8-12-09

SWAN LAKE DRAINAGE OUTFALL IMPROVEMENTS

DEP General Permit for Utilities and Drainage

PREPARED FOR:

UNIVERSITY OF CONNECTICUT

July 2009

Prepared by:

LENARD ENGINEERING, INC.

CIVIL, ENVIRONMENTAL & HYDROGEOLOGICAL CONSULTANTS

1768 STORRS ROAD, P.O. BOX 580

STORRS, CT 06268-0580

Request for Authorization Form for General Permits Administered by the Inland Water Resources Division Including:

DEP USE ONLY
App. No. _____
Co./Ind. No. _____

- **General Permit For Habitat Conservation (DEP-IWRD-GP-003)**
- **General Permit For Lake, Pond and Basin Dredging (DEP-IWRD-GP-004)**
- **General Permit For Utilities and Drainage (DEP-IWRD-GP-005)**
- **General Permit For Minor Structures (DEP-IWRD-GP-006)**
- **General Permit For Minor Grading (DEP-IWRD-GP-007)**
- **General Permit For Dam Safety Repair and Alteration (DEP-IWRD-GP-008)**

Notice to Requesters: Please complete this form in accordance with the instructions (DEP-IWRD-INST-003-008) to ensure the proper handling of your request for authorization. Print or type unless otherwise noted. You must submit the *Permit Application Transmittal Form* (DEP-APP-001) and the applicable total fee with this form.

Notice to Municipal Agencies: This is a request for authorization submitted to the Department of Environmental Protection (DEP) pursuant to CGS Section(s) 22a-45a (Inland Wetlands and Watercourses), 22a-349a (Stream Channel Encroachment Lines), 22a-378a (Diversion of Water), or 22a-411 (Dam Safety). In accordance with such sections, the municipal agencies listed in Part VIII of this request for authorization and any other person, may submit written comments to DEP concerning the activities described herein no later than **thirty-five days** after the date this request for authorization was submitted to such agencies or DEP, whichever date is later. **All correspondence regarding this request for authorization must identify the name of the requester and the name of the general permit (see above).** No activity is authorized under these general permits unless it is approved, in writing, by the Commissioner of DEP.

Submit *comments* to:

INLAND WATER RESOURCES DIVISION
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

Call the Inland Water Resources Division General Permit Program should there be any questions: 860-424-3019 or 860-424-3706, Monday through Friday, except holidays, from 8:30am to 4:30pm.

Part I: Requester Information

1. Fill in the name of the applicant(s)/requester(s) as indicated on the *Permit Application Transmittal Form* (DEP-APP-001):

Applicant/Requester: **University of Connecticut**

Mailing Address: **31 LeDoyt Road; U-3055**

City/Town: **Storrs** State: **CT** Zip Code: **06269-3055**

Business Phone: **860-486-5446** ext. Fax: **860-486-5477**

Contact Person: **Richard Miller** Title: **Director, Envir. Policy**

☐ Enter a check mark if there are co-requesters. If so, label and attach additional sheet(s) with the required information as supplied above.

Part II: General Permit Type and Fee Information

Enter a check mark in the appropriate box(es) to indicate the activity(ies) which is(are) the subject of this request for authorization and the program that applies to each activity. Please complete one request for authorization form for each site. Each site may encompass several activities. The fee for each activity is $1000.00, unless otherwise indicated. For municipalities, the 50% discount applies. The request for authorization will not be processed without the total fee. Please enter the fee for each activity and the total fee submitted in the spaces provided.

4 Proposed Activity	This request for authorization is for 4 (check each program that applies): State Action Inland Wetlands (CGS 22a-45a) (No Fee)	Stream Channel Encroachment Lines (CGS 22a-349a)	Water Diversion (CGS 22a-378a)	Dam Safety (CGS 22a-411)	Fee
Habitat Conservation (DEP-IWRD-GP-003)					
☐ Placement of boulders w/in stream channels	☐	☐	☐	☐	
☐ Installation of fisheries enhancement structures	☐	☐	☐	☐	
☐ Removal of invasive species	☐	☐	☐	☐	
☐ Beaver management activities	☐	☐	☐	☐	
☐ Streambank stabilization	☐	☐	☐	☐	
Lake, Pond And Basin Dredging (DEP-IWRD-GP-004)					
☐ Dredging of lakes and ponds	☐	☐	☐	☐	
☐ Dredging of sedimentation, detention or retention basins	☐	☐	☐	☐	
Utilities And Drainage (DEP-IWRD-GP-005)					
☐ Placement, repair or replacement of cables, conduits and pipelines	☐	☐	☐	☐	**$1000**
☐ Placement, repair or replacement of support structures for overhead cables or wires	☐	☐	☐	☐	
☐ Drainage system maintenance	☐	☐	☐	☐	**No Fee**
☐ Repair or replacement of culverts or bridges	☐	☐	☐	☐	**$ 1000**
☐ Installation of small storm drainage systems	☐	☐	☐	☐	
☐ Repair or installation of septic systems	☐	☐	☐	☐	
☐ Construction of permanent irrigation systems	☐	☐	☐	☐	
☐ Construction of temporary irrigation systems	☐	☐	☐	☐	
☐ Installation of water monitoring structures	☐	☐	☐	☐	
☐ Installation of dry hydrants	☐	☐	☐	☐	

4 Proposed Activity	This request for authorization is for 4 (check each program that applies):	

	State Action Inland Wetlands (CGS 22a-45a) (No Fee)	Stream Channel Encroachment Lines (CGS 22a-349a)	Water Diversion (CGS 22a-378a)	Dam Safety (CGS 22a-411)	Fee
Minor Structures (DEP-IWRD-GP-006)					
☐ Construction of a post supported structure	☐	☐	☐	☐	
☐ Construction of hoop houses and green houses	☐	☐	☐	☐	
☐ Placement of structures on land whose elevation is above the stream channel encroachment line base flood	☐	☐	☐	☐	
☐ Demolition of an existing structure	☐	☐	☐	☐	
☐ Backfilling of foundations	☐	☐	☐	☐	
☐ Construction of minor additions to an existing facility for the purpose of providing handicap accessibility	☐	☐	☐	☐	
☐ Flood proofing of existing structures (including elevating structures in accordance with FEMA standards)	☐	☐	☐	☐	
☐ Construction of structural appurtenances to an existing structure	☐	☐	☐	☐	
☐ Installation of permanent fencing that is open to flood flows	☐	☐	☐	☐	
☐ Installation of permanent solid wall fencing closed to flood flows	☐	☐	☐	☐	
Minor Grading (DEP-IWRD-GP-007)					
☐ Minor landscaping, construction of paths, trails	☐	☐	☐	☐	
☐ Plan for the maintenance of boat launch facilities and beaches	☐	☐	☐	☐	**No Fee**
☐ Grading for temporary access	☐	☐	☐	☐	
☐ Wetland creation or enhancement	☐	☐	☐	☐	
☐ Roadway widening	☐	☐	☐	☐	
☐ Construction of nature access structures	☐	☐	☐	☐	

4 Proposed Activity	This request for authorization is for 4 (check each program that applies): State Action Inland Wetlands (CGS 22a-45a) (No Fee)	Stream Channel Encroachment Lines (CGS 22a-349a)	Water Diversion (CGS 22a-378a)	Dam Safety (CGS 22a-411)	Fee
Dam Safety Repair and Alteration (DEP-IWRD-GP-008)					
☐ Installation of riprap erosion protection	☐	☐	☐	☐	
☐ Installation or restoration of embankment fill	☐	☐	☐	☐	
☐ Repair or alteration of structural components of a dam	☐	☐	☐	☐	
Total fee submitted with this request for authorization					

Part III: Authorization Type

If this request is for a renewal of an approval of authorization, you *must* complete Parts I through III and Parts VIII and IX; complete the remaining parts of the form *only* if it is different than your previous submittal. Please provide the following:

Permit or Authorization Number(s) Expiration Date: Description of Activity

Part IV: Associated Party Information

1. List primary contact for departmental correspondence and inquiries, if different than the requester.

   Name:

   Mailing Address:

   City/Town: State: Zip Code:

   Business Phone: ext. Fax:

   Contact Person: Title:

2. List attorney or other representative, if applicable.

   Firm Name:

   Mailing Address:

   City/Town: State: Zip Code:

   Business Phone: ext. Fax:

   Attorney:

3. Owner of the property or facility, if different than the requester:

   Name:

   Mailing Address:

   City/Town: State: Zip Code:

   Business Phone: ext. Fax:

   Contact Person: Title:

   Requester's interest in the subject property:

   ☐ option holder ☐ lessee ☐ other (specify):

4. List consultant(s) employed or retained to assist in preparing the request for authorization or in designing or constructing the activity. Please enter a check mark if additional sheets are necessary, and label and attach them to this sheet. ☐

   Name: **Lenard Engineering, Inc.**

   Mailing Address: **P.O. Box 580**

   City/Town: **Storrs** State: **CT** Zip Code: **06268**

   Business Phone: **860-429-5400** ext. Fax: **860-429-1367**

   Contact Person: **James E. Ericson, P.E.** Title: **Vice President**

   Service Provided: **Permit Application**

Part V: Site Information

1. **Site Location:**

   a. Name of facility, if applicable:

   Street Address or Description of Location: **Intersection of Gurleyville Road and Horsebarn Hill Road**

   City/Town: **Storrs** State: **CT** Zip Code: **06269**

   Project No., if applicable:

   b. Tax Assessor's Reference: Map Block Lot

   (Assessor's reference is not required if requester is an agency of the State of Connecticut.)

   c. Latitude and Longitude of the approximate "center of the site" in *degrees, minutes, and seconds*:

   Latitude: **72-14'-43" N** Longitude: **41-48'-11" W**
   Method of determination (check one): ☐ GPS ☒ USGS MAP ☐ Other
   If a USGS Map was used, provide the quadrangle name: **Spring Hill**

   d. In case of an existing dam structure, the CT Dam Inventory Number:

2. Name of the wetland or watercourse involved with or adjacent to the subject activity:

   Roberts Brook

3. Is the subject activity located in a public water supply watershed? ☒ Yes ☐ No

   If yes, provide the name of the water utility: **Windham Water Works**

4. Is the activity which is the subject of this registration located within the coastal boundary as delineated on DEP approved coastal boundary maps? ☐ Yes ☒ No

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

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

5. Is the project site 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: **June 2009**

   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 request for authorization, 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 D.

   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 Attachment D.

Part V: Site Information (cont.)

6a. Is the subject activity within a watercourse or floodplain? ☐ Yes ☒ No

If yes: Provide the land surface area draining to the site of the subject activity:

acres or square miles

6b. Will the subject activity be within a FEMA floodway? ☐ Yes ☒ No

(i) If yes, and the subject activity is the construction of a culvert or a bridge, submit, as Attachment E, the certification by a licensed engineer, together with the hydraulic analysis in support thereof, that such culvert or bridge is designed in accordance with accepted engineering practices and conforms to the applicable flood management standards and criteria under 44CFR Chapter 1, Part 59 through 79, inclusive.

(ii) If the requester has a Flood Management (FM) Certification for the subject activity, provide the FM certification number:

An FMC application accompanies this GP application.

7. **Existing Conditions**

a. Describe the present and intended use(s) of the property on which the subject activity is proposed.

The property is part of the University of Connecticut's Storrs campus. The project site currently receives stormwater flows from two sub-watersheds on campus, and will continue to receive stormwater flows from these sub-watersheds, in addition to flows from a ~57-acre watershed in the future. This project was included in the University's April 2006 Campuswide Drainage Master Plan, submitted as a Flood Management Certification application.

☐ Check if additional sheets are attached to this page.

b. Describe all natural and man-made features including wetlands, watercourses, fish and wildlife habitat, floodplains and any existing structures potentially affected by the subject activity. Such features should be depicted on the site plan (*Attachment B*). In the case of maintenance and repair or improvements to an existing dam, describe the condition of the structure which necessitates such work.

Approximatly 700 square feet of wetland and watercourse will be affected by the activity. Some trees will be removed for the proposed construction to stabilize the slope. The existing 30" and 36" drain lines will be relocated, a new head wall and preformed scour hole will be constructed. The relocated drain lines will be extended no more than 5' from their existing location.

☒ Check if additional sheets are attached to this page.

ADDITIONAL INFORMATION
PART V: Site Information

Item 6a. Is the subject activity within a watercourse or floodplain?

Response: No. The project location consists of the combined discharge locations for the Swan Lake overflow piping, as well as a pipe with drains the Horsebarn Hill Watershed. These pipes discharge adjacent to each other, into a small channel, and form the headwaters of Roberts Brook. These discharges only flow generally when there is a storm event, after which there is no significant flow in the channel. Therefore, we believe the area immediately downstream of the discharge location should not technically be a watercourse.

We also reviewed the FEMA flood plain maps, and our project is well outside the limits of the mapped FEMA floodplain.

Part VI: Project Summary

1. **Regulated Activity**

   Describe the activity which is the subject of this request for authorization including the reason for conducting or maintaining the activity. If the subject activity is to be conducted on an existing dam, describe the specific nature and location of maintenance, repair or improvement activities relative to the dam structure itself.

   The existing storm drainage outlets into Roberts Brook are showing signs of erosion and the proposed project will correct that erosion, as well as provide additional erosion protection at the outlet suitable for the proposed increased stormwater flows as described in the attached sheet.

   ☒ Check if additional sheets are attached to this page.

2. **Initiation of Activity**

   When does the requester plan to initiate construction of the subject activity?

   Fall, 2009

3. **Construction Activity Details**

   Provide the following information about the subject activity's impact on wetlands, watercourses or floodplains (all such details must also be depicted on the site plan included in this request for authorization as *Attachment B*):

   a. Volume of proposed fill: cubic yards

   b. Area of proposed fill: acres

   c. Volume of proposed excavation: cubic yards

   d. Area of proposed excavation: **0.016** acres

   e. Area of any clearing, grubbing of land, or other alteration of the land: **0.15** acres

   f. Describe the volume and area of any *temporary* fill, the purpose of such fill, and when it will be removed.

☐ Check if additional sheets are attached to this page.

Part VI: Project Summary (cont.)

4. **Plan for Maintenance of Boat Launch Facilities and Beaches**

   Provide the following information if the subject activity involves maintenance of boat launch facilities and beaches as described in Section 3(a)(2) of the General Permit for Minor Grading (DEP-IWRD-GP-007)

   Include as Attachment F, a Plan for Maintenance of Boat Launch Facilities and Beaches.

   Go to Part VII of this form; do not complete items (5) through (9) of Part VI.

5. **Drainage Maintenance Plan**

   Provide the following information if the subject activity is drainage maintenance as described in Section 3(a)(3) of the General Permit for Utilities and Drainage (DEP-IWRD-GP-005).

   Include as Attachment G, a Drainage Maintenance Plan.

   Go to Part VII of this form; do not complete items (6) through (9) of Part VI.

6. **New, Replaced Or Modified Drainage System(s)**

   Provide the following information if the subject activity involves the placement, replacement, or other modification of a drainage system:

   a. Q_{10} = V_{10} =
   Is energy dissipaton or inlet/outlet protection provided? ☐ Yes ☐ No
   Riprap/stone size:
   Pad dimensions are:
   If there is more than one pad, provide additional pad dimensions on a separate sheet.
   ☒ Check if additional sheets are attached to this page.

   b. Include as Attachment H, adequate design computations which show that such activity is designed in accordance with accepted engineering practices and conforms to the applicable flood management standards and criteria, including standards for floodproofing of structures, established in Section 25-68d of the General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies (RCSA).

7. **Floodproofing of Structures**

   Have the structures been designed according to the standards for flood-proofing of structures established in the RCSA Sections 25-68h-1-3? ☐ Yes ☒ No

8. **Activities Involving Dams**

   Provide the following information if the subject activity involves maintenance, repair or improvement of an existing dam, or construction of a low hazard dam as described in Section 3(a) of the General Permit for Dam Safety Repair and Alteration (DEP-IWRD-GP-008) (all such details must be depicted on the site plan, Attachment B):

   a. Include as Attachment I, an engineering report, as described in Section 4(c)(2)(L) of the General Permit for Dam Safety Repair and Alteration (DEP-IWRD-GP-008).

   b. *Pond Characteristics*:

   Surface area: acres
   Drainage area: acres or square miles
   Volume at spillway elevation: acre feet

ADDITIONAL INFORMATION
PART VI: Project Summary

Item 6. New, Replaced or Modified Drainage System(s)

Response: Per discussions with DEP Inland Water Resources staff, the University is submitting this general permit application under the category "Extensions of Culverts and / or Drainage Pipes". Therefore, we have not completed all the information in Item 6a.

However, as given in the Flood Management Certification application that accompanies this general permit, LEI designed the outfall for the predicted 100 year design storm combined flow of **34 cfs** from the 36 and 30 inch piping, and used a peak channel velocity of **8 feet per second** obtained from the HEC RAS output to conservatively design the erosion protection at the outfall of both pipes.

This project was designed to not only remedy the existing erosion problems at the outlets, but to accommodate additional flows from a 55 acre diversion proposed as part of the University's campuswide Flood Management Certification application, during a 100 year storm event.

Part VI: Project Summary (cont.)

c. *Dam Characteristics*:

Maximum height: feet

Total length: feet

Type of construction (e.g., earth, concrete masonry, timber etc.):

Type of spillway (e.g., weir, drop inlet, ogee, etc.):

d. *Fill in Watercourses*:

Does the subject activity involve placement of fill material in the existing brook, stream, river or impoundment? ☐ Yes ☐ No

If yes, describe the volume of such fill, its engineering characteristics and intended purpose:

☐ Check if *additional* sheets are attached to this page.

9. **Best Management Practices**

Describe the pollution prevention and best management practices that will be implemented during construction and operation of the proposed activity to: minimize disturbance and pollution of floodplains, wetlands, and watercourses; maintain an uninterrupted stream flow; and prevent flooding or other environmental damage. Show erosion and sedimentation controls in Attachment B, include pretreament of stormwater runoff.

The construction activity will take place only during low flow conditions. During construction, stormwater will be diverted around the construction area by either temporary bypass piping, pumps or a combination of these measures. Temporary check dams will be installed in the stream channel downstream of the construction area, to minimize the potential for downstream sedimentation.

☐ Check if additional sheets are attached to this page.

Part VII: Supporting Documents

In addition to the documents described in Parts V and VI of this form, your request for authorization must include a location map (*Attachment A*) and a site plan (*Attachment B*). For directions as to the information that should be depicted on such maps and plans, please review Section 4(c)(2) of the applicable general permits.

Please enter a check mark by the attachments as verification that *all* attachments have been submitted with this request for authorization form. When submitting any supporting documents, please label the documents as indicated in this part (e.g., *Attachment A, Location Map*, etc.) and be sure to include the requester's name as indicated on the *Permit Application Transmittal Form*.

☒	Attachment A:	Location Map: A depiction, on an 8.5" x 11" copy of the relevant portion of the most recent version of the United States Geologic Survey topographic map (Scale 1:24,000), of the exact location of the property at which such activity will be conducted.
☒	Attachment B:	Site Plan: please review Section 4(c)(2) of the applicable general permits.
☐	Attachment C:	*Coastal Consistency Review Form* (DEP-APP-004), if applicable
☒	Attachment D:	A copy of the NDDB Review Request Form (DEP-APP-007) and the NDDB response thereto, and any biologist's report on endangered, threatened or special concern species, if applicable.
☐	Attachment E:	Certification of a licensed engineer, as described in Section 4(c)(2)(M) of the General Permit for Utilities and Drainage (DEP-IWRD-GP-005), for work involving the construction of culverts or bridges. For guidance, please refer to *Model Hydraulic Analysis, Supplemental Guidelines for Preparing Hydraulic Analyses in Permit Applications Submitted to the Inland Water Resources Division* (DEP-IWRD-GUID-001, Rev. 02/13/02).
☐	Attachment F:	Plan for Maintenance of Boat Launch Facilities and Beaches, as described in Section 3(a)(2) of the General Permit for Minor Grading (DEP-IWRD-GP-007), if applicable.
☐	Attachment G:	Drainage Maintenance Plan, as described in Section 3(a)(3) of the General Permit for Utilities and Drainage (DEP-IWRD-GP-005), if applicable.
☐	Attachment H:	Design Computations, as described in Section 4(c)(2)(L) of the General Permit for Utilities and Drainage (DEP-IWRD-GP-005), for work involving placement, replacement, or other modification of a drainage system.
☐	Attachment I:	Engineering Report, as described Section 4(c)(2)(L) of the General Permit for Dam Safety Repair and Alteration (DEP-IWRD-GP-008) for work related to a dam.
☐	Attachment J:	Other information provided by requester (list):

Part VIII: Notice to Municipal Agencies

You must submit a complete copy of your request for authorization to the municipal wetlands agency, zoning commission, planning commission or combined planning and zoning commission, and conservation commission of each municipality which is or may be affected by the subject activity. Enter the **names and addresses** of the municipal agencies which were provided a complete copy of your request for authorization, including all of its attachments, the date such copy was submitted, (Date of Service) and the Type of Service (check one). Note: the department can not authorize your proposed activity until thirty five (35) days after the date of your service to the municipal agencies.

Wetlands Agency:

Name: **Town of Mansfield**

Address: **4 South Eagleville Rd**

City/Town: **Mansfield** State: **CT** Zip Code: **06268**

Date of Service: 8/17/09 Type of Service: ☐ First class mail ☐ Certified mail ☒ Hand delivery

Conservation Commission:

Name:

Address:

City/Town: State: Zip Code:

Date of Service: Type of Service: ☐ First class mail ☐ Certified mail ☒ Hand delivery

Planning Commission:

Name:

Address:

City/Town: State: Zip Code:

Date of Service: Type of Service: ☐ First class mail ☐ Certified mail ☐ Hand delivery

Zoning Commission:

Name:

Address:

City/Town: State: Zip Code:

Date of Service: Type of Service: ☐ First class mail ☐ Certified mail ☐ Hand delivery

Combined Planning and Zoning Commission:

Name: **Town of Mansfield**

Address: **4 South Eagleville Road**

City/Town: **Mansfield** State: **CT** Zip Code: **06268**

Date of Service: 8/17/09 Type of Service: ☐ First class mail ☐ Certified mail ☒ Hand delivery

☐ Check this box if the agencies of another municipality were served a copy of this request for authorization and attach to this page additional sheets listing the agency names and addresses where a copy of the request was mailed or delivered, the date of such service and the type of service used.

Part IX: Requester Certification

The requester *and* the individual(s) responsible for actually preparing the request for authorization must sign this part. A request for authorization 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 the 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 request for authorization is on complete and accurate forms as prescribed by the commissioner without alteration of the text.

I certify that a complete copy of this request for authorization, including all documents attached thereto, was sent by regular or certified mail or was hand delivered to the municipal wetlands agency, zoning commission, planning commission or combined planning and zoning commission, and conservation commission of each municipality which is or may be affected by the subject activity.

I understand that a false statement in the submitted information may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to section 53a-157b of the General Statutes, and in accordance with any other applicable statute."

Richard A. Miller — Signature of Requestor

8/12/09 — Date

Richard A. Miller
Name of Requestor (print or type)

Director, Envir. Policy
Title (if applicable)

James E Ericson — Signature of Preparer

7-17-09 — Date

James E. Ericson, P.E.
Name of Preparer (print or type)

Vice President
Title (if applicable)

☐ Please enter a check mark if additional signatures are necessary.
If so, please reproduce this sheet and attach signed copies to this sheet.

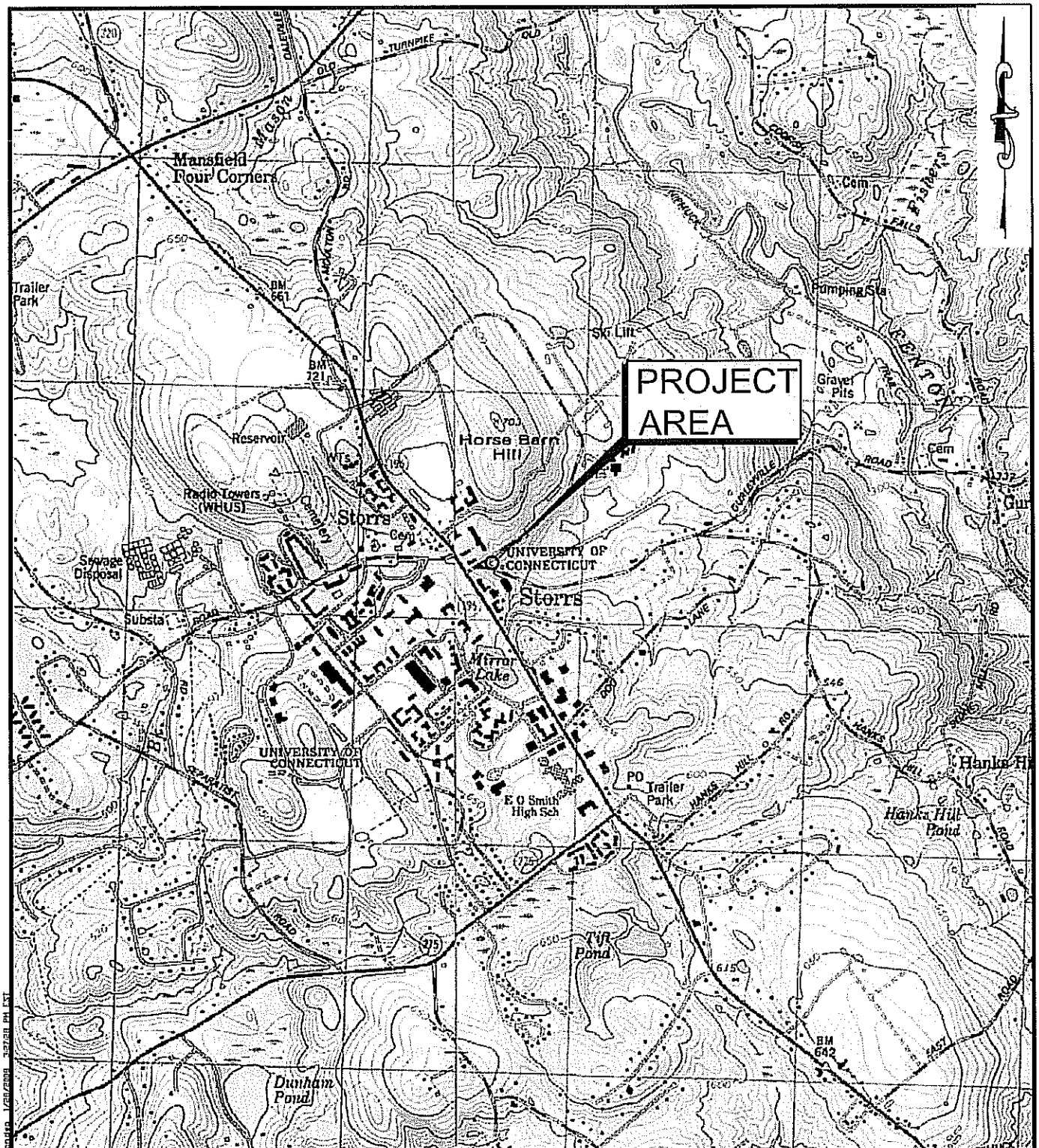
Note: Please submit the total general permit fee and the original and two copies of your completed *Permit Application Transmittal Form* and *Request for Authorization Form* and all documents attached to and a part thereof to:

CENTRAL PERMIT PROCESSING UNIT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

And submit one complete copy of your completed *Request for Authorization Form* and all documents attached to and a part thereof to each municipal agency listed in Part VIII.

ATTACHMENT A

USGS LOCATION MAP



Source:
USGS TOPOGRAPHIC MAP
Coventry, CT QUADRANGLE
Srping Hill, CT QUADRANGLE

Lenard Engineering, Inc.
Winsted, CT

ATTACHMENT A

USGS TOPOGRAPHIC QUADRANGLE MAP

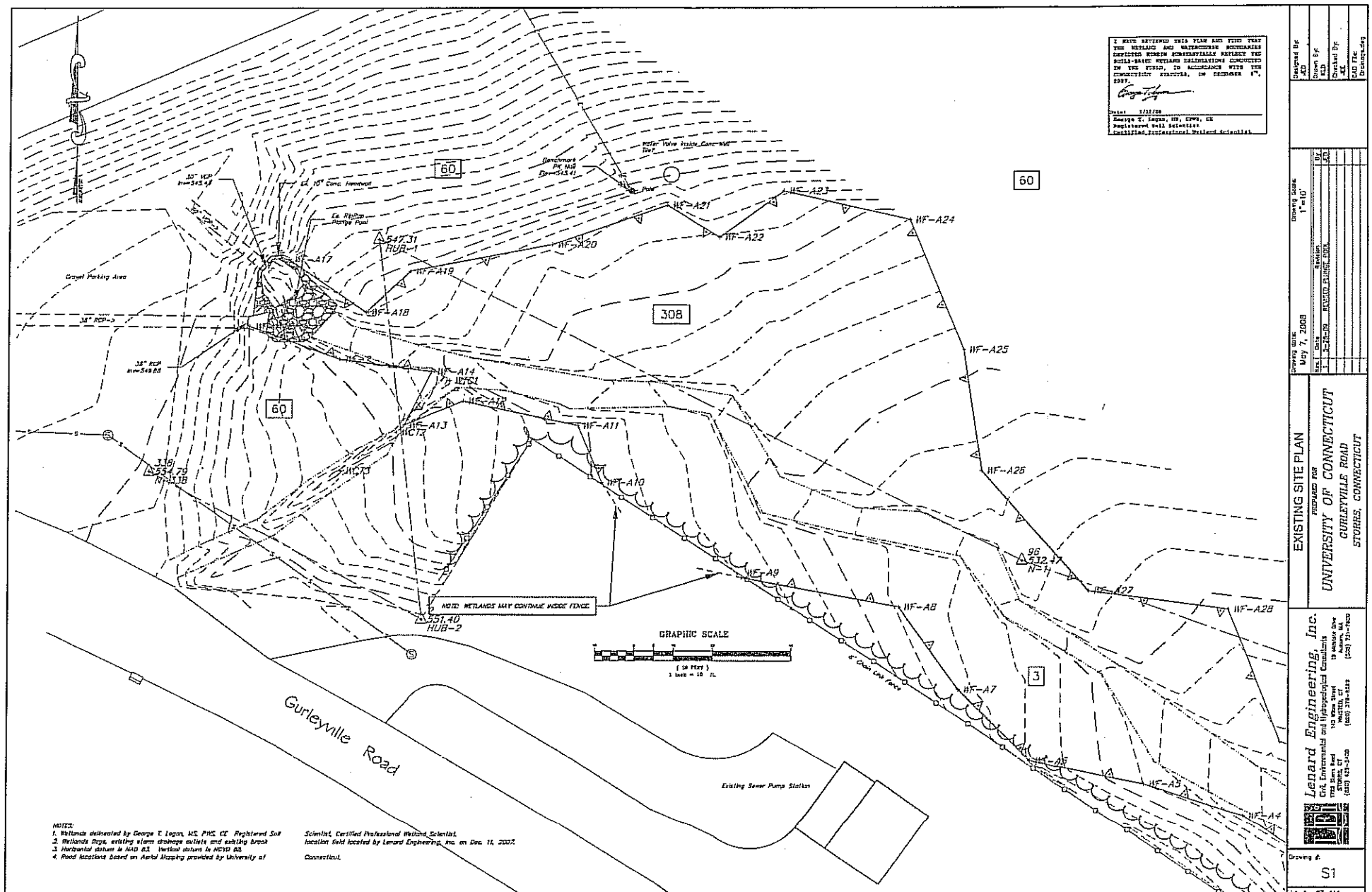
SWAN LAKE OUTFALL

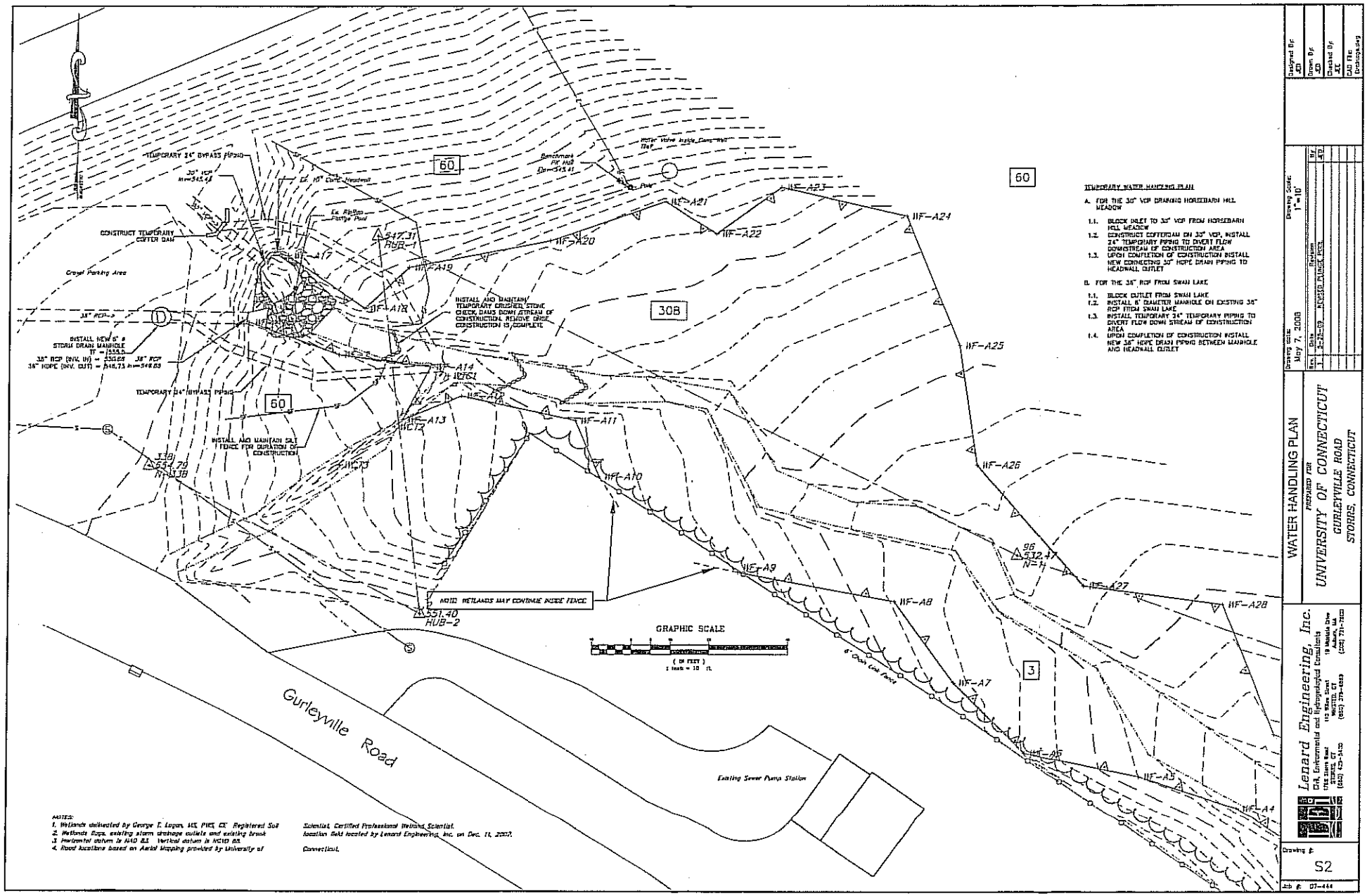
STORRS, CT

Scale 1:25000

ATTACHMENT B

SITE PLAN


I HAVE REVIEWED THIS PLAN AND FIND THAT THE WETLAND AND WATERCOURSE BOUNDARIES DEPICTED HEREON SUBSTANTIALLY REFLECT THE SOILS-BASED WETLAND DELINEATIONS CONDUCTED IN THE FIELD, IN ACCORDANCE WITH THE CONNECTICUT STATUTES, ON DECEMBER 6TH, 2007.
George E. Logan, MS, CPWS, CE
Registered Soil Scientist
Certified Professional Wetland Scientist
Designed By: JCD
Drawn By: KLD
Checked By: JCE
CAD File: Drawings.dwg
Drawing Date: May 7, 2008
Drawing Scale: 1"=10'
Revision: 2-28-08 REVISED PLANTING AREA
EXISTING SITE PLAN
PREPARED FOR
UNIVERSITY OF CONNECTICUT
GURLEYVILLE ROAD
STORRS, CONNECTICUT
Lenard Engineering, Inc.
Civil, Environmental and Hydrogeological Consultants
19 Mason Circle, Suite 1, Auburn, MA (508) 721-7520
192 Main Street, Willington, CT (860) 429-3100
1792 Main Street, Storrs, CT (860) 974-2338
Drawing #: S1
Job #: 07-444
60
308
3
WF-A1
WF-A2
WF-A3
WF-A4
WF-A5
WF-A6
WF-A7
WF-A8
WF-A9
WF-A10
WF-A11
WF-A12
WF-A13
WF-A14
WF-A15
WF-A16
WF-A17
WF-A18
WF-A19
WF-A20
WF-A21
WF-A22
WF-A23
WF-A24
WF-A25
WF-A26
WF-A27
WF-A28
HC71
HC72
HC73
547.31 HUB-1
551.40 HUB-2
554.79 N-118
532.47 N-1
Gravel Parking Area
30" RCP
36" RCP
Ex. Rip-rap Plunge Pool
Water Valve Riser Conc. Mat
Bench Mark PK Nail Elev=545.41
8' Chain Link Fence
NOTE: WETLANDS MAY CONTINUE INSIDE FENCE.
GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.
Gurleyville Road
Existing Sewer Pump Station
NOTES:
1. Wetlands delineated by George E. Logan, MS, PWS, CE. Registered Soil Scientist, Certified Professional Wetland Scientist.
2. Wetlands flags, existing storm drainage outlets and existing brook location field located by Lenard Engineering, Inc. on Dec. 11, 2007.
3. Horizontal datum is NAD 83. Vertical datum is NGVD 88.
4. Road locations based on Aerial Mapping provided by University of Connecticut.



TEMPORARY WATER HANDLING PLAN

A. FOR THE 30" VCP DRAINING HORSEBARN HILL MEADOW

1.1. BLOCK INLET TO 30" VCP FROM HORSEBARN HILL MEADOW
1.2. CONSTRUCT COFFERDAM ON 30" VCP, INSTALL 24" TEMPORARY PIPING TO DIVERT FLOW DOWNSTREAM OF CONSTRUCTION AREA
1.3. UPON COMPLETION OF CONSTRUCTION INSTALL NEW CONNECTING 30" HDPE DRAIN PIPING TO HEADWALL OUTLET

B. FOR THE 38" RCP FROM SWAN LAKE

1.1. BLOCK OUTLET FROM SWAN LAKE
1.2. INSTALL 6' DIAMETER MANHOLE ON EXISTING 38" RCP FROM SWAN LAKE
1.3. INSTALL TEMPORARY 24" TEMPORARY PIPING TO DIVERT FLOW DOWN STREAM OF CONSTRUCTION AREA
1.4. UPON COMPLETION OF CONSTRUCTION INSTALL NEW 36" HDPE DRAIN PIPING BETWEEN MANHOLE AND HEADWALL OUTLET

NOTES:
1. Wetlands delineated by George T. Logan, MS, PWS, CE Registered Soil Scientist, Certified Professional Wetland Scientist.
2. Wetlands flags, existing storm drainage outlets and existing brook location field located by Lenard Engineering, Inc. on Dec. 11, 2007.
3. Horizontal datum is NAD 83. Vertical datum is NGVD 88.
4. Road locations based on Aerial Mapping provided by University of Connecticut.

Designed By: JCD
Drawn By: JCD
Checked By: JLL
CAD File: Drainage.dwg

Drawing date: May 7, 2008
Drawing Scale: 1" = 10'

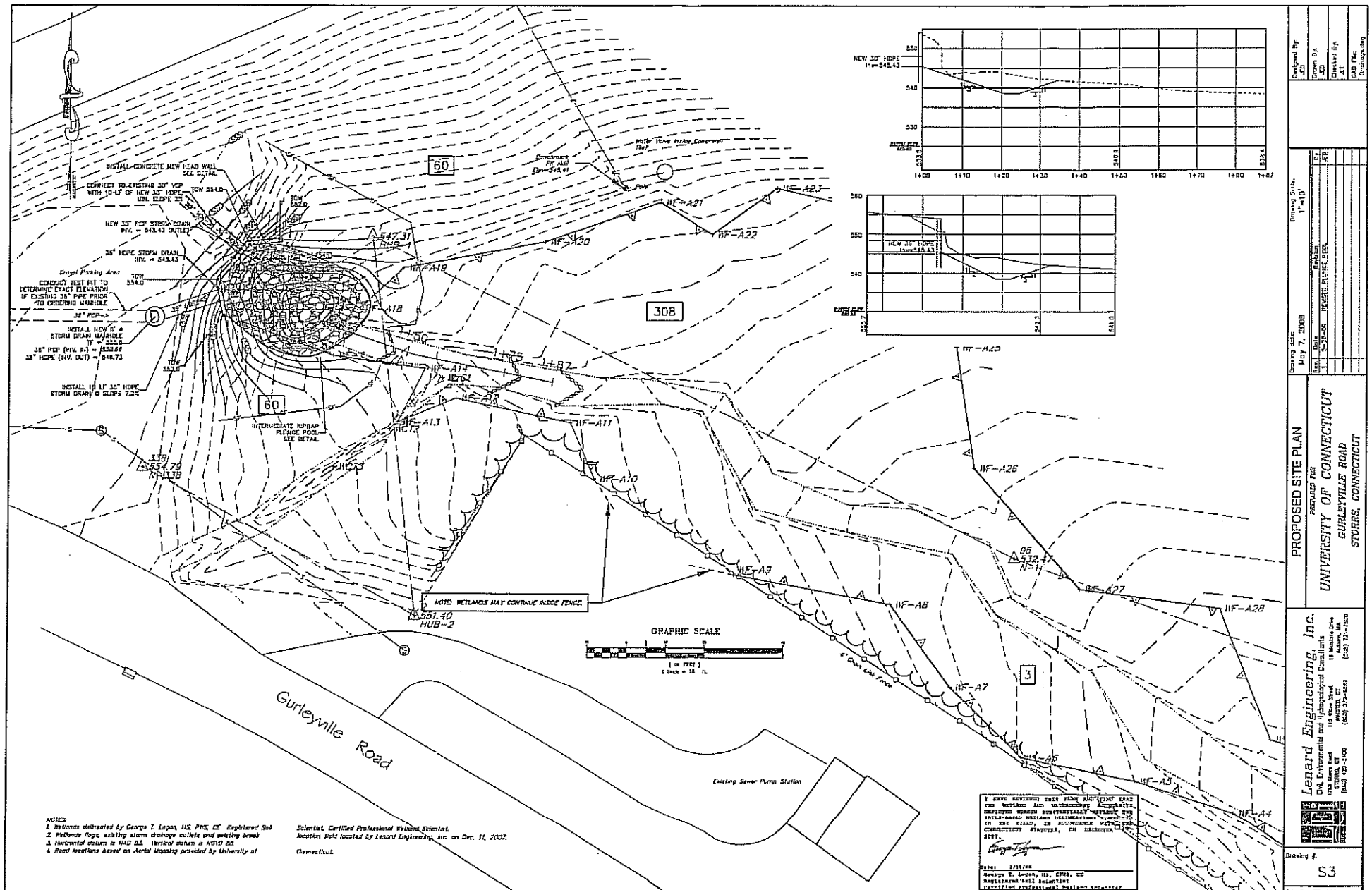
Rev.	Date	Revision	By
1	5-29-08	ADDED PLUNGE POOL	JCD

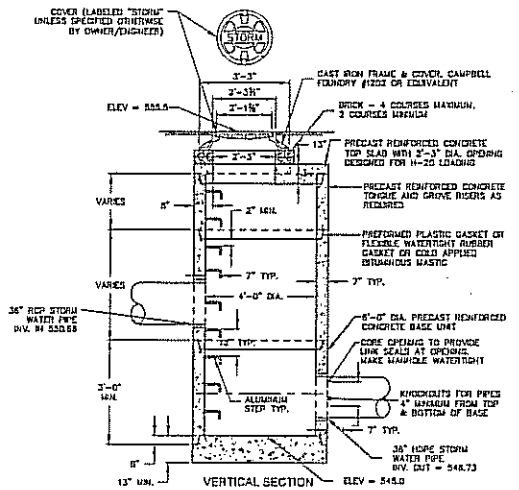
WATER HANDLING PLAN
PREPARED FOR
UNIVERSITY OF CONNECTICUT
GURLEYVILLE ROAD
STORRS, CONNECTICUT

Lenard Engineering, Inc.
Civil, Environmental and Hydrogeological Consultants
112 Main Street, Willington, CT (860) 429-5430
19 Middle Drive, Ashford, CT (860) 429-6829
1755 Main Street, Willimantic, CT (860) 423-4581
(203) 731-7220

Drawing #: S2

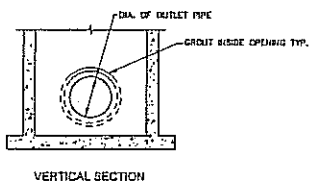
Job #: 07-444

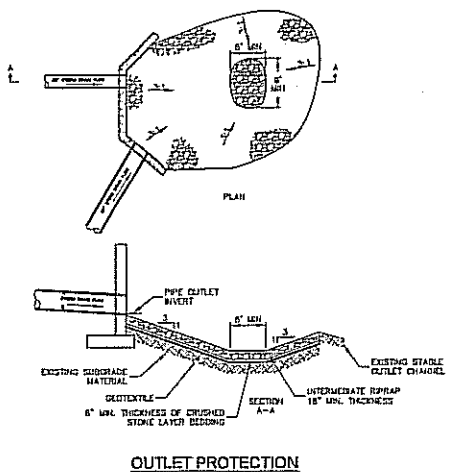

INSTALL CONCRETE HDW HEAD WALL SEE DETAIL
CONNECT TO EXISTING 30" RCP WITH 10-LF OF NEW 30" HDPE MIN. SLOPE 2%
NEW 30" RCP STORM DRAIN INV. = 543.43 OUTLET
36" HDPE STORM DRAIN INV. = 545.43
Gravel Parking Area
CONDUCT TEST PIT TO DETERMINE EXACT ELEVATION OF EXISTING 36" PIPE PRIOR TO ORDERING MANHOLE
36" RCP
INSTALL NEW 5' ø STORM DRAIN MANHOLE TF = 555.5
36" RCP (INV. IN) = 550.68
36" HDPE (INV. OUT) = 548.73
INSTALL 18 LF 36" HDPE STORM DRAIN @ SLOPE 7.2%
INTERMEDIATE RIPRAP PLUNGE POOL SEE DETAIL
60
308
3
HUB-1
HUB-2
HUB-3
HUB-4
HUB-5
HUB-6
HUB-7
HUB-8
HUB-9
HUB-10
HUB-11
HUB-12
HUB-13
HUB-14
HUB-15
HUB-16
HUB-17
HUB-18
HUB-19
HUB-20
HUB-21
HUB-22
HUB-23
HUB-24
HUB-25
HUB-26
HUB-27
HUB-28
NOTE: WETLANDS MAY CONTINUE INSIDE FENCE
GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.
Gurleyville Road
Existing Sewer Pump Station
NEW 30" HDPE In=545.43
NEW 36" HDPE In=545.43
Benchmark Pk Nail Elev=554.61
Water Valve in Conc. Well Pad
Pole
6" Chain Link Fence
NOTES:
1. Wetlands delineated by George T. Logan, III, PWS, CE Registered Soil Scientist, Certified Professional Wetland Scientist, location field located by Lenard Engineering, Inc. on Dec. 11, 2007.
2. Wetlands flags, existing storm drainage outlets and existing brook
3. Horizontal datum is NAD 83. Vertical datum is NGVD 29.
4. Road locations based on Aerial Mapping provided by University of Connecticut.
I HAVE REVIEWED THIS PLAN AND FIND THAT THE WETLAND AND WATERCOURSE BOUNDARIES DEPICTED HEREIN ACCURATELY REFLECT THE SOILS-BASED WETLAND DELINEATIONS CONDUCTED ON THE SITE, IN ACCORDANCE WITH THE CONNECTICUT STATUTES, ON DECEMBER 11, 2007.
George T. Logan
Date: 1/15/08
George T. Logan, III, CPWS, CE
Registered Soil Scientist
Certified Professional Wetland Scientist
PROPOSED SITE PLAN
PREPARED FOR
UNIVERSITY OF CONNECTICUT
GURLEYVILLE ROAD
STORRS, CONNECTICUT
Drawing Date: May 7, 2008
Drawing Scale: 1"=10'
Rev. 1 Date 5-28-08 Revision PLUNGE POOL DTL
Designed By: JCD
Drawn By: JCD
Checked By: JCE
CAD File: Drainage.dwg
Lenard Engineering, Inc.
Civil, Environmental and Hydrological Consultants
156 Storrs Road, STORRS, CT (860) 429-6100
18 Maple Street, Willington, CT (860) 429-8605
18 Auburn Drive, Auburn, MA (508) 721-7800
Drawing #: S3
Job #: 07-444



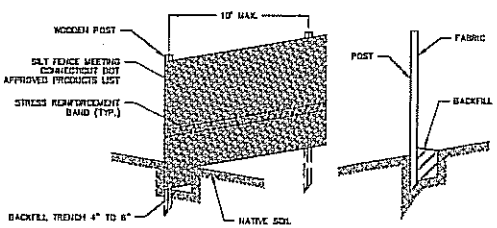
PRECAST MANHOLE
NOT TO SCALE

NOTE:
LARGER DIAMETER PRECAST BASES MAY BE USED TO ACCOMMODATE LARGER SIZE. PRECAST REDUCERS WILL BE PLACED ABOVE LARGER BASES AS DIRECTED BY THE ENGINEER. WALL THICKNESS TO INCREASE 1" FOR EVERY 1' OF INSIDE DIAMETER INCREASE.

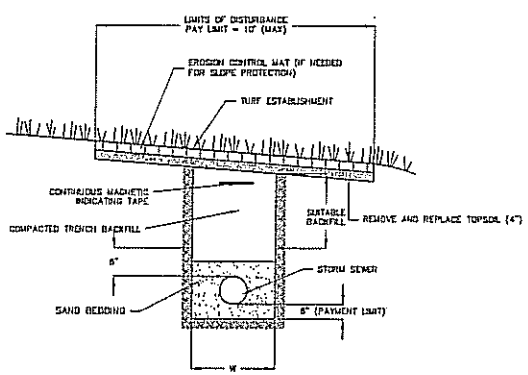




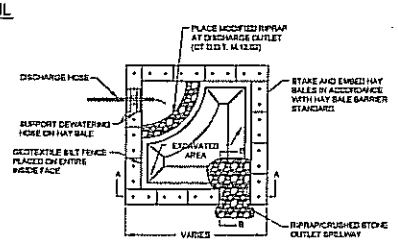
OUTLET PROTECTION
1"=10'



SILT FENCING DETAIL
NOT TO SCALE

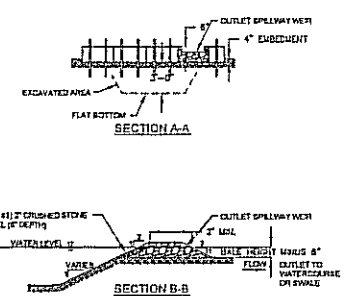


GRASS RESTORATION OVER STORM SEWER TRENCH
NOT TO SCALE



NOTES:
1. USE ONLY ON RELATIVELY FLAT GRADES
2. DIMENSIONS VARY ACCORDING TO PUMPING RATES. MINIMUM REQUIRED STORAGE IS CALCULATED FROM CREST OF SPILLWAY WEIR.
3. REQUIRED STORAGE (CU.FT.) = PUMP DISCHARGE RATE (GPM) X 18

TEMPORARY SEDIMENT BASIN
NOT TO SCALE



Designed By: JEP
Drawn By: JEP
Checked By: JEC
CAD File: Site Details

Drawing Scale: 1"=10'

Rev.	Date	Revision	By
1	5-30-09	INTERNAL REVIEW	JEC

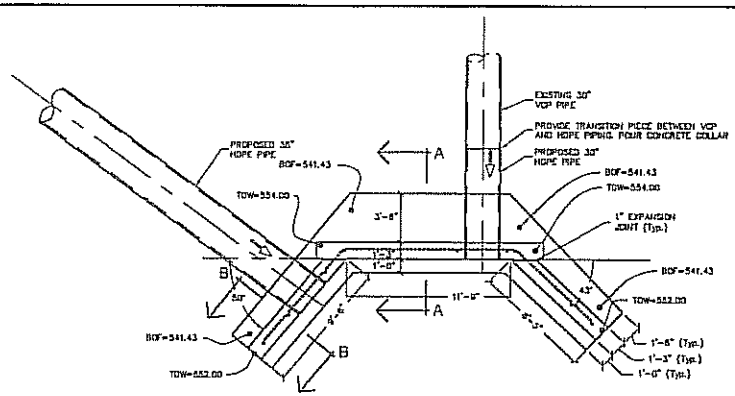
Drawing date: JAN. 15, 2009

WATER HANDLING PLAN
PREPARED FOR
UNIVERSITY OF CONNECTICUT
CURLEYVILLE ROAD
STORRS, CONNECTICUT

Lenard Engineering, Inc.
Civil, Environmental and Hydrological Consultants
1026 Stuart Road, STORRS, CT (860) 429-3430
10 Waterside Drive, WESTON, CT (203) 227-8449
10 Mellen Drive, Ashford, MA (203) 731-7620

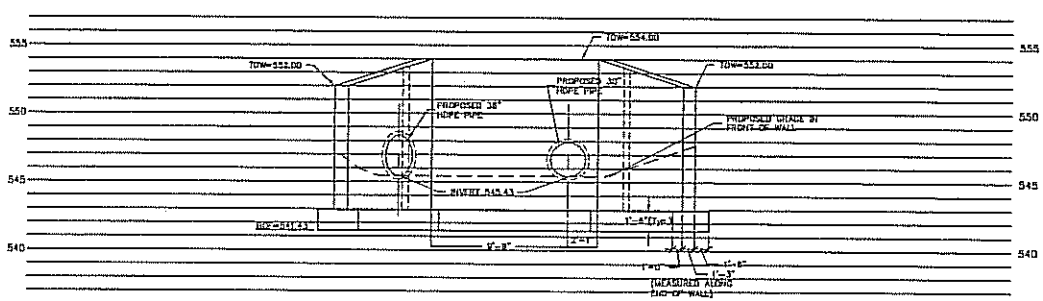
Drawing #: D1

Job #: 07-444



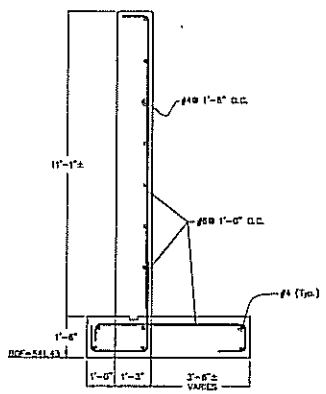
STRUCTURE LAYOUT

SCALE 1"= 4'-0"



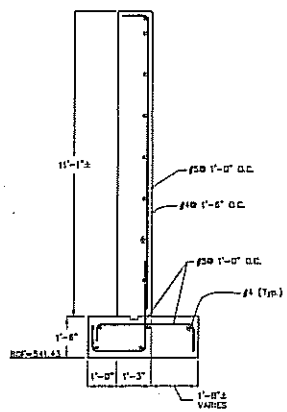
UPSTREAM ELEVATION

SCALE 1"= 4'-0"



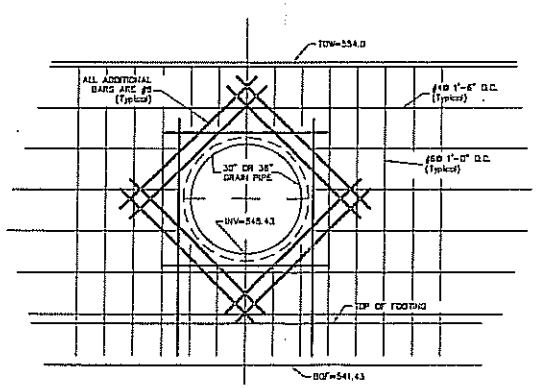
SECTION A

SCALE 1"= 2'-0"



SECTION B

SCALE 1"= 2'-0"



ADDITIONAL REINFORCEMENT AROUND 30" VCP AND 36" HDPE DRAINS

SCALE: NTS

Designed By: JED
Drawn By: JED
Checked By: JEE
CAD File: Head Wall Detail

Drawing Scale: 1"=10'

Rev.	Date	Revision	By
1	5-28-09	REMOVED PLUNGE POOL	JED

Drawing date: JAN. 15, 2008

HEAD WALL DETAILS

PREPARED FOR

UNIVERSITY OF CONNECTICUT

GURLEYVILLE ROAD

STORRS, CONNECTICUT

Lenard Engineering, Inc.
Civil, Environmental and Hydrogeological Consultants
1743 Storrs Road
STORRS, CT
(860) 423-5400
140 Main Street
WASTED, CT
(860) 379-8889
18 Mulvale Drive
Amsterdam
(800) 771-7820

Drawing #: D2

Job #: 07-444

SOIL EROSION AND SEDIMENT CONTROL PLAN NARRATIVE

1. INTRODUCTION AND PERMIT COMPLIANCE

Pursuant to Connecticut P.A. 83-388, this project requires a Soil Erosion and Sediment Control Plan and Narrative.

This narrative describes the minimum measures required to control soil erosion during and after construction of the site work shown on this plan. The soil erosion and sediment control measures shown on this plan are designed in accordance with a document entitled "Connecticut Guidelines for Soil Erosion and Sediment Control" published by the Connecticut Council on Soil and Water Conservation in 2002 (hereinafter referred to as "The Guidelines"). The Contractor may be required to implement additional measures to prevent site erosion and sedimentation of downstream waterways.

The contractor is required to obtain copies of, and comply with the conditions of all permits for the project, including but not limited to:

- Municipal Inland Wetlands Permit
- Municipal Approval of the Erosion Control Plan
- Connecticut DOT Encroachment Permit

The Contractor's activities and operations include all site work and work incidental to the project including, but not limited to haul roads, waste and disposal areas, staging areas, and field offices. If any of his activities require approvals above and beyond those already accounted for by the Owner's permits, the contractor shall apply for and obtain such permits prior to conducting those operations. If incidental work such as haul roads, waste and disposal areas, staging areas, and field offices are not shown on the plans, and require additional erosion control, the contractor shall provide such controls.

2. PROJECT DESCRIPTION AND SITE CHARACTERISTICS

The project consists of the reconstruction of a existing 30" and 24" drainage discharge outlets and construction of a new Intermediate Riprap plunge pool. Associated construction will consist of a new drainage manhole, trench excavation and backfill, non-paved surface restoration, and sediment and erosion control measures.

3. CONSTRUCTION SEQUENCING

A. Hold pre-construction conference.
B. Confirm all permits are in place.
C. Install sediment and erosion control measures
D. Clear and grub only those areas necessary for new drain lines and associated construction.
E. Construct drain lines, manhole and plunge pool:

1. Install silt fencing around limits of construction, as shown on the plans.
2. The contractor shall limit tree cutting and soil disturbance during the project, and shall restore all areas disturbed during construction as specified on this plan, and in the Contract Documents.
3. Strip and stockpile topsoil adjacent to project area, for potential reuse on the project. Place silt fence/haybale barriers around any temporary soil stockpiles.
4. Install temporary water handling items, see section 7 and sheet S1.
5. Install drain lines, manhole and plunge pool. Restore area at the end of each day to grades shown on plans.
6. Install temporary haybale check dams as directed by the Engineer, in addition to those specified in item 5, to correct potential erosion areas.
7. Upon completion of entire project, spread seed and hay mulch in areas not specified for riprap surface treatment.
8. Repair all erosion damage, apply additional topsoil and additional seed as required to stabilize the construction area.
9. Upon establishment of grass surface on all disturbed non-paved areas, remove silt fencing.

4. RESPONSIBILITY

4.1 RESPONSIBILITIES OF OWNER/PERMITTEE

The Owner/Permittee is:
UNIVERSITY OF CONNECTICUT
Attn: Jason Coite
P.O. Box 3038
31 LeDoyt Rd
Storrs, CT 06269-3038
Phone: (860) - 486-9301

The Owner/Permittee shall:

A. Provide the contractor with copies of land-use permits that owner has acquired.

B. Inform all parties involved with the proposed site work of this plan's objectives and requirements.

4.2 RESPONSIBILITIES OF CONTRACTOR

The Contractor is responsible for preventing erosion of the site and for protecting adjacent waterways from sedimentation.

The Contractor shall:

A. Install, monitor, and maintain the soil erosion and sediment control measures as shown on this plan.

B. Comply with all permit requirements.

C. Provide the Owner, Engineer, and the municipality with 24 hour phone numbers in the event of an emergency at the site.

5. PRECONSTRUCTION CONFERENCE

The Contractor shall initiate a preconstruction conference with the Permitee, Owner-of-record, Contractor, Engineer, and a municipal representative to review the proposed soil erosion and sediment control measures.

6. DESCRIPTION AND MAINTENANCE OF EROSION CONTROL MEASURES

6.1 TEMPORARY STABILIZATION MEASURES

(TS) Temporary Seeding
Where construction activities have permanently ceased or have temporarily been suspended for more than seven days, or when final grades are reached in any portion of the site, stabilization practices shall be implemented within three days. Areas which remain disturbed but inactive for at least thirty days shall receive temporary seeding in accordance with the Guidelines. In all cases, stabilization measures shall be implemented as soon as possible, in accordance with the Guidelines.

(HB) Haybale Barriers:
Install haybale barriers as shown on the plans and details. Embed the haybale barriers into the ground, pack them tightly together, and firmly stake them, as shown on the details. Remove sediment once levels have reached 1/4 of the effective bale height. Repair and/or replace the haybales immediately, if damaged or deteriorated.

NOTES:

1. USE ONLY ON RELATIVELY FLAT GRADES
2. DIMENSIONS VARY ACCORDING TO PUMPING RATES. MINIMUM REQUIRED STORAGE IS CALCULATED FROM CREST OF SPILLWAY WEIR.
3. REQUIRED STORAGE (CU FT.) = PUMP DISCHARGE RATE (GPM) X 16

TEMPORARY SEDIMENT BASIN (1/SE1)
NOT TO SCALE

Stockpiling or Storage of Excavated Materials
Completely surround all temporary (2-4 weeks) material stockpiles with haybales or silt fence to prevent transportation of sediment. Seed stockpiles that will remain longer than 30 days in accordance with Temporary Seeding (TS) requirements outlined in the Guidelines.

(DC) Dust Control:
The Contractor shall take precautions to prevent dust from becoming a nuisance to abutting property owners, the Owner's customers, and passing motorists. Sweep all pavements adjoining the excavation on a daily basis. Cover and/or keep all earth stockpiles moist at all times. Use non-asphaltic soil tackifiers to control dust on the site, as directed by the Engineer or shown on the plans. Soil tackifiers shall conform to the Guidelines. The Contractor shall maintain and inspect, on a daily basis, the adequacy of dust control measures and correct any deficiencies immediately.

Temporary Trench Paving:
Use temporary paving to prevent erosion of the excavated trench. Place temporary pavement prior to the end of the working day and after the completion of backfill operations. The contractor shall maintain and repair temporary bituminous pavement surfaces in a safe condition.

(TP) Tree Protection:
The Owner will select trees or groups of trees to remain prior to construction. The Contractor shall provide snow fencing, board fencing, silt fencing, or trunk armoring around trees or groups of trees to protect them against damage. The Contractor shall be responsible for selecting and installing the protection measures most appropriate for the conditions present. The Contractor shall repair and/or replace tree protection measures immediately if damaged during construction.

6.2 TEMPORARY STRUCTURAL MEASURES

Catch Basin Protection, Haybales, Type 1:
Use haybales for protection of catch basins in a low point. Place haybales around all four sides of the catch basins to minimize sediment entering the drainage system. Firmly stake haybales into the pavement base material. Remove sediment from around the bales once levels reach 1/4 the effective height of the bales. Replace the haybales immediately if they are damaged or deteriorated.

Catch Basin Protection, Haybales and Filter Fabric, Type 2:
Use haybales and filter fabric for protection of catch basins in a low point. Place haybales around all four sides of the catch basins to minimize sediment entering the drainage system. Firmly stake haybales into the pavement base material. Wrap the entire grate with Mirafi 140N filter fabric or equal. Remove sediment from around the bales once levels reach 1/4 the effective height of the bales. Replace the haybales immediately if they are damaged or deteriorated. Replace the fabric shall be replaced immediately if it's permeability is impeded by sediment.

Catch Basin Protection, Haybale Check Dams, Type 3:
Use haybale check dams for protection of catch basins in a swale. Place staked haybale barriers in the swale in at least two locations upstream of the basin as shown in the plans and details. Monitor the barrier to ensure that runoff either filters through the barrier or goes over the top. Do not allow runoff to bypass the side of the barrier. Remove the sediment when it reaches 1/4 of the height of the barrier.

6.3 PERMANENT STABILIZATION MEASURES

Implement stabilization measures within three days of final grading.

(PS) Permanent Seeding:

A. Fertilizer and Limestone

Contractor shall conduct appropriate soil tests to determine amounts of fertilizer and limestone required to ensure an acceptable lawn. Generally, fertilizer should be at the following rates.

Ground Limestone	100 lbs/1,000 s.f.
Commercial Fertilizer	20 lbs/1,000 s.f.

Unless otherwise indicated by soil test, fertilizer should consist of:
10% Nitrogen (at least 50% of nitrogen shall be from organic sources.
6% Phosphoric Acid
4% Potash

B. Lawn Seed

Seed mixture for late summer/early fall/early spring planting:

Sow at a rate of 4 lbs/1,000 s.f.

Creeping Red Fescue	15 Parts
Chewings Red Fescue	20 Parts
Kentucky 31 Tall Fescue	15 Parts
Baron Bluegrass	20 Parts
Rough Bluegrass	10 Parts

Seed mixture for planting from May 1st to late summer:

Sow at rate of 6 lbs/1,000 s.f.

Creeping Red Fescue	35 Parts
Chewings Red Fescue	25 Parts
Kentucky 31 Tall Bluegrass	25 Parts
Domestic Ryegrass	15 Parts

Apply seed uniformly by hand cyclone seeder, drill or hydroseeder. Seed bed should be prepared by hand raking to loosen and smooth soil and remove surface stones. After seeding, the bed should be firmed with a roller. Apply mulch where applicable. Water as necessary.

The contractor shall be responsible for all seeded areas. If topsoil, seed, and/or mulch is washed away by rainfall, the contractor shall restore the area.

6.4 PERMANENT STRUCTURAL MEASURES (POST CONSTRUCTION STORMWATER MANAGEMENT)

Land Grading:
Proposed grades are shown in detail on the plan. Place and compact fill in shallow lifts, proceeding uphill from the toe area. Create large but shallow runoff collection areas at the end of each working day to help collect and prevent runoff from running down the fill face.

Bring all excavated, filled, or disturbed areas to final grade as soon as possible and stabilize areas with Temporary Seeding (TS) or Permanent Seeding (PS) as required. Maintain erosion control measures until the site is completely stabilized with pavement and/or vegetation.

6.5 OTHER CONTROLS

Waste Disposal:
Provide an adequate number of covered waste containers to ensure that no litter, debris, building materials, or similar materials are discharged to wetlands or watercourses. Instruct subcontractors to use the containers for waste material. Empty the containers promptly when full.

(CE) Construction Entrance:
Place clean washed stone (CONNDOT No.3 stone) at the site entrance(s) to the length, width and depth indicated on the plans and details to help remove mud and/or clods of soil from construction vehicles exiting from the site. Add more as necessary to maintain adequate serviceability.

Pavement Maintenance:
The contractor shall sweep paved roadways adjacent to the site on a routine basis to prevent tracking of mud onto public roadways and washing of mud into waterways. If the Contractor's schedule for cleaning the pavement is found to be inadequate by the Owner, the Contractor shall increase the frequency of pavement cleanings at no additional cost to the Owner.

Cleaning of Stormwater Structures:
Clean all stormwater structures, including, but not limited to pipes, swales, sediment basins, sediment traps, and riprap aprons of sediment upon completion of the project.

7. DEWATERING

The Contractor shall prepare and submit a comprehensive dewatering plan to the Owner's representative for review and concurrence. The plan shall indicate, in detail, the methods, sequence, and equipment that the Contractor proposes to use to:

A. Maintain utility trenches in a dry working environment.
B. Minimize the tributary watershed to the proposed Temporary Sediment Basin and any given time during the course of construction.
C. Protect downstream receiving waters from sedimentation and turbidity.
D. Do project during dry period, with no precipitation in forecast.
E. Excavate, dewater trench, pump water into temporary sedimentation basin.
F. Install sand bedding, water main, trench backfill.
G. Store stockpile wetland soil, for replacement in wetland area.

Temporary Water Handling Plan

A. For the 30" VCP draining Horsebarn Hill Meadow

1.1. Block inlet to 30" VCP from Horsebarn Hill meadow
1.2. Construct cofferdam on 30" VCP, install 24" temporary piping to divert flow downstream of construction area
1.3. Upon completion of construction install new connecting 30" HDPE drain piping to headwall outlet

B. For the 24" RCP from Swan Lake

1.1. Block outlet from Swan Lake
1.2. Install 6' diameter manhole on existing 24" RCP from Swan Lake
1.3. Install temporary 24" temporary piping to divert flow down stream of construction area
1.4. Upon completion of construction install new 24" HDPE drain piping between manhole and headwall outlet

Construction Dewatering:
This item includes methods and equipment necessary to maintain, in a dry condition, any areas in which construction is to be conducted. These methods include pumping, draining, installing well-points and/or cofferdams. Whatever the methods or equipment used, dispose of the discharge water in such a manner to avoid pollution of existing watercourses, injury to persons or public or private property.

The contractor shall develop a dewatering program designed to ensure that disposal of all dewatering wastewaters will not cause scouring or erosion or contain suspended solids in amounts which could reasonably be expected to cause pollution of wetlands or waterways. Discharge wastewaters in a manner which minimizes the discoloration of receiving waters.

The Contractor's dewatering program shall employ adequate Pumping Inlet and Outlet Protection (PuP) as indicated on the Contract Drawings and as further described in the Guidelines. The Contractor shall protect the pump intake through use of a floating intake or other practical means to avoid scouring and re-suspension of settled sediments at the intake.

The Contractor shall construct pumping settling basins in appropriate locations for dewatering operations associated with utility construction, foundation excavation, and any other site work that requires pumped dewatering. The Contractor shall size and construct these basins in accordance with specific pumping rates and the criteria outlined in the Guidelines and relevant in the construction details. In general, Type I basins shall be used for relatively low pumping volumes, Type II for moderate pumping volumes, and Type III for high pumping volumes. The Contractor shall locate each basin upstream of the proposed Temporary Sediment Basin.

The Contractor shall discharge dewatering wastewater into the new storm sewer that outlets into the new Temporary Sediment Basin.

SILT FENCING DETAIL (2/SE1)
NOT TO SCALE

HAYBALE BARRIER (3/SE1)
NOT TO SCALE

SILT FENCE/HAYBALE COMBINATION DETAIL (4/SE1)
NOT TO SCALE

8. GENERAL CONDITIONS

8.1 If erosion control measures are damaged by construction vehicles, acts of vandalism, or severe weather conditions, the contractor shall immediately remove sediment in the vicinity of the erosion control measures and repair these measures to a functional condition.

8.2 If, during or after construction, it becomes apparent that existing erosion control measures are incapable of controlling erosion, the owner, the engineer, or the municipality may require additional control measures including, but not limited to; additional haybales, silt fence, sediment basins, or mechanically anchored mulch.

8.3 Refueling of equipment or machinery within 100 feet of any wetland or watercourse is prohibited.

8.4 No construction shall proceed until a written proposal of methods to prevent construction debris, paint, spent blast materials, or other materials from entering the wetland or watercourse has been submitted by the Contractor to the Owner and approved by the Owner, and such methods have been implemented as the Owner directs. These materials shall be collected and disposed of in an environmentally safe manner in accordance with all applicable Federal and State laws and regulations. The Owner may order the Contractor to cease such activity temporarily if, in the judgement of the Owner, wind or storm conditions threaten to cause the deposit of such materials into a waterway.

8.5 No materials resulting from construction activities shall be placed in or allowed to contribute to the degradation of an adjacent wetland or watercourse. Disposal of any material shall be in accordance with Connecticut General Statutes, including, but not limited to, Sections 22a-207 through 22a-229.

8.6 Fording of streams with equipment is prohibited, except as allowed by the Owner and the Owner's permits. Minimize such equipment travel. Where frequent equipment travel on stream banks and beds is necessary, place washed stone to minimize erosion, scour, and turbidity, provided no significant grade change will be required for any haul road or temporary structure placed in wetlands or watercourses. Unless the above activities are specifically authorized by the owner's permits, the contractor shall acquire permits for such activities before commencement of the work.

8.7 Submit a construction sequencing plan and a water handling plan including a contingency plan for flood events in writing to the Owner prior to commencement of any construction in a waterway. Keep water deep enough in the channel to allow for the passage of fish and the continuous flow of the watercourse as required by the Engineer.

8.8 Conduct work within or adjacent to watercourses during periods of low flow, whenever possible. The Owner shall remain aware of flow conditions during the conduct of such work, and shall cease such activity in times should flow conditions threaten to cause excessive erosion, siltation or turbidity. The Contractor shall make every effort to secure the work site before predicted major storms. A major storm shall be defined as a storm predicted by NOAA Weather Service with warnings of flooding, severe thunderstorms, or similarly severe weather conditions or effects.

8.9 Stabilize all temporary fill to prevent erosion and to prevent sediment or other particulate matter from entering a wetland or watercourse. Restore and revegetate all areas affected by temporary fill to their original contours or as directed by the Owner. Confine the extent of temporary fill or excavation to that area necessary to perform the work, as approved by the Owner.

CATCH BASIN PROTECTION (5/SE1)
NOT TO SCALE

TEMPORARY EROSION CONTROL BLANKET (6/SE1)
NOT TO SCALE

8.10 Dumping of oil, chemicals or other deleterious materials on the ground is forbidden. The contractor shall provide a means of catching, retaining, and properly disposing of drained oil, removed oil filters, or other deleterious material. All spills of such materials shall be reported immediately by the Contractor to the DEP.

8.11 No application of herbicides or pesticides within 25 feet of any wetland or watercourse will be allowed. All such applications must be done by a Connecticut licensed applicator. The contractor shall submit to the Owner the proposed applicator's name and license number, and must receive the Owner's approval of the proposed applicator, before such application is carried out.

8.12 During spawning seasons, discharges and construction activities in spawning areas of State Waters shall be restricted so as not to disturb or inhibit aquatic species which are indigenous to the waters.

9. CONTRACTOR CERTIFICATION

Each contractor and subcontractor performing site work shall certify the plan in the spaces provided below.

"I certify under penalty of the law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as a contractor or subcontractor at the site, I am authorized by this general permit, and must comply with the terms and conditions of this permit, including but not limited to the requirements of the Stormwater Pollution Control Plan prepared for the site".

Signature	Date
Name of Person (Printed)	Title
Company	
Street Address	Phone
City, State, Zip	24 Hour Emergency Contact Number

Signature	Date
Name of Person (Printed)	Title
Company	
Street Address	Phone
City, State, Zip	24 Hour Emergency Contact Number

SEDIMENT & EROSION CONTROL NARRATIVE

PREPARED FOR
UNIVERSITY OF CONNECTICUT
GURLEYVILLE ROAD
STORRS, CONNECTICUT

Lenard Engineering, Inc.
Civil, Environmental and Hydrogeological Consultants
1258 Storrs Road, Storrs, CT (860) 429-5410
140 Water Street, Winsted, CT (860) 379-6669
19 Midstate Drive, Auburn, MA (508) 721-7600

Drawing date: May 28, 2009	Drawing Scale: AS SHOWN
Rev.	Date	Revision	By
Designed By: JED	Drawn By: JED	Checked By: JCE	CAD File: S&E Plan
Drawing #: SE1	Job #: 07-444

ATTACHMENT D

NDDB REVIEW REQUEST FORM AND RESPONSE LETTER

LENARD ENGINEERING, INC.
1066 STORRS ROAD
PO BOX 580
STORRS, CT 06268
PHONE: (860) 429-5400

LETTER OF TRANSMITTAL

DATE: April 3, 2008
JOB NUMBER: 07-444

TO: DEP Wildlife Division
Bureau of Natural Resources
79 Elm St., 6th Floor
Hartford, CT 06106-5127

ATTN: Wildlife Division
RE:
NDDB Request
Proposed Improvements to Swan Lake
Drainage Outfall

We are sending you: ☒ Attached ☐ Under separate cover ☐ Prints ☐ Plans ☐ Specifications
☐ Other_____

Copies	Date	No.	Description
1			NDDB Request

These are for: your review comment.

REMARKS:

Ladies and Gentlemen: On behalf of the University of Connecticut, Lenard Engineering, Inc. (LEI) is pleased to submit the attached NDDB request for your review and comment. Our project involves channel improvements at the Swan Lake storm drainage outfall upstream of Valentine Meadow on the Uconn-Storrs Campus.
Could you please advise if the NDDB has any areas of concern in our project area? Thank you.

Copies to: Richard Miller, University of Connecticut
Jason Coite, University of Connecticut

SIGNED: FILE DATE: April 3, 2008
James E. Ericson, P.E.

Connecticut Natural Diversity Data Base
Review Request Form

Please complete this form *only* if you have conducted a review which determined that your activity is located in an area of concern.

Name: **University of Connecticut**

Affiliation: **State of Connecticut**

Mailing Address: **31 LeDoyt Road, Box 3051**

City/Town: **Storrs** State: **CT** Zip Code: **06269-3038**

Business Phone: **860-486-8741** ext. Fax:

Contact Person: **Richard A. Miller, Esq.** Title: **Director of Environmental Quality**

Project or Site Name: **Erosion Control at Swan Lake Outlet**

Project Location In between Gurlyville and Horse Barn Hill Roads

Town: **Storrs** USGS Quad: **Mansfield**

Brief Description of Proposed Activities:

Placing of riprap around storm drainage outlet. Stream bank stabilization at various locations inside a 300 ft. long stream reach.

Have you conducted a "State and Federal Listed Species and Natural Communities Map" review?

☒ Yes ☐ No Date of Map: **2007**

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

If yes, provide the following information and submit a copy of the field survey with this form.

Biologists Name:

Address:

If the project will require a permit, list type of permit, agency and date or proposed date of application:

General Permit for Utilities and Drainage

(See reverse side - you must sign the certification on the reverse side of this form)

The Connecticut Natural Diversity Data Base (CT NDDB) information will be used for:

☒ permit application

☐ environmental assessment (give reasons for assessment):

☐ other (specify):

"I certify that the information supplied on this form is complete and accurate, and that any material supplied by the CT NDDB will not be published without prior permission."

James E Ellen — Signature

April 3, 2008 — Date

All requests must include a USGS topographic map with the project boundary clearly delineated.

Return completed form to:

WILDLIFE DIVISION
BUREAU OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM ST, 6TH FLOOR
HARTFORD, CT 06106-5127

* You must submit a copy of this completed form with your registration or permit application.

cc: Rich/JC

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WILDLIFE DIVISION

SESSIONS WOODS WILDLIFE MANAGEMENT AREA
P.O. BOX 1550 • BURLINGTON, CT 06013 - 1550
TELEPHONE (860) 675-8130 • FAX (860) 675-8141

RECEIVED
AUG 0 8 2008
OFFICE OF ENVIRONMENTAL POLICY

July 28, 2008

Mr. Richard Miller
University of Connecticut
31 LeDoyt Road, Box 3051
Storrs, CT 06269-3038

Re: University of Connecticut: Erosion control at Swan Lake in Mansfield, Connecticut

Dear Mr. Miller:

Materials pertaining to the above project were forwarded to me for review by the DEP Natural Diversity Database (NDDB). The NDDB indicated that the state endangered horned lark (*Eremophila alpestris*), state threatened northern spring salamander (*Gyrinophilus porphyriticus*), and state species of special concern Savannah sparrow (*Passerculus sandwichensis*) occur in the vicinity of this proposed project.

This project is unlikely to have a negative impact on any of these state-listed species.

The Wildlife Division has not made an on-site inspection of the project area. Consultation with this office should not be substituted for site-specific surveys that may be required for environmental assessments. This is a preliminary site review and is not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to the DEP for the proposed site. Please be advised that should state permits be required or should state involvement occur in some other fashion, specific restrictions or conditions relating to the species discussed above may apply. In this situation, additional evaluation of the proposal by the DEP Wildlife Division should be requested and species-specific surveys may be required. If the proposed project has not been initiated within 6 months of this Wildlife Division review, you should contact the NDDB for an updated review.

Please feel free to contact me if you have additional questions regarding these species.

Sincerely,

Jenny Dickson
Wildlife Biologist

cc: D. McKay - 16090
J. Victoria