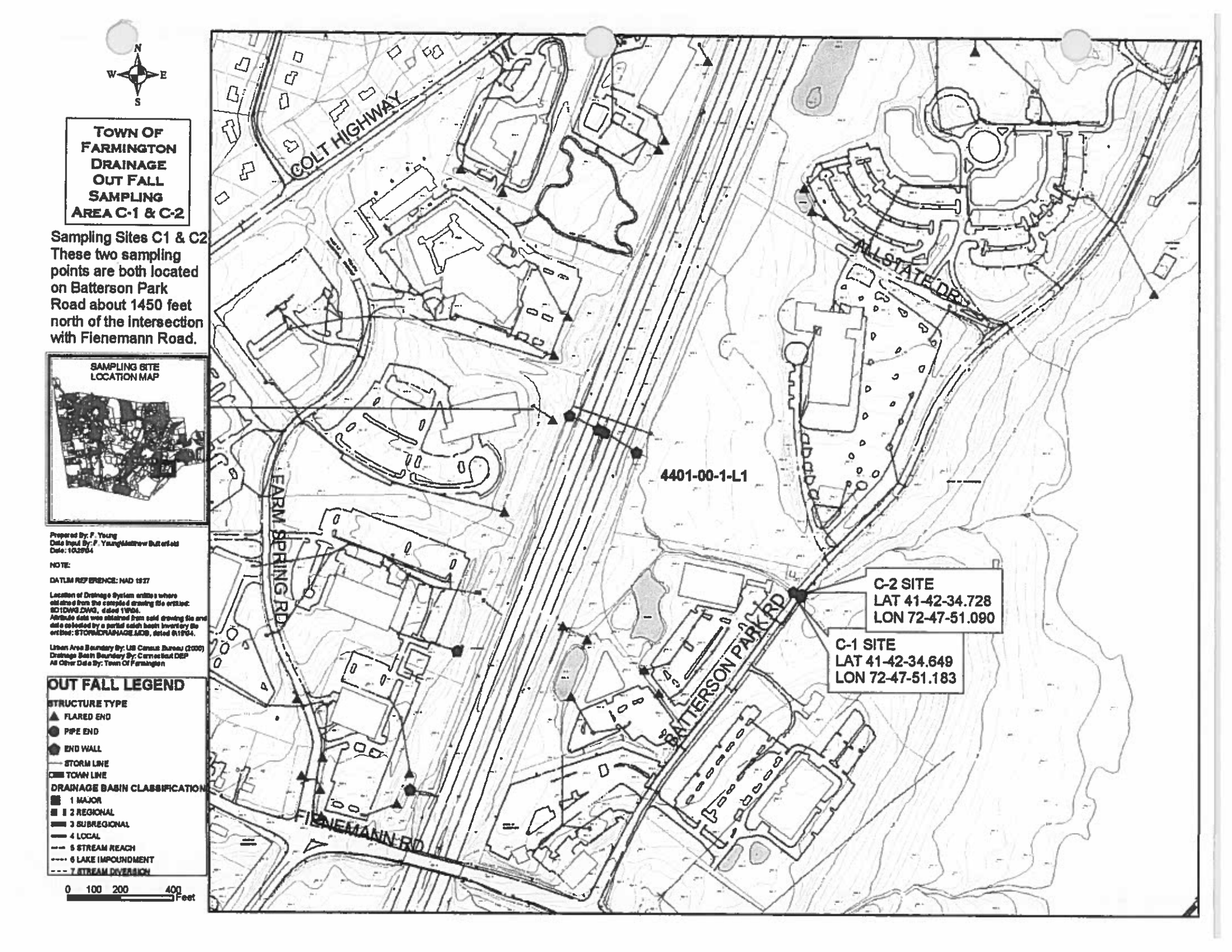
TOWN OF FARMINGTON DRAINAGE OUT FALL SAMPLING AREA SITE R-3
This sampling site is located on Knollwood Road about 175 feet northeast of the intersection with Farmington Avenue
0 50 100 200 300 400 Feet
DATUM REFERENCE:NAD 1927
LOCATION MAP
LEGEND
TOWN LINE
STORM LINE
TOWN STRUCTURES
STRUCTURE TYPE
FLARED END(164)
PIPE END(67)
END WALL(221)
CATCH BASIN(3080)
MANHOLE(221)
PRIVATE STRUCTURES
STRUCTURE TYPE
FLARED END
PIPE END
END WALL
CATCH BASIN
MANHOLE
DRAINAGE BASINS (DEP Line)
DRAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION
BRIARWOOD RD
KNOLLWOOD RD
RIVER
4300-28-1-L2
4300-00-4+R16
R-3 SITE
LAT 41-44-43.751
LON 72-51-45.227
SEQUASSEN RD
River Glen
WYNDWOOD RD
LAKESHORE DR
4300-25-1
4300-00-4+R17
FARMINGTON AVE
MAP PREPARED BY: TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
DATE: NOVEMBER 2005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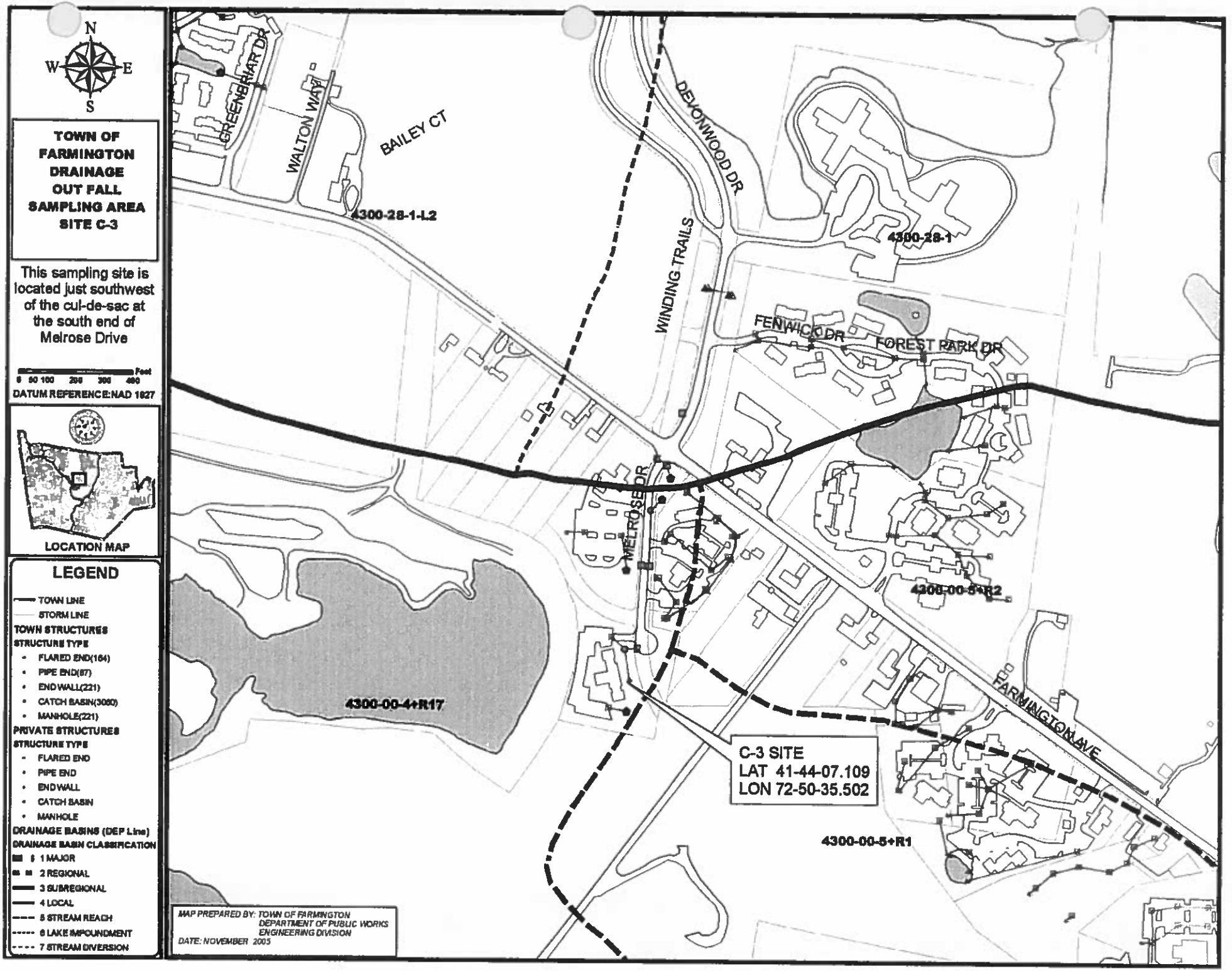
TOWN OF FARMINGTON DRAINAGE OUT FALL SAMPLING AREA C-1 & C-2
Sampling Sites C1 & C2 These two sampling points are both located on Batterson Park Road about 1450 feet north of the intersection with Flenemann Road.
SAMPLING SITE LOCATION MAP
COLT HIGHWAY
ALLSTATE DR
FARM SPRING RD
4401-00-1-L1
BATTERSON PARK RD
FLENEMANN RD
C-2 SITE
LAT 41-42-34.728
LON 72-47-51.090
C-1 SITE
LAT 41-42-34.649
LON 72-47-51.183
Prepared By: F. Young
Data Input By: F. Young/Matthew Butterfield
Date: 10/2004
NOTE:
DATUM REFERENCE: NAD 1927
Location of Drainage System entities where obtained from the compiled drawing file entitled: SD1DWG.DWG, dated 1/1904.
Attribute data was obtained from said drawing file and data collected by a partial catch basin inventory file entitled: STORMDRAINAGE.MDB, dated 6/1904.
Urban Area Boundary By: US Census Bureau (2000)
Drainage Basin Boundary By: Connecticut DEP
All Other Data By: Town Of Farmington
OUT FALL LEGEND
STRUCTURE TYPE
FLARED END
PIPE END
END WALL
STORM LINE
TOWN LINE
DRAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION
0 100 200 400 Feet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W
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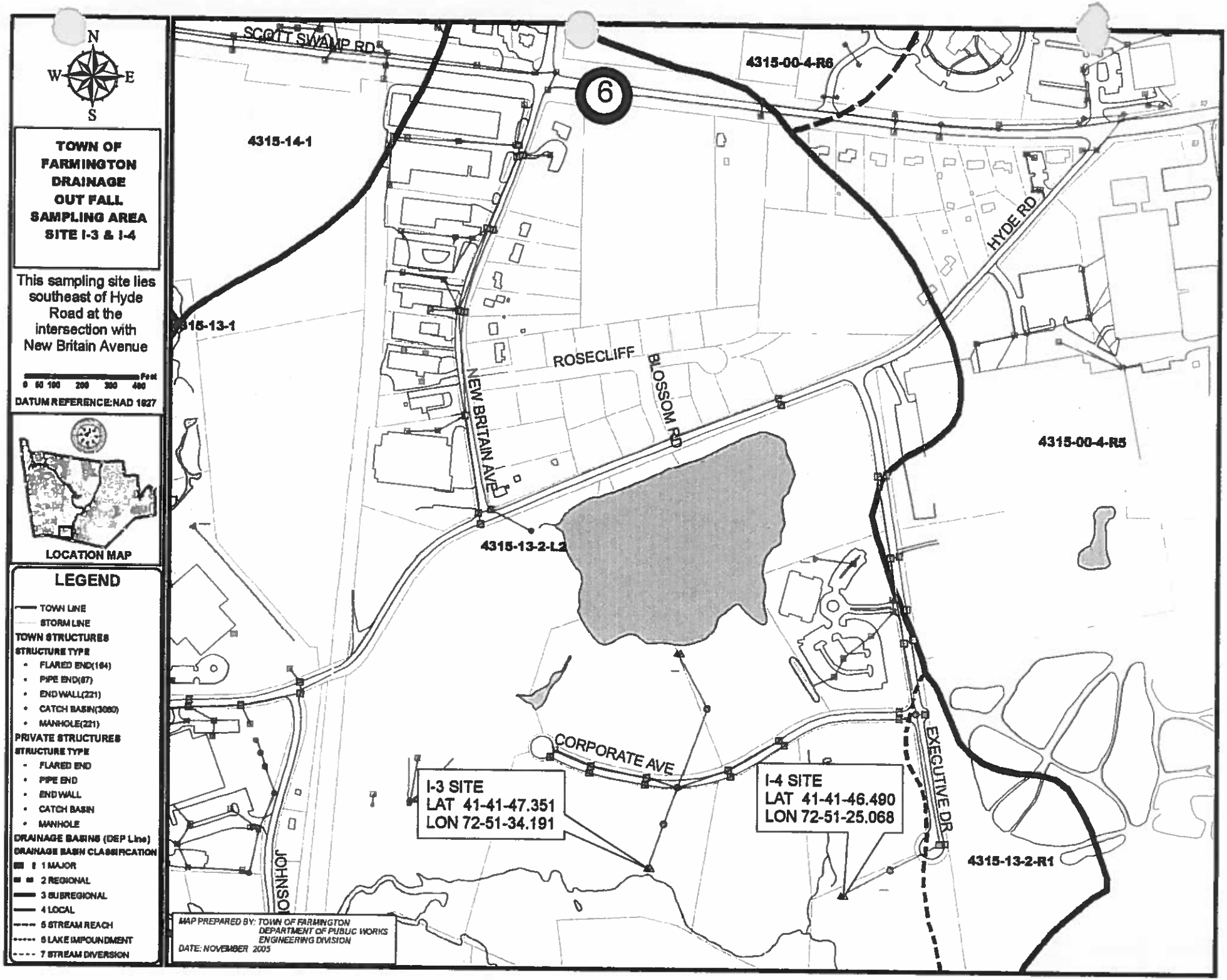
S
TOWN OF FARMINGTON DRAINAGE OUT FALL SAMPLING AREA SITE C-3
This sampling site is located just southwest of the cul-de-sac at the south end of Melrose Drive
Feet
0 50 100 200 300 400
DATUM REFERENCE:NAD 1927
LOCATION MAP
LEGEND
TOWN LINE
STORM LINE
TOWN STRUCTURES
STRUCTURE TYPE
FLARED END(164)
PIPE END(87)
END WALL(221)
CATCH BASIN(3060)
MANHOLE(221)
PRIVATE STRUCTURES
STRUCTURE TYPE
FLARED END
PIPE END
END WALL
CATCH BASIN
MANHOLE
DRAINAGE BASINS (DEP Line)
DRAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION
GREENBRIAR DR
WALTON WAY
BAILEY CT
4300-28-1-L2
DEVONWOOD DR
WINDING TRAILS
4300-28-1
FENWICK DR
FOREST PARK DR
MELROSE DR
4300-00-5+R2
4300-00-4+R17
FARMINGTON AVE
C-3 SITE
LAT 41-44-07.109
LON 72-50-35.502
4300-00-5+R1
MAP PREPARED BY: TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
DATE: NOVEMBER 2005


N
W
E
S
TOWN OF FARMINGTON DRAINAGE OUT FALL SAMPLING AREA SITE I-3 & I-4
This sampling site lies southeast of Hyde Road at the intersection with New Britain Avenue
0 50 100 200 300 400 Feet
DATUM REFERENCE:NAD 1927
LOCATION MAP
LEGEND
TOWN LINE
STORM LINE
TOWN STRUCTURES
STRUCTURE TYPE
FLARED END(164)
PIPE END(87)
END WALL(221)
CATCH BASIN(3080)
MANHOLE(221)
PRIVATE STRUCTURES
STRUCTURE TYPE
FLARED END
PIPE END
END WALL
CATCH BASIN
MANHOLE
DRAINAGE BASINS (DEP Line)
DRAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION
SCOTT SWAMP RD
6
4315-00-4-R6
4315-14-1
HYDE RD
4315-13-1
ROSECLIFF
BLOSSOM RD
NEW BRITAIN AVE
4315-00-4-R5
4315-13-2-L2
CORPORATE AVE
EXECUTIVE DR
JOHNSON
I-3 SITE
LAT 41-41-47.351
LON 72-51-34.191
I-4 SITE
LAT 41-41-46.490
LON 72-51-25.068
4315-13-2-R1
MAP PREPARED BY: TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
DATE: NOVEMBER 2005