



**US Army Corps  
of Engineers**®  
New England District

# PUBLIC NOTICE

696 Virginia Road  
Concord, MA 01742-2751

**Date: July 3, 2007**

**Comment Period Ends: August 3, 2007**

**File Number: NAE -2006-4232**

**In Reply Refer To: Stephen D. DiLorenzo**

The District Engineer has received a permit application from the applicant shown below requesting a change to a previously authorized golf course. This golf course was built. However, it will now be converted to a residential subdivision as described below. This change in use will require additional impacts to **waters of the United States**. The Corps is soliciting comments on both the project itself and the range of issues to be addressed in the environmental documentation.

## APPLICANT

Pistol Creek Association, LLC  
C/o Krame Development Company, LLC.  
12 Route 17 North  
Paramus, New Jersey 07652

## PROPOSED WORK AND PURPOSE

To accomplish this the applicant is requesting authorization to change the permitted use from a golf course to said residential subdivision. The applicant is requesting authorization to place additional fill in approximately 4,109 square feet of wetlands for the construction of road crossings for the development of the new residential subdivision.

The Corps issued a permit June 16, 1998 (permit number 199602336) for the construction of the golf course. This authorized the filling of approximately 0.933 acres and the selective cutting of another approximately 6 acres of wetlands for the construction of an 18-hole golf course. The permit also required the performance of wetland mitigation to offset the lost functions and values from the construction of the Pistol Creek golf course.

The permitted work is described on the enclosed plans entitled "PISTOL CREEK INVESTORS, LLC" on one of one sheet, and dated "July 1997" and "PISTOL CREEK INVESTORS, LLC" on 15 sheets (sheet 1, 2 & 5- 9, 12-15 are dated "August 12, 1997", sheets 3 & 4 are dated "Rev. 10/15/97" and sheets 10-11 dated "Rev. 11/12/97". The mitigation is shown on the enclosed plans entitled "PROPOSED MITIGATION AREAS" on 12 sheets and dated "Rev. 1/8/98".

The proposed subdivision with both the impacts from the golf course and those proposed are shown on the enclosed plans entitled "RIO VISTA/PISTOL CREEK ESTATES" in 11 sheets, and dated "MAY 6, 2007" and "RIO VISTA WETLAND IMPACTS REGULATED ACTIVITY 1" on sheet WI-1A and WI-1B; "WETLAND IMPACTS REGULATED ACTIVITY 2" on sheet WI-2A and WI-2B; "WETLAND IMPACTS REGULATED ACTIVITY 3" on sheet WI-3A and WI-3B; and "WETLAND IMPACTS REGULATED ACTIVITY WI-4A and WI-4B" and dated Jan26, 2006".

The applicant is also proposing to perform additional mitigation. The mitigation is described on the enclosed plans entitled "RIO VISTA, WETLAND MITIGATION ACTIVITY 1" on sheet WM-1-A and WM-1-B; "WETLAND MITIGATION ACTIVITY 2 & 3" on sheets WM-2 & 3-A and "WETLAND MITIGATION ACTIVITY 2 & 3" on sheet WM-2 & 3-B; and "WETLAND CREATION PLANT LIST" on one sheet WM-PL and dated "February 2, 2007".

### **WATERWAY AND LOCATION OF THE PROPOSED WORK**

This work is proposed in the wetlands of Spruce Brook at the intersection Spruce Brook Road, Berlin and Atkins Street, Middletown, Connecticut. The proposed location on the USGS MIDDLETOWN, CT quadrangle sheet is at Latitude 41.604368 and Longitude 72.731802.

### **AUTHORITY**

Permits are required pursuant to:

- Section 10 of the Rivers and Harbors Act of 1899
- Section 404 of the Clean Water Act
- Section 103 of the Marine Protection, Research and Sanctuaries Act).

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which may reasonably accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are: conservation, economics, aesthetics, general environmental concerns, wetlands, cultural value, fish and wildlife values, flood hazards, flood plain value, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Where the activity involves the discharge of dredged or fill material into waters of the United States or the transportation of dredged material for the purpose of disposing it in ocean waters, the evaluation of the impact of the activity in the public interest will also include application of the guidelines promulgated by the Administrator, U.S Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act, and/or Section 103 of the Marine Protection Research and Sanctuaries Act of 1972 as amended.

### SECTION 106 COORDINATION

Based on his initial review, the District Engineer has determined that the proposed work may impact properties listed in, or eligible for listing in, the National Register of Historic Places. Additional review and consultation to fulfill requirements under Section 106 of the National Historic Preservation Act of 1966, as amended, will be ongoing as part of the permit review process.

### ENDANGERED SPECIES CONSULTATION

The New England District, Army Corps of Engineers has reviewed the list of species protected under the Endangered Species Act of 1973, as amended, which might occur at the proposed project site during the construction and subsequent operation/use period sought by the applicant. We have undertaken a Biological Assessment (BA) of the potential for interactions and adverse impacts to those listed species. It is our determination that the proposed activity for which authorization is being sought is designed, situated or will be operated/used in such a manner that it is not likely to adversely affect any Federally listed endangered or threatened species or their designated critical habitat. By this Public Notice, we are requesting that the appropriate Federal Agency concur with our BA determination.

The following authorizations have been applied for, or have been, or will be obtained:

- Permit, License or Assent from State.
- Permit from Local Wetland Agency or Conservation Commission.
- Water Quality Certification in accordance with Section 401 of the Clean Water Act.

In order to properly evaluate the proposal, we are seeking public comment. Anyone wishing to comment is encouraged to do so. **Comments should be submitted in writing by the above date.** If you have any questions, please contact Stephen D. DiLorenzo at (978) 318-8373, (800) 343-4789 or (800) 362-4367, if calling from within Massachusetts.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for a public hearing shall specifically state the reasons for holding a public hearing. The Corps holds public hearings for the purpose of obtaining public comments when that is the best means for understanding a wide variety of concerns from a diverse segment of the public.

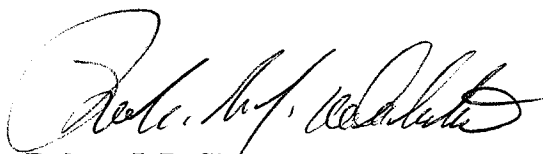
The initial determinations made herein will be reviewed in light of facts submitted in response to this notice. All comments will be considered a matter of public record. Copies of letters of objection will be forwarded to the applicant who will normally be requested to contact objectors directly in an effort to reach an understanding.

CENAE-R

FILE NO. NAE-2006-4232

For more information on the New England District Corps of Engineers programs, visit our website at <http://www.nae.usace.army.mil>.

**THIS NOTICE IS NOT AN AUTHORIZATION TO DO ANY WORK.**

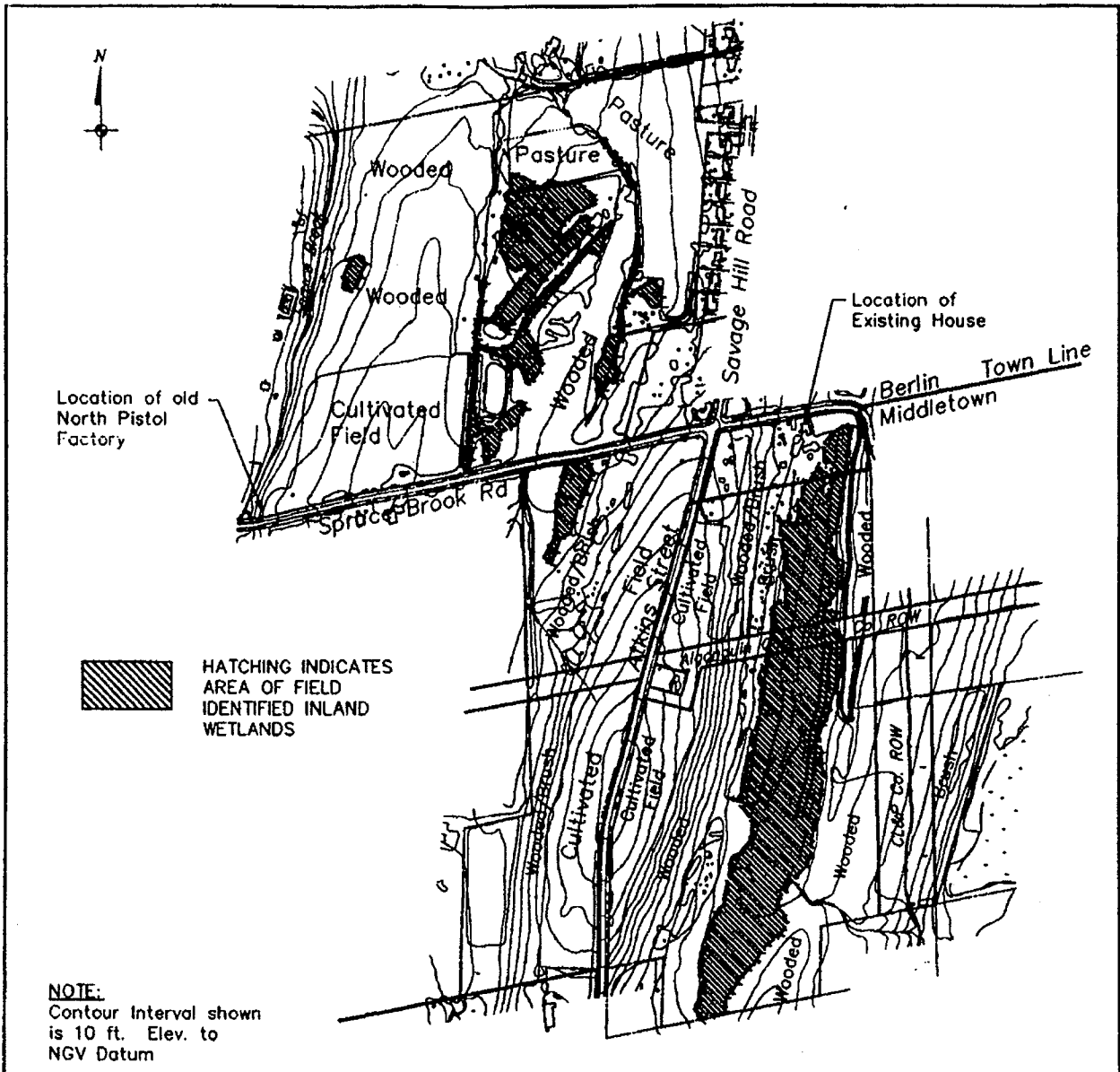


**Robert J. DeSista**  
**Chief, Permits and Enforcement Branch**  
**Regulatory Division**

If you would prefer not to continue receiving Public Notices, please contact Ms. Tina Chaisson at (978) 318-8058 or e-mail her at [bettina.m.chaisson@usace.army.mil](mailto:bettina.m.chaisson@usace.army.mil). You may also check here ( ) and return this portion of the Public Notice to: Bettina Chaisson, Regulatory Division, U.S. Army Corps of Engineers, 696 Virginia Road, Concord, MA 01742-2751.

NAME: \_\_\_\_\_


ADDRESS: \_\_\_\_\_

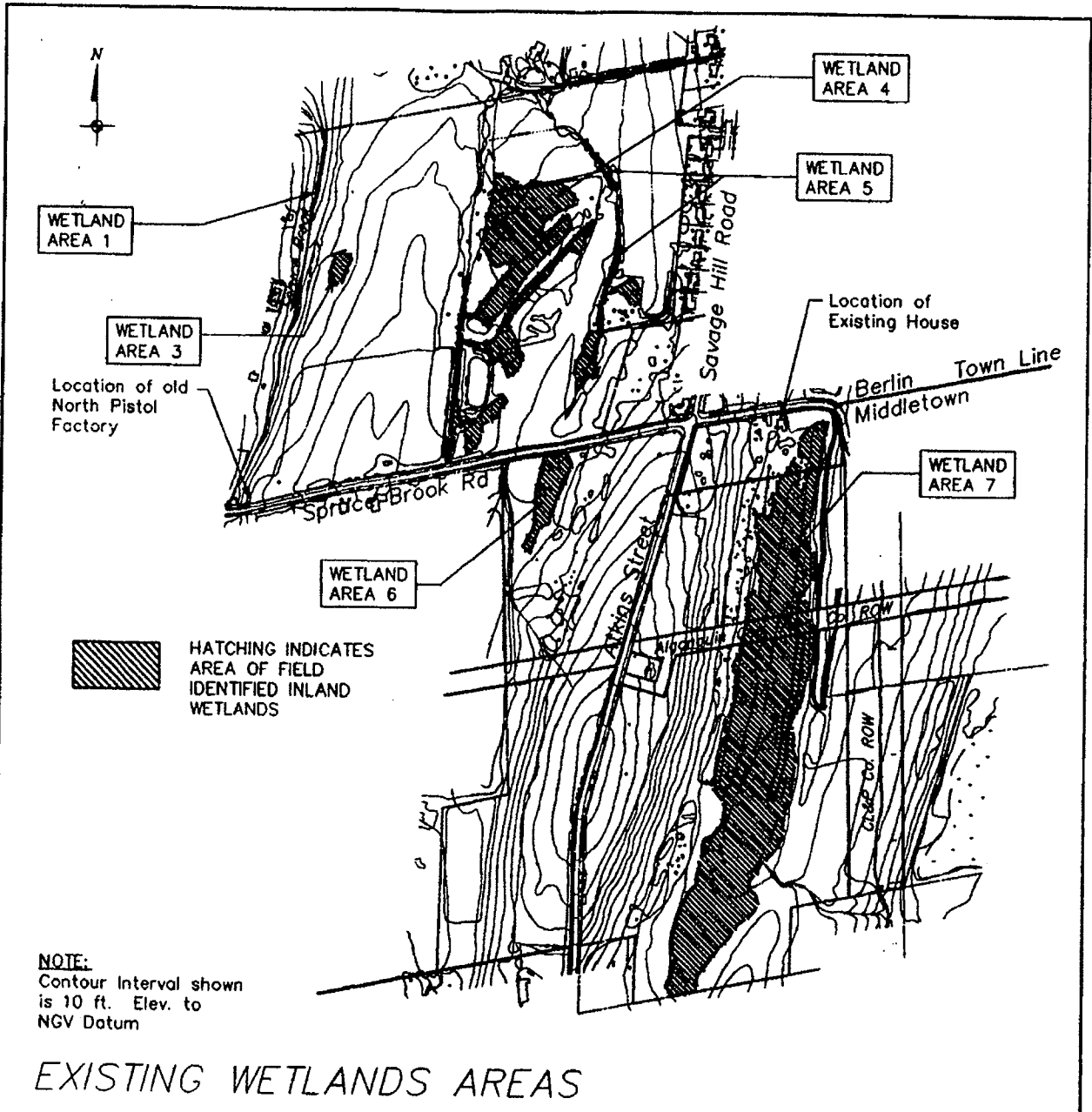


EXISTING SITE CONITIONS

OVERALL PROPERTY MAP

Scale: 1"=500'

PLAN PREPARED BY:  <b>MBA Engineering, Inc.</b> Surveying and Engineering Services 211 New Britain Road, Suite 103 Kensington, Connecticut 06037 (860) 827-0222 Fax (860) 827-9997	PROPOSED <b><u>PISTOL CREEK GOLF CLUB</u></b> LOCATED IN THE TOWNS OF MIDDLETOWN (MIDDLESEX COUNTY) and BERLIN (HARTFORD COUNTY) IN THE STATE OF CONNECTICUT	SHEET 1
	APPLICATION BY: <b><u>PISTOL CREEK INVESTORS, LLC</u></b>	DATE August 12, 1997



**EXISTING WETLANDS AREAS**

**OVERALL PROPERTY MAP**

Scale: 1"=500'

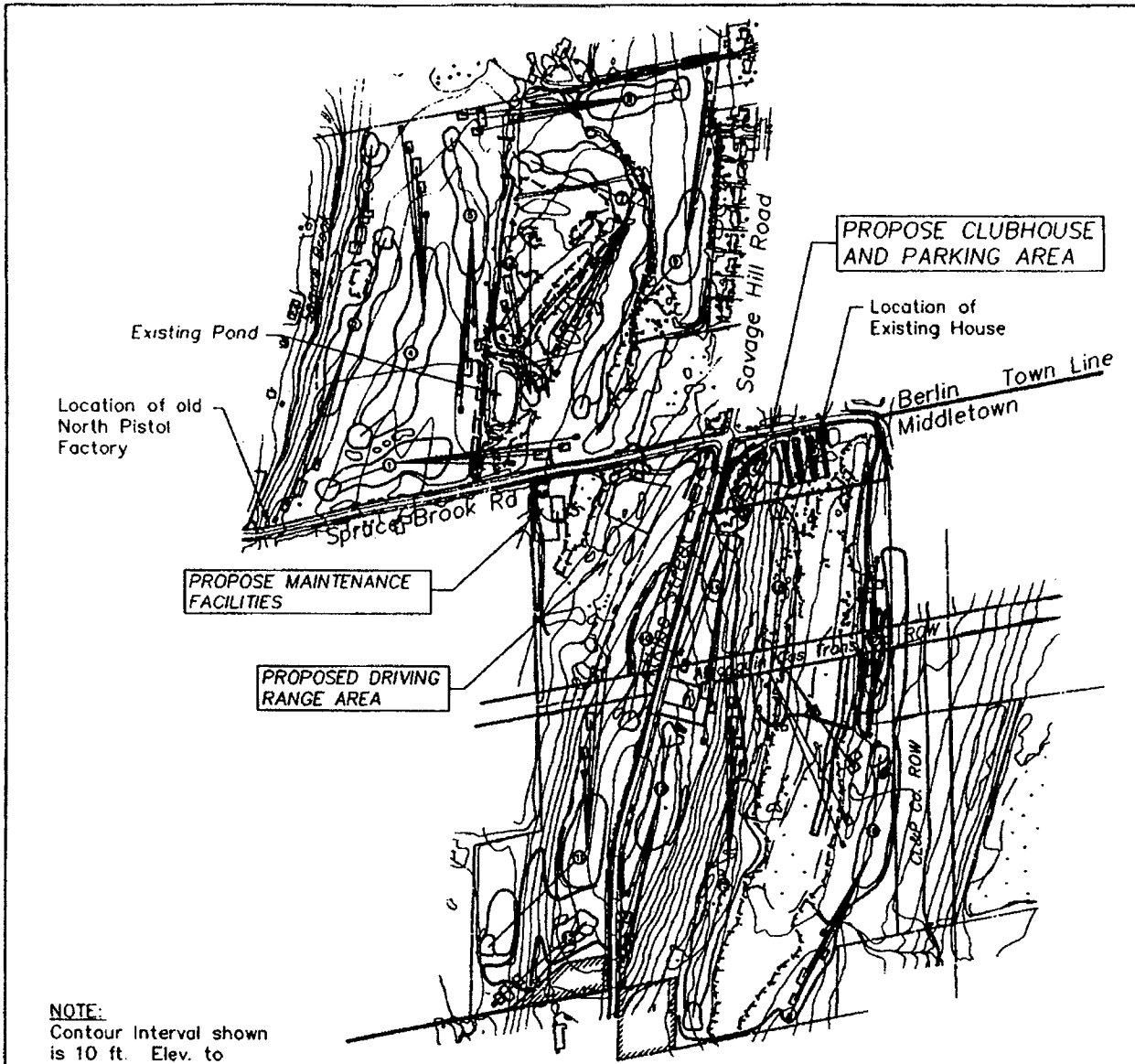
PLAN PREPARED BY:  
**MBA Engineering, Inc.**  
 Surveying and Engineering Services  
 211 New Britain Road, Suite 103  
 Kensington, Connecticut 06037  
 (860) 627-0222 Fax (860) 827-9997

PROPOSED  
**PISTOL CREEK GOLF CLUB**  
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 IN THE STATE OF CONNECTICUT

SHEET  
 2

DATE  
 August 12, 1997

APPLICATION BY:  
**PISTOL CREEK INVESTORS, LLC**



PROPOSED DEVELOPMENT CONDITIONS

PROPOSED DEVELOPMENT PLAN

Scale: 1"=500'

PLAN PREPARED BY:



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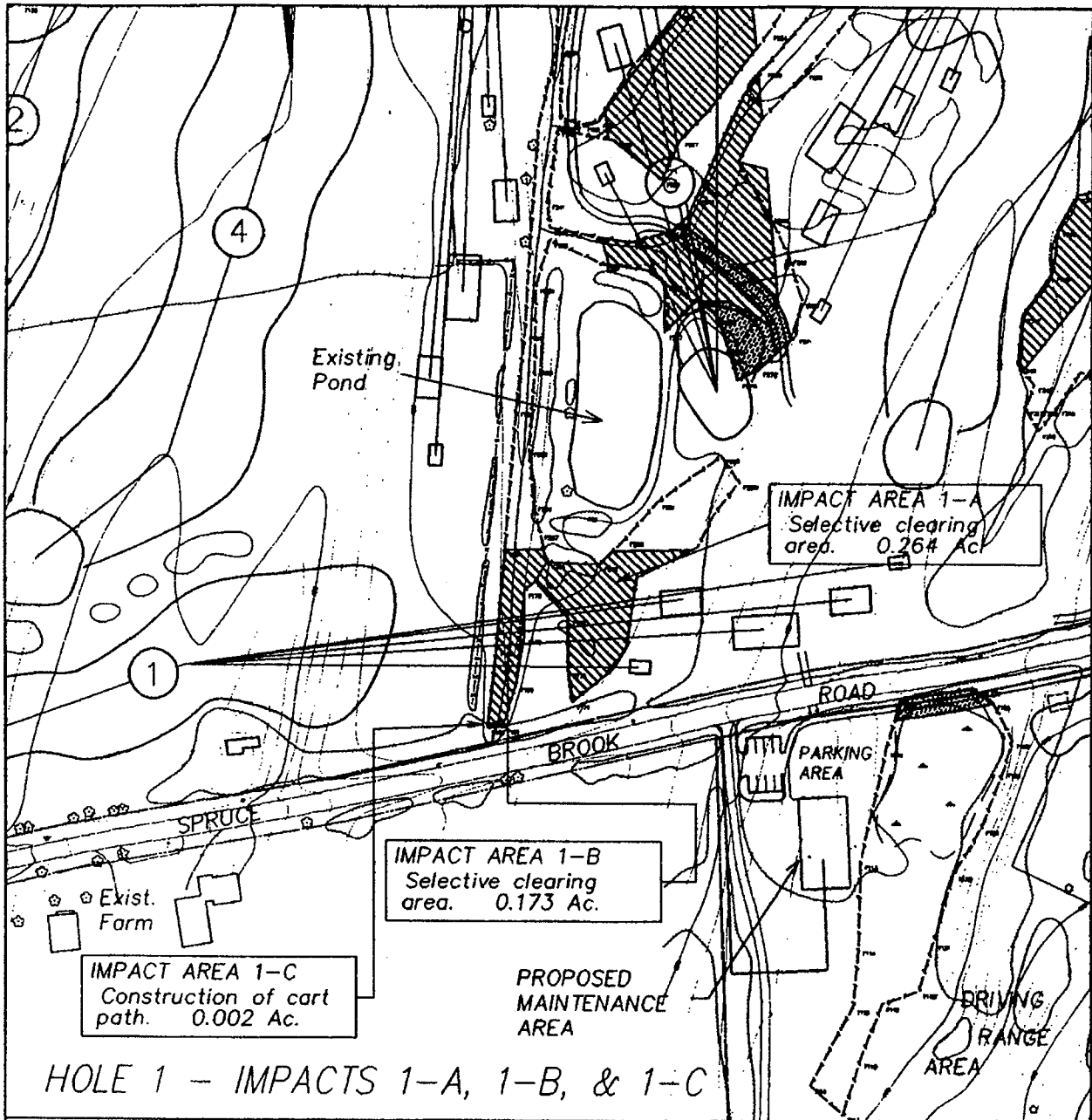
SHEET

3

DATE

August 12, 1997

Rev. 10/15/97



PROPOSED DEVELOPMENT PLAN

Scale: 1"=100'

PLAN PREPARED BY:



**MBA Engineering, Inc.**  
 Surveying and Engineering Services  
 211 New Britain Road, Suite 103  
 Kensington, Connecticut 06037  
 (860) 827-9222 Fax (860) 827-9997

PROPOSED

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PISTOL CREEK INVESTORS, LLC

SHEET

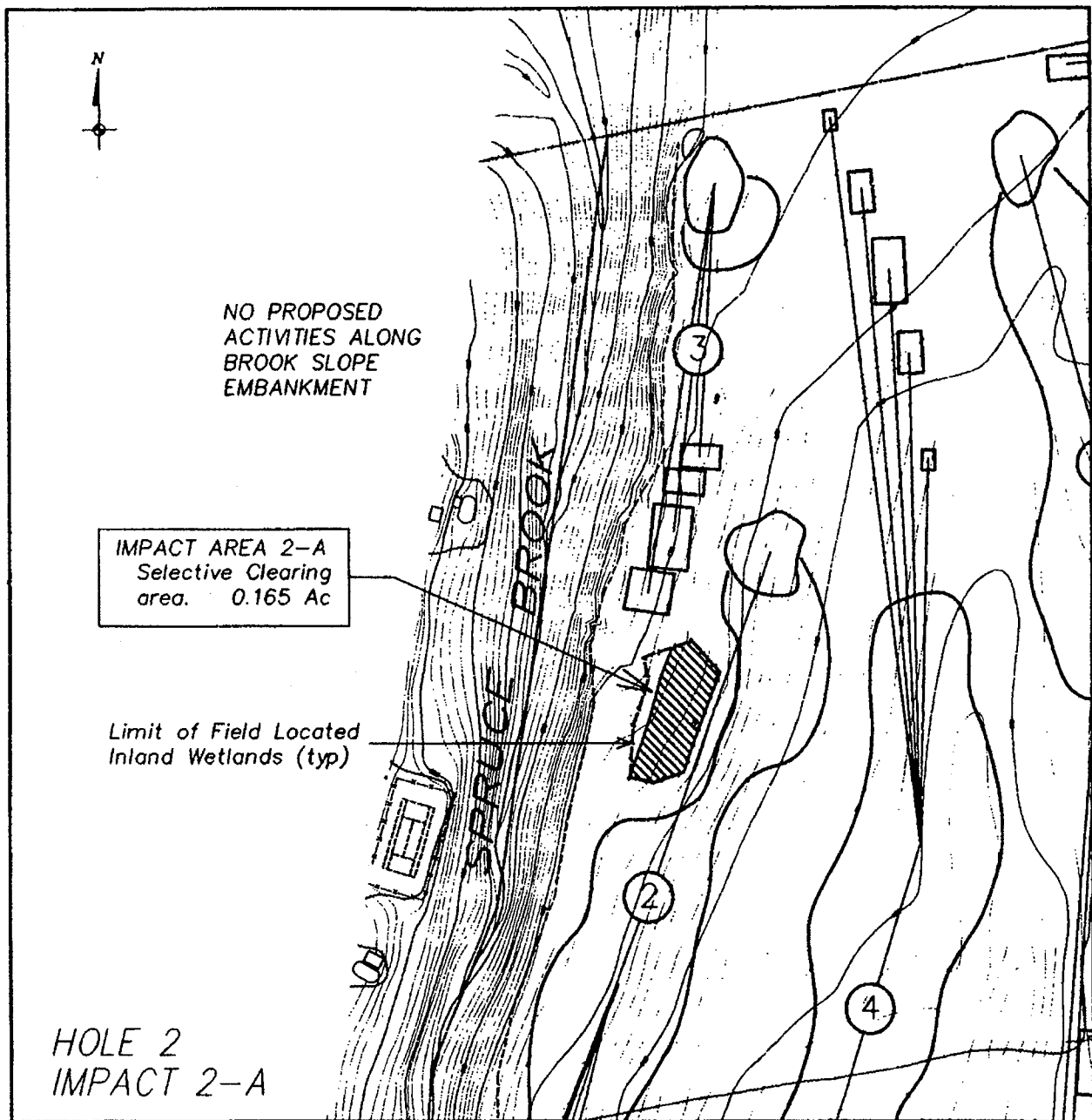
4

DATE

August 12, 1997

Rev. 10/15/97





**PROPOSED DEVELOPMENT PLAN**

Scale: 1"=100'

PLAN PREPARED BY:



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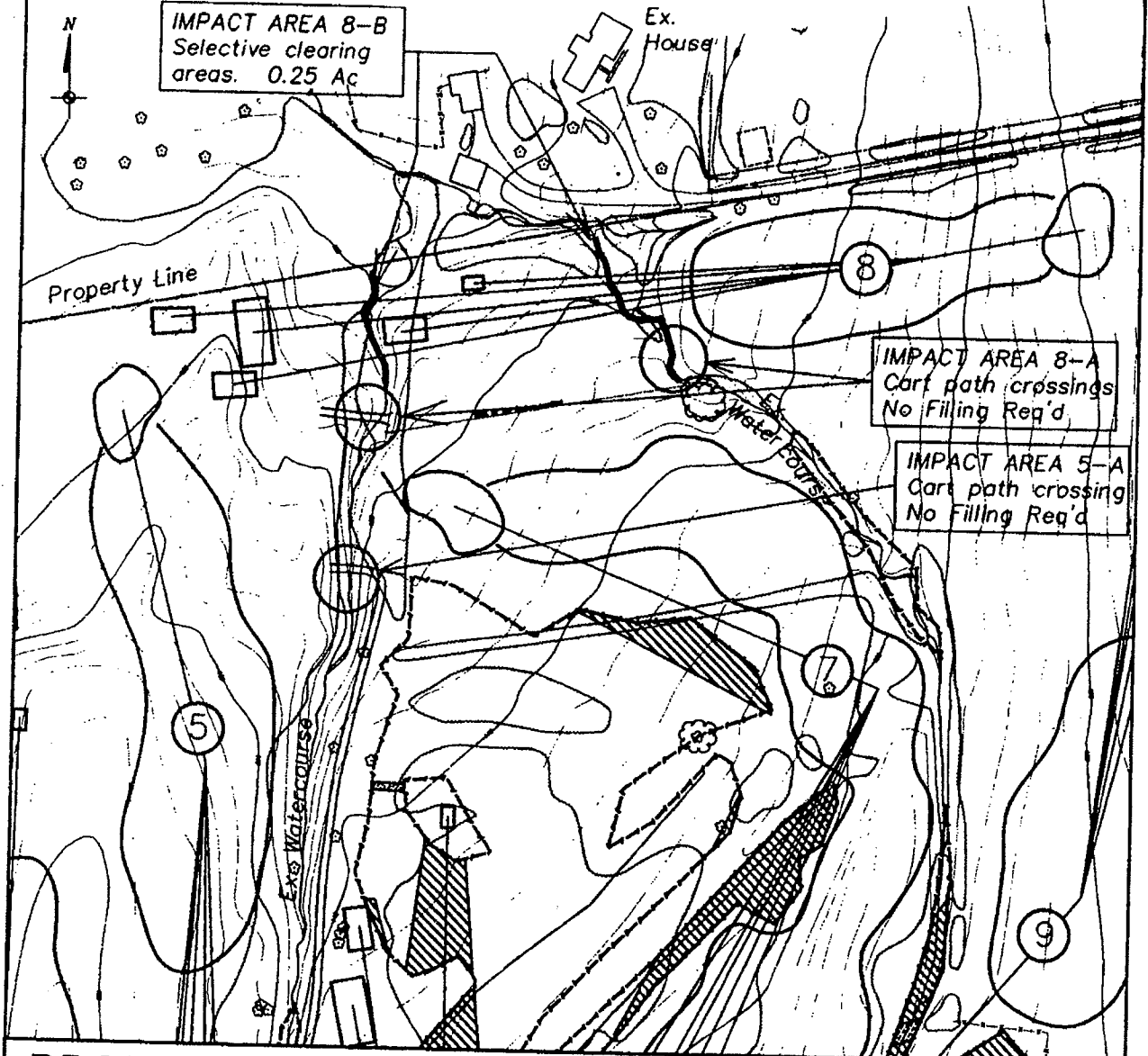
SHEET

5

DATE

August 12, 1997

HOLE 5 - IMPACT 5-A  
 HOLE 8 - IMPACTS 8-A & 8-B



**PROPOSED DEVELOPMENT PLAN**

Scale: 1"=100'

PLAN PREPARED BY:

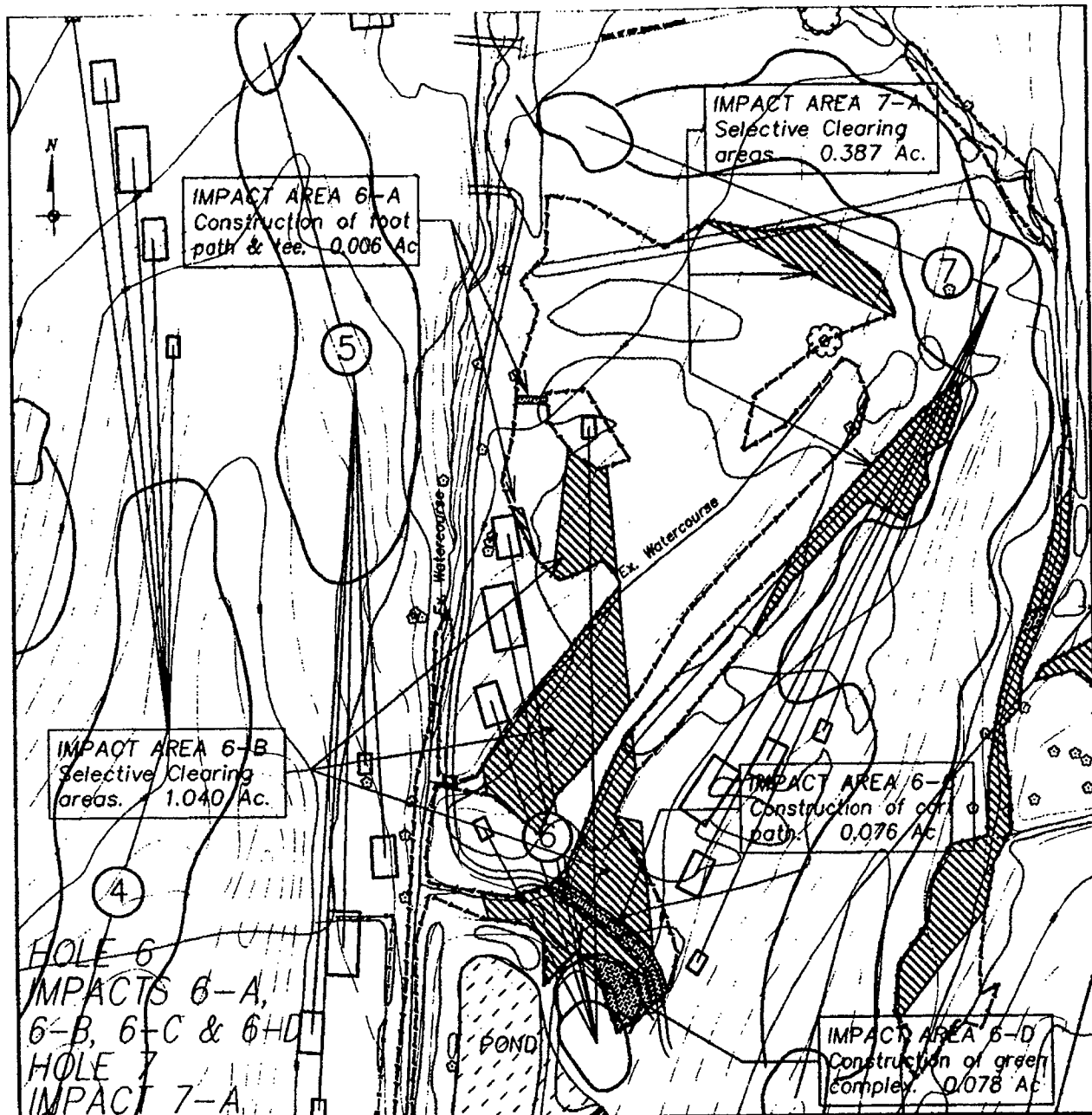
**MBA Engineering, Inc.**  
 Surveying and Engineering Services  
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 Kensington, Connecticut 06037  
 (860) 827-0222 Fax (860) 827-9997

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SHEET  
 6

DATE  
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APPLICATION BY:  
**PISTOL CREEK INVESTORS, LLC**



**PROPOSED DEVELOPMENT PLAN**

Scale: 1"=100'

PLAN PREPARED BY:

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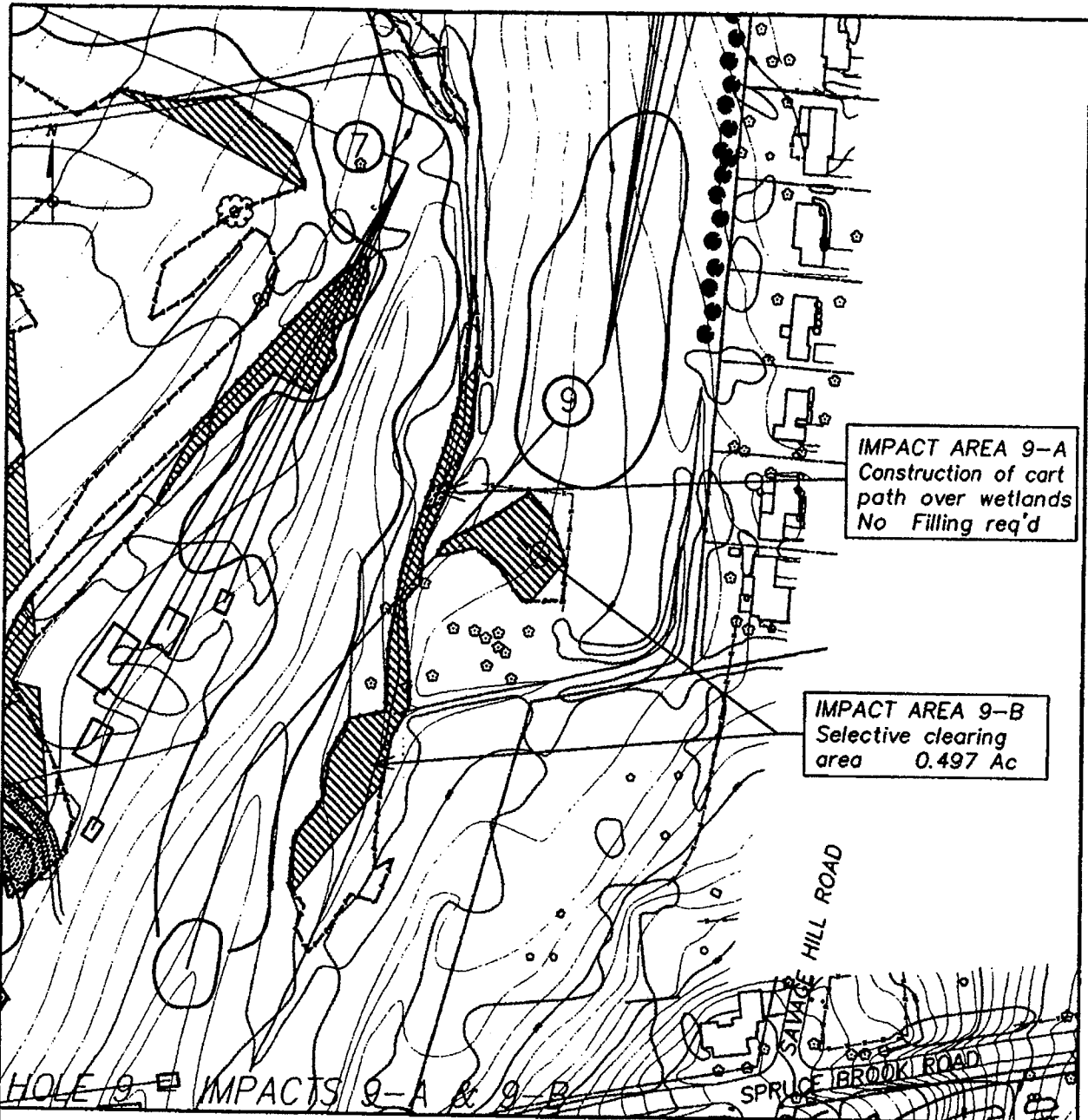
APPLICATION BY:  
**PISTOL CREEK INVESTORS, LLC**

SHEET

7

DATE

August 12, 1997



IMPACT AREA 9-A  
Construction of cart  
path over wetlands  
No Filling req'd

IMPACT AREA 9-B  
Selective clearing  
area 0.497 Ac


HOLE 9 IMPACTS 9-A & 9-B

Savage Hill Road

SPRUCE BROOK ROAD

**PROPOSED DEVELOPMENT PLAN**

Scale: 1"=100'

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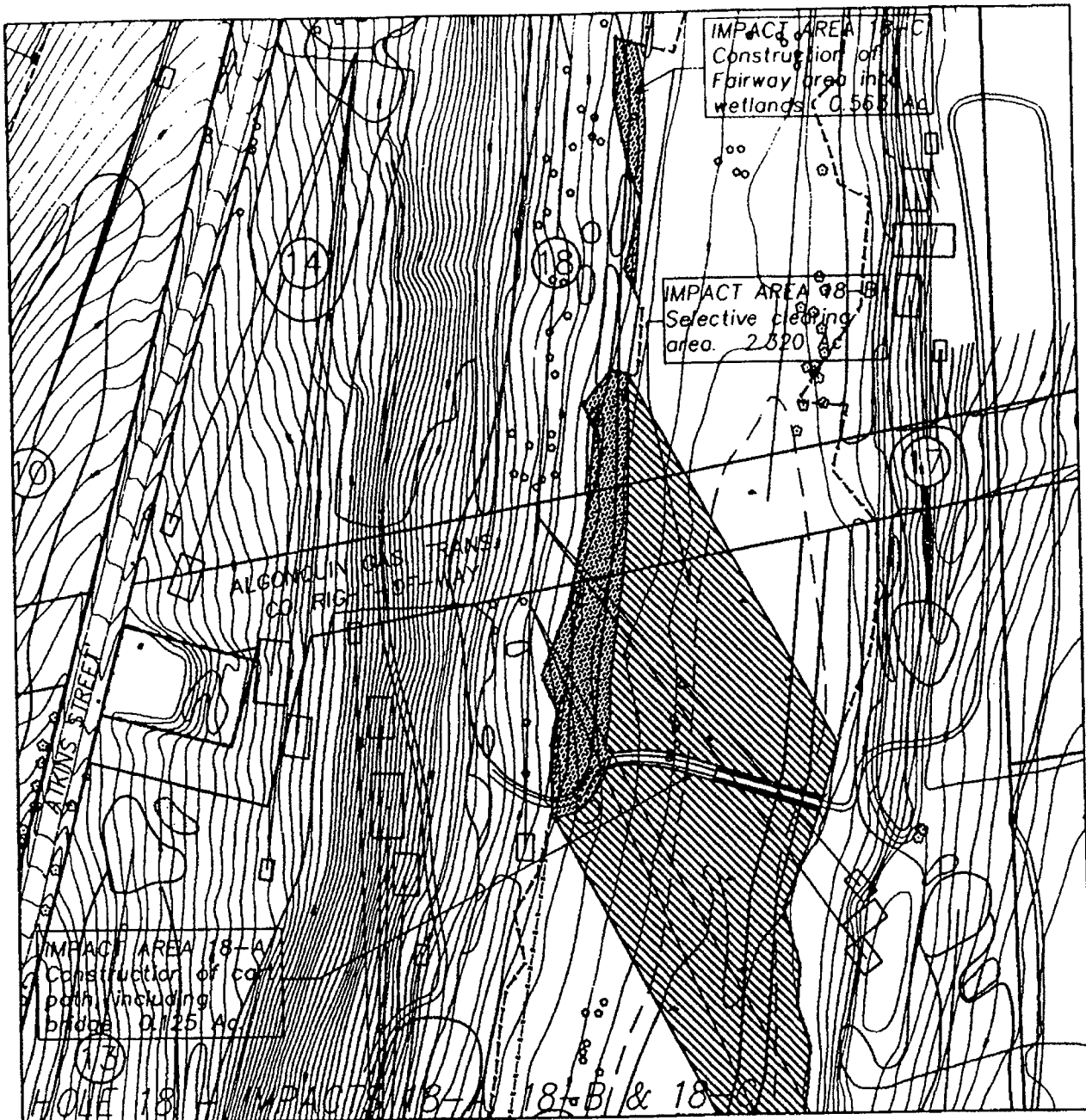
APPLICATION BY:  
**PISTOL CREEK INVESTORS, LLC**

SHEET  
 8

DATE  
 August 12, 1997



<b>PROPOSED DEVELOPMENT PLAN</b>		Scale: 1"=100'
PLAN PREPARED BY: <b>MBA Engineering, Inc.</b> Surveying and Engineering Services 211 New Britain Road, Suite 103 Kensington, Connecticut 06037 (860) 827-0222 Fax (860) 827-9997	PROPOSED <b>PISTOL CREEK GOLF CLUB</b> LOCATED IN THE TOWNS OF MIDDLETOWN (MIDDLESEX COUNTY) and BERLIN (HARTFORD COUNTY) IN THE STATE OF CONNECTICUT	SHEET <div style="text-align: center; font-size: 2em;">9</div>
	APPLICATION BY: <b>PISTOL CREEK INVESTORS, LLC</b>	DATE August 12, 1997



PROPOSED DEVELOPMENT PLAN

Scale: 1"=100'

PLAN PREPARED BY:



**MBA Engineering, Inc.**  
 Surveying and Engineering Services  
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 (860) 827-0222 Fax (860) 827-9997

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APPLICATION BY:  
**PISTOL CREEK INVESTORS, LLC**

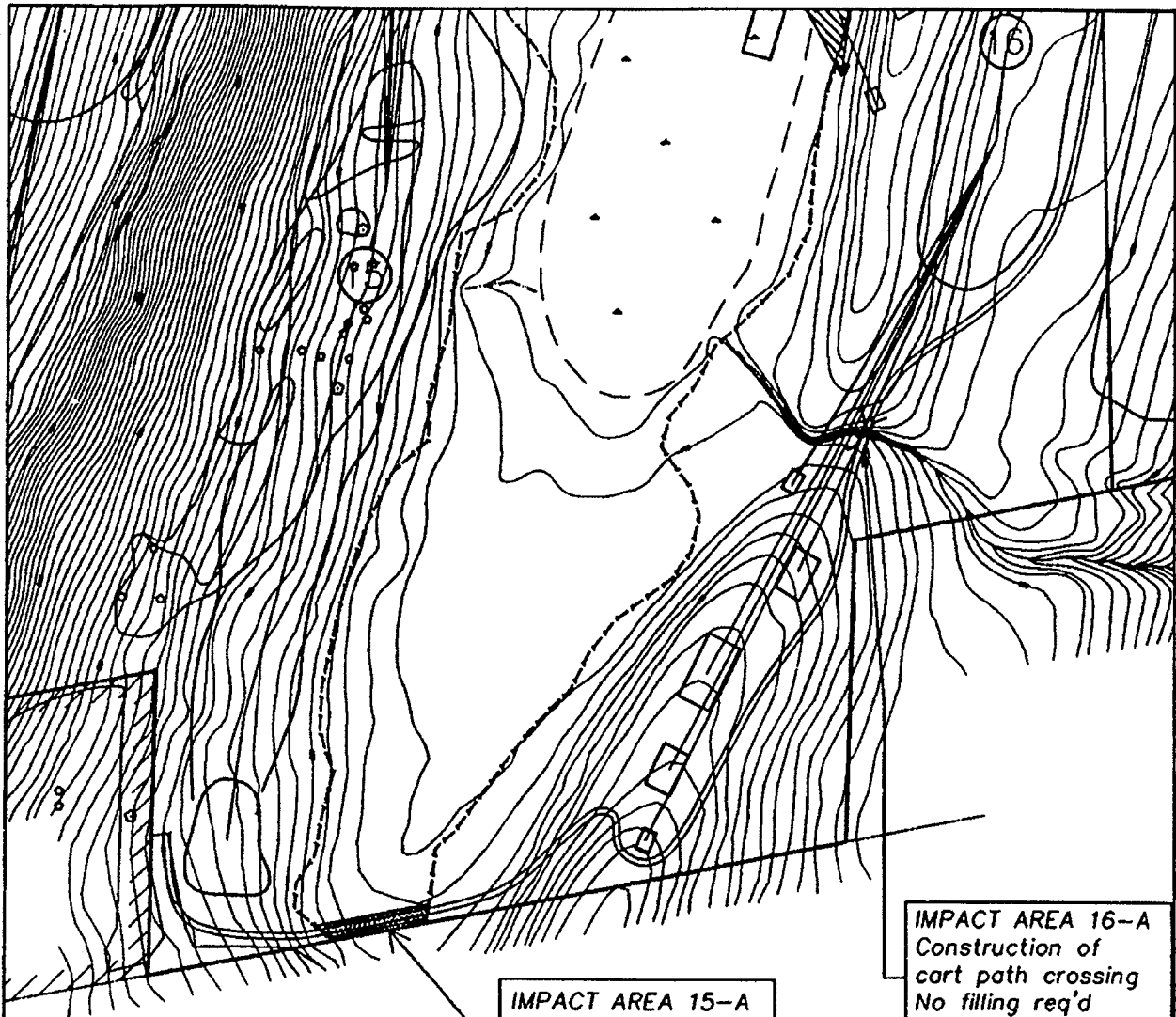
SHEET

10

DATE

August 12, 1997

Rev. 11/12/97




IMPACT AREA 15-A  
Construction of cart path. 0.035 Ac

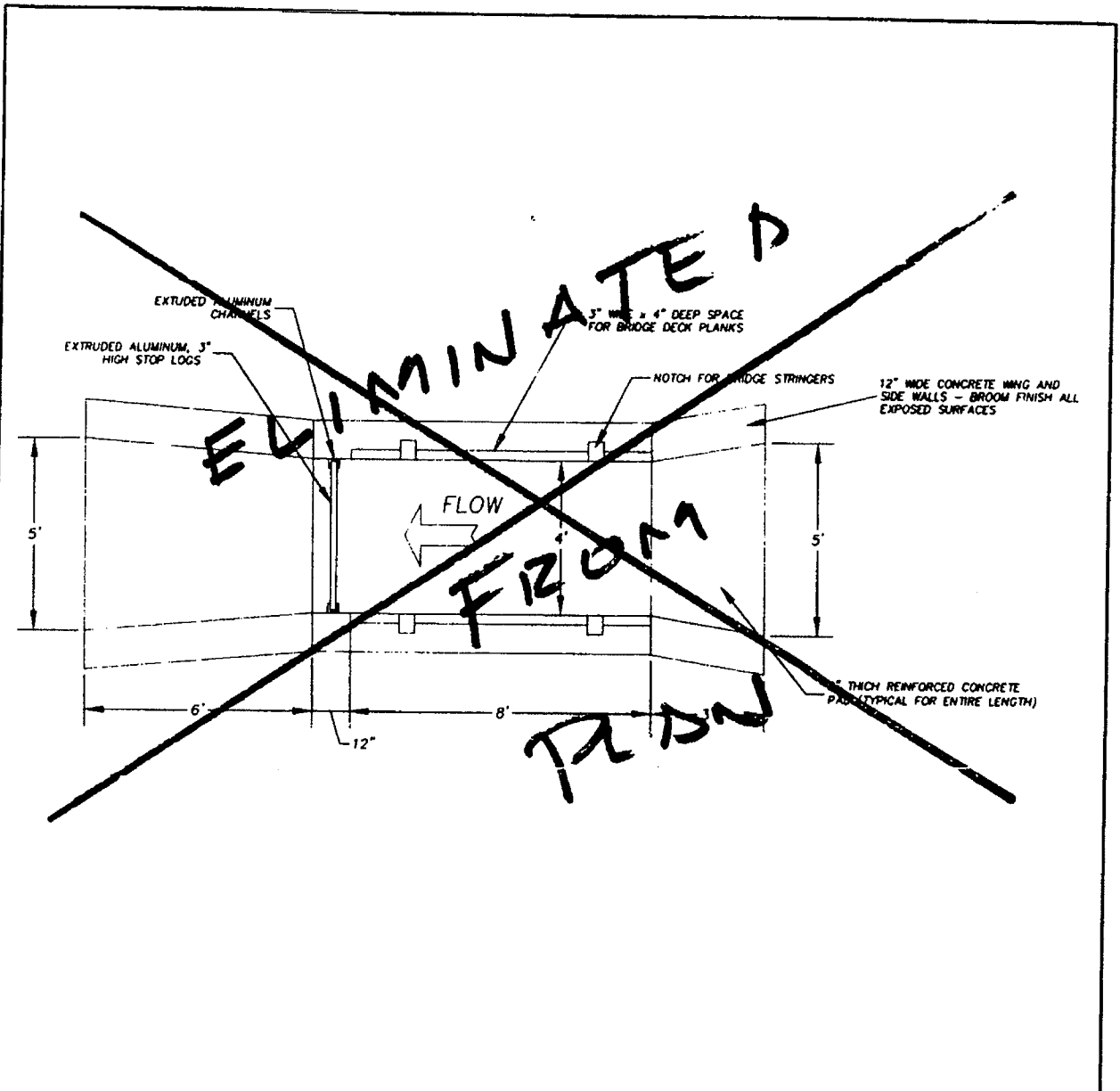
IMPACT AREA 16-A  
Construction of cart path crossing  
No filling req'd

HOLE 15 - IMPACT 15-A  
HOLE 16 - IMPACT 16-A

PROPOSED DEVELOPMENT PLAN

Scale: 1"=100'

PLAN PREPARED BY:  <b>MBA Engineering, Inc.</b> Surveying and Engineering Services 211 New Britain Road, Suite 103 Kensington, Connecticut 06037 (860) 827-0222 Fax (860) 827-9997	PROPOSED <b>PISTOL CREEK GOLF CLUB</b> LOCATED IN THE TOWNS OF MIDDLETOWN (MIDDLESEX COUNTY) and BERLIN (HARTFORD COUNTY) IN THE STATE OF CONNECTICUT	SHEET 11
	APPLICATION BY: <b>PISTOL CREEK INVESTORS, LLC</b>	DATE August 12, 1997 Rev. 11/12/97



DETAIL - PLAN VIEW

WATER CONTROL STRUCTURE

Not to Scale

PLAN PREPARED BY:

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SHEET

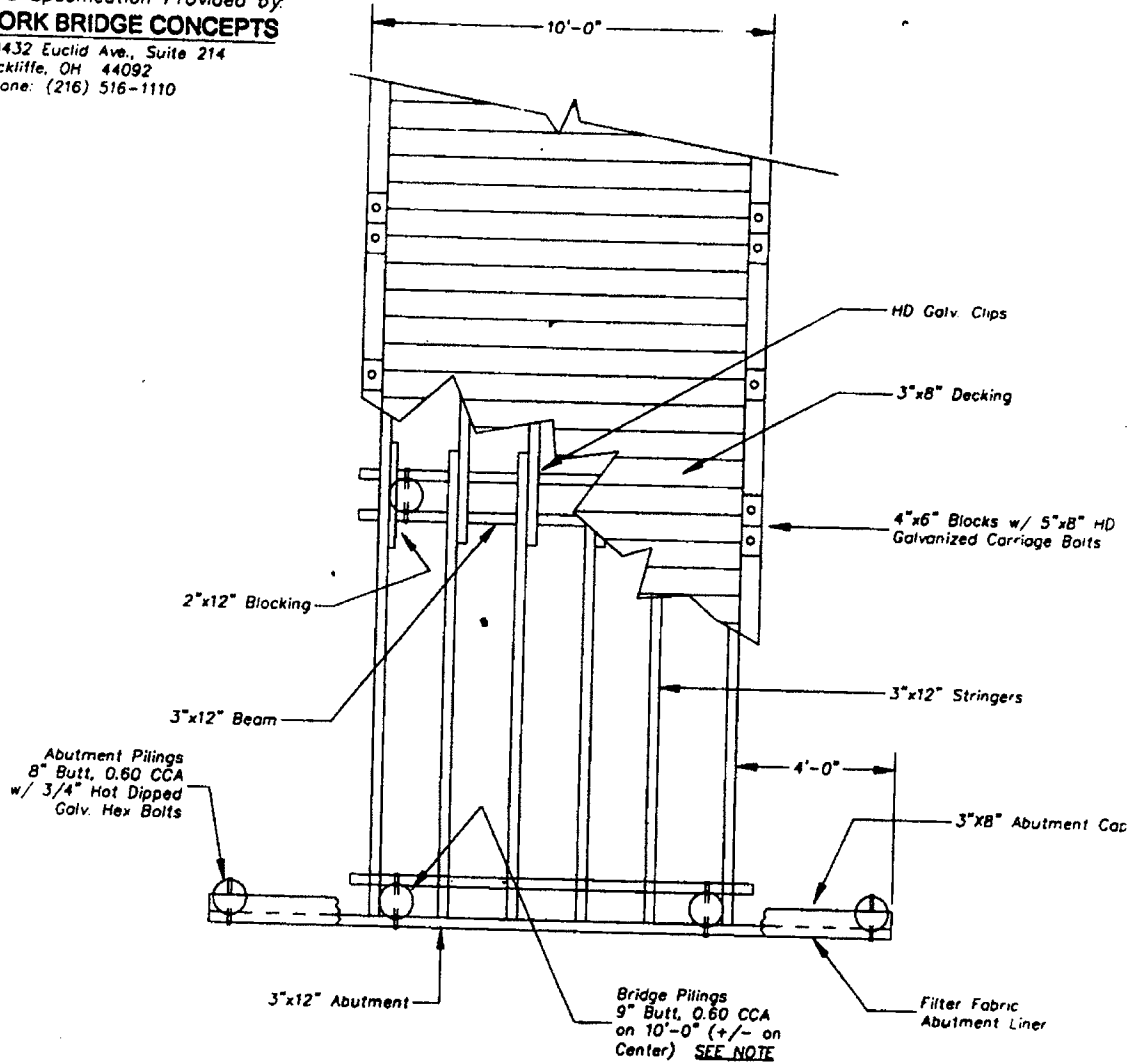
12

DATE

August 12, 1997



Preliminary Bridge Design  
and Specification Provided by:  
**YORK BRIDGE CONCEPTS**  
30432 Euclid Ave., Suite 214  
Wickliffe, OH 44092  
Phone: (216) 516-1110



DETAIL - PLAN VIEW

BRIDGE

Not to Scale

PLAN PREPARED BY:

**MBA** **MBA Engineering, Inc.**  
Surveying and Engineering Services  
211 New Britain Road, Suite 103  
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(860) 827-0222 Fax (860) 827-9997

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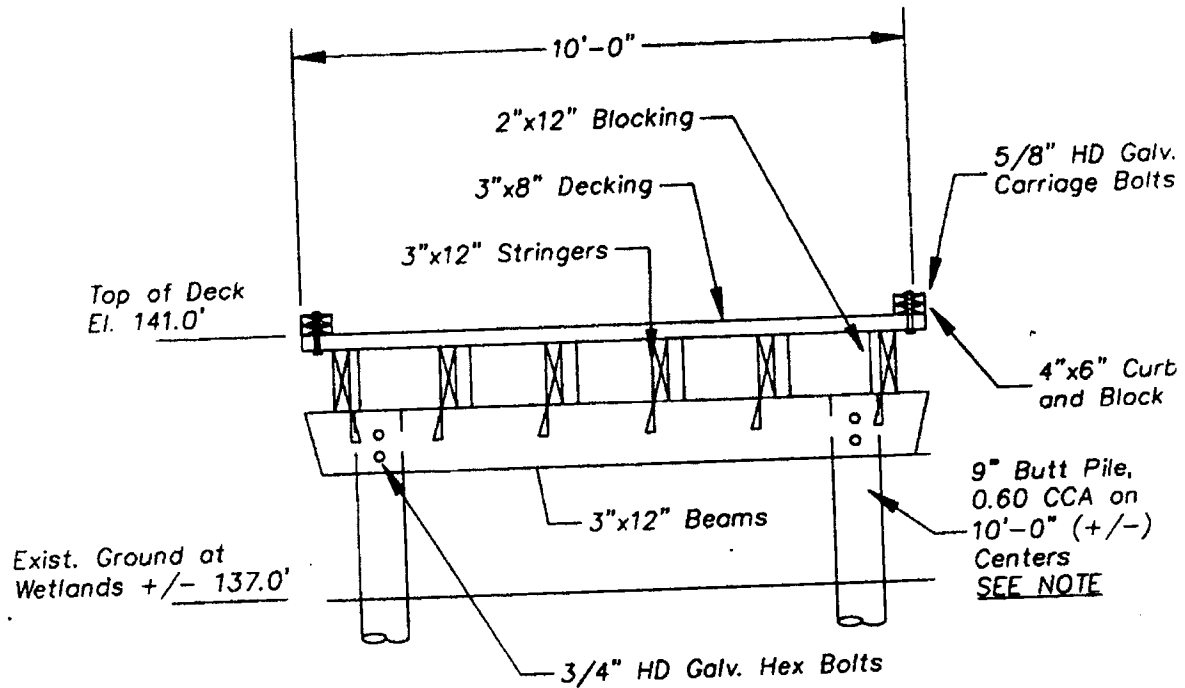
APPLICATION BY:  
**PISTOL CREEK INVESTORS, LLC**

SHEET

13

DATE

August 12, 1997



DETAIL - ELEVATION SECTION VIEW

BRIDGE

Not to Scale

PLAN PREPARED BY:

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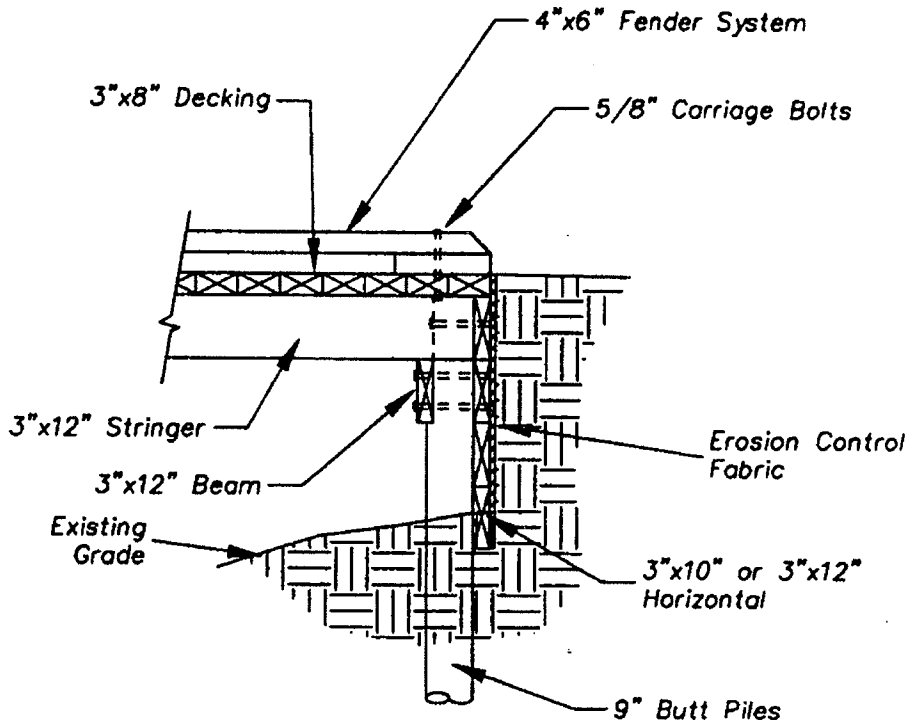
APPLICATION BY:  
**PISTOL CREEK INVESTORS, LLC**

SHEET

14

DATE

August 12, 1997



DETAIL - ABUTMENT SECTION VIEW

BRIDGE

Not to Scale

PLAN PREPARED BY:

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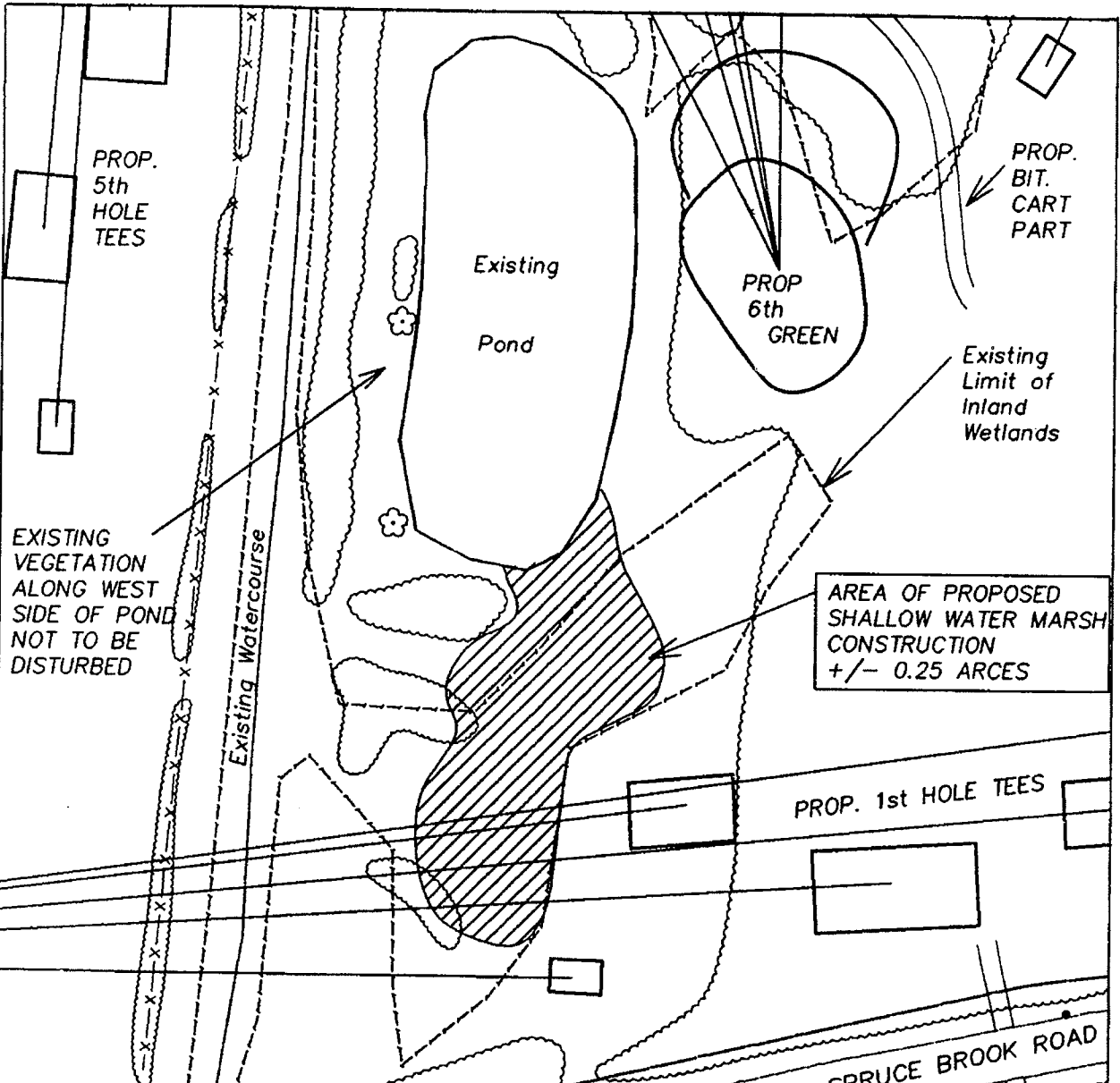
**PISTOL CREEK INVESTORS, LLC**

SHEET

15

DATE

August 12, 1997



SHALLOW WATER MARSH - OVERALL LAYOUT PLAN

PROPOSED MITIGATION AREAS Scale: 1"=60'

PLAN PREPARED BY:

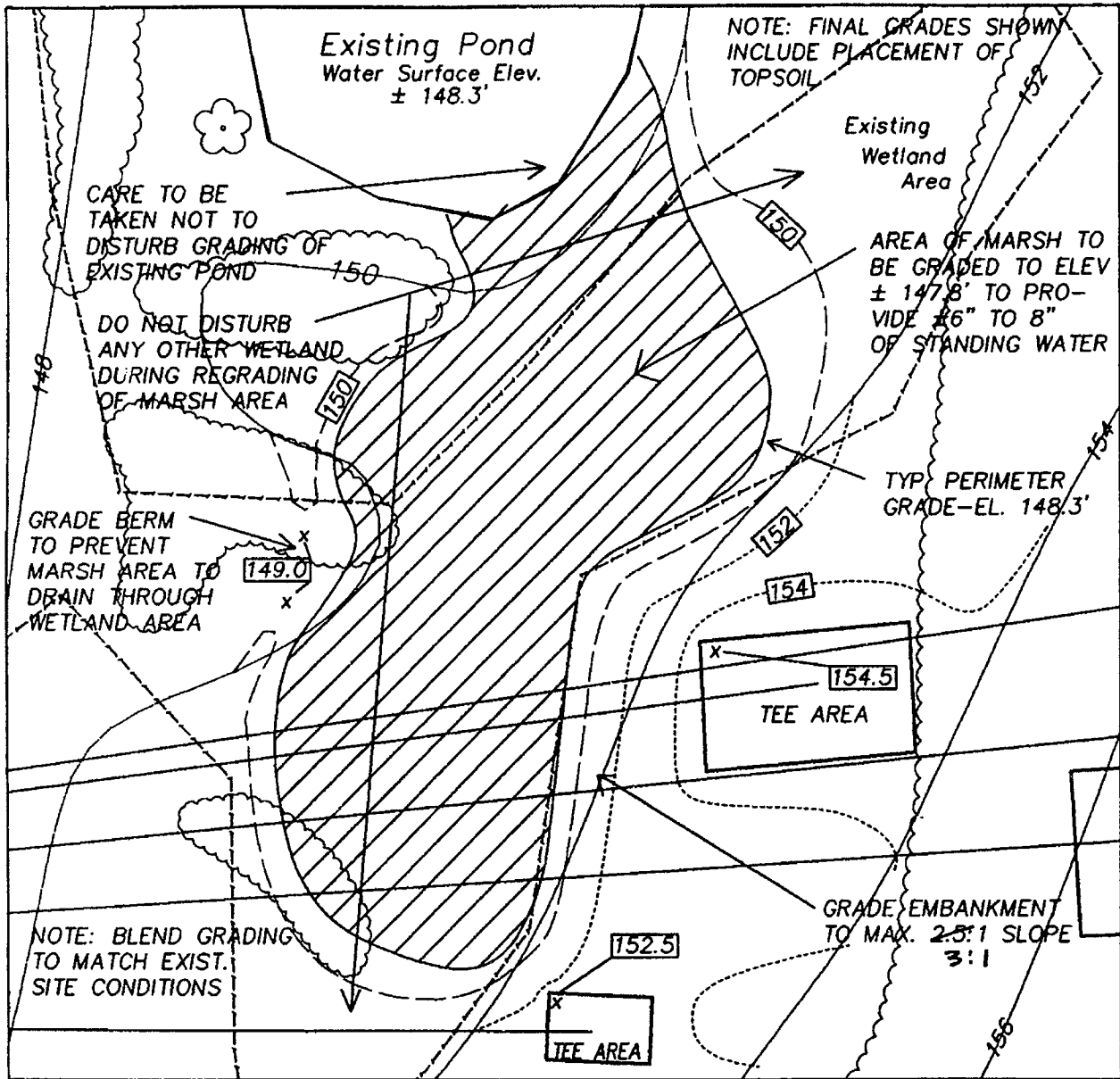
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APPLICATION BY:  
**PISTOL CREEK INVESTORS, LLC**

SHEET  
**M-1**

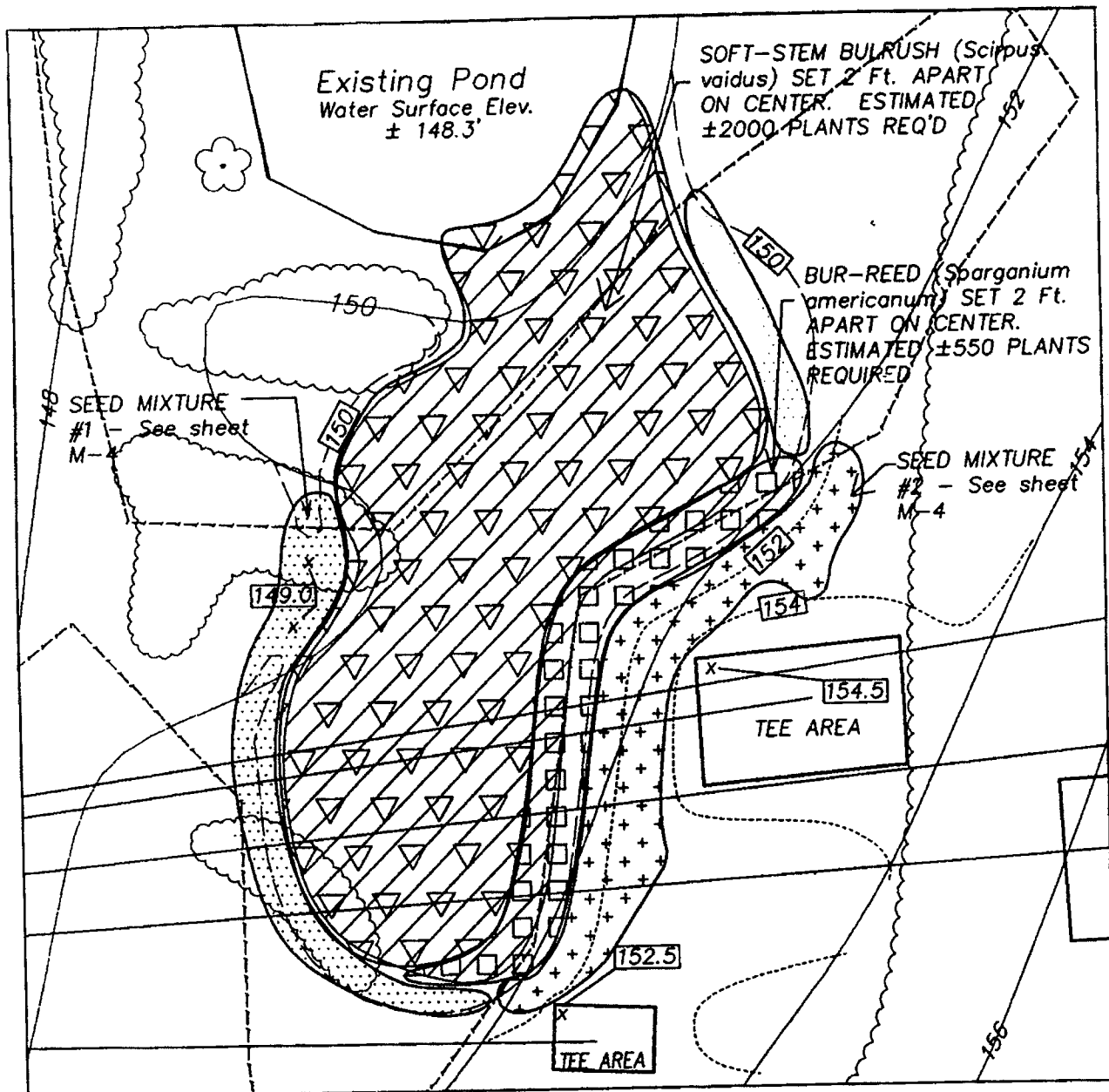
DATE  
 November 12, 1997  
 Rev. 1/8/98



SHALLOW WATER MARSH - GRADING PLAN

PROPOSED MITIGATION AREAS Scale: 1"=30'

PLAN PREPARED BY: <b>MBA Engineering, Inc.</b> Surveying and Engineering Services 211 New Britain Road, Suite 103 Kensington, Connecticut 06037 (860) 827-0222 Fax (860) 827-9997	PROPOSED <b>PISTOL CREEK GOLF CLUB</b> LOCATED IN THE TOWNS OF MIDDLETOWN (MIDDLESEX COUNTY) and BERLIN (HARTFORD COUNTY) IN THE STATE OF CONNECTICUT	SHEET <b>M-2</b>
	APPLICATION BY: <b>PISTOL CREEK INVESTORS, LLC</b>	DATE November 12, 1997 Rev. 1/8/98



SHALLOW WATER MARSH - PLANTING LAYOUT

PROPOSED MITIGATION AREAS Scale: 1"=30'

PLAN PREPARED BY: <b>MBA Engineering, Inc.</b> Surveying and Engineering Services 211 New Britain Road, Suite 103 Kensington, Connecticut 06037 (860) 827-0222 Fax (860) 827-9997	PROPOSED <b>PISTOL CREEK GOLF CLUB</b> LOCATED IN THE TOWNS OF MIDDLETOWN (MIDDLESEX COUNTY) and BERLIN (HARTFORD COUNTY) IN THE STATE OF CONNECTICUT	SHEET <b>M-3</b>
	APPLICATION BY: <b>PISTOL CREEK INVESTORS, LLC</b>	DATE November 12, 1997 Rev. 1/8/98

**PLANTING SCHEDULE**

<b>BUR-REED</b>	Spagnum americanum set 2' O C	2" Peat Pots Est +/- 550 Plants
<b>SOFT-STEM BULRUSH</b>	Spagnum americanum set 2' O C	2" Peat Pots Est +/- 2000 Plants

**SEED MIXTURES**

**MIXTURE #1 - NEW ENGLAND WETMIX**, (from N. E. Wetland Plants, Inc., 800 Main St., Amherst, MA 01002, Phone: (413) 256-1752), OR ACCEPTABLE EQUAL  
 APPLICATION RATE: 1 Lb/5000 Sq. Ft. AS UNDERSTORY SEEDING and 1 Lb/2500 Sq. Ft. AS A WET MEADOW SEEDING

SPECIES - Fringed Sedge, Canada Manna Grass, Three-way Sedge, Blue Vervain, Woolgrass, Lurid Sedge, Soft Push, Joe-pye, Green Bulrush, Bearded Sedge, Tussock Sedge, Boneset, Broomsedge, Fox Sedge, Barberpole Sedge, Rusty Flatsedge, Bladder Sedge, Swamp Candle, Marsh St. John's-wort, Northern Bugleweed and Fowl Manna Grass

**MIXTURE #2 - NEW ENGLAND EROSION CONTROL/RESTORATION MIX**, (from N. E. Wetland Plants, Inc., 800 Main St., Amherst, MA 01002, Phone: (413) 256-1752), OR ACCEPTABLE EQUAL

APPLICATION RATE: 35 Lb/Acre  
 SPECIES - Tioga Deertounge, Alsike Clover, Rough Bluegrass, Meadow Fescue, Red Top, Creeping Bentgrass, Switchgrass, Meadow Foxtail, Eastern Gama-grass, Fox Sedge, Virginia Wild-rye, Plains Coreopsis, Grass-leaved Goldenrod, Canada Goldenrod, Blue Vervain, Joe-Pye Weed, Boneset, and Flat-top Aster

**NOTES:**

- SEEDING MIXTURE SHALL BE USED AS SHOWN ON SHEET M-3 AND USED AS A UNDERSTORY SEEDING WITHIN SOFT-STEM BULRUSH AND BUR-REED PLANTING AREAS.
- LIGHTLY RAKE ALL SEEDED AREAS TO ENSURE PROPER SOIL-SEED CONTACT.
- LIGHTLY MULCH ALL SEEDED AREAS WITH WEED-FREE STRAW.
- NATURAL TOPSOIL USED SHALL CONSIST OF AT LEAST 12% ORGANIC CARBON CONTENT (by weight). MANMADE TOPSOIL, IF USED, SHALL CONSIST OF A MIXTURE OF EQUAL VOLUMES OR ORGANIC AND MINERAL MATERIALS
- COMMERCIALY PACKAGED PEAT FROM SEDGE, SPHAGNUM, OR REED SOURCES IS SPECIFICALLY PROHIBITED AS A TOPSOIL AMENDMENT. IF THE TOPSOIL CONDITIONS REQUIRE ORGANIC AMENDMENTS, CLEAN LEAF COMPOST WHICH HAS BEEN COMPOSTED FOR A MINIMUM OF 3 YEARS, SHALL BE CONSIDERED A REASONABLE ALTERNATIVE

6 MINIMUM OF 6" OF TOPSOIL SHALL BE USED IN ALL CREATED MITIGATION AREAS OR AREA IMPACTED BY REGRADING

7 EXTREME CARE SHALL BE TAKEN TO ENSURE THAT PREVENT THE INTRODUCTION OF INVASIVE SPECIES (Purple Loosestrife / *Lythrum salicaria* or Phragmites / *Phragmites australis*) INTO ANY AREA DISTURBED BY THE PROPOSED MITIGATION AREA ANY EXISTING STANDS OF THESE SPECIES, OR THE POSSIBLE INTRODUCTION OF THESE SPECIES INTO IMPACTED AREAS SHALL REQUIRE THERE REMOVAL BY AN APPROPRIATE METHOD OF REMOVAL THESE TECHNIQUES MAY INCLUDE THE USE OF CHEMICAL, MECHANICAL OR BIOLOGICAL REMOVAL METHODS MONITORING FOR EVASIVE SPECIES WITHIN AND ADJACENT TO THE CREATED WETLAND AREA FOR A PERIOD OF NOT LESS THAN THREE YEARS SHALL BE REQUIRED

8 ALL PROPER AND REQUIRED SEDIMENTATION AND EROSION CONTROL METHODS SHALL BE UTILIZED DURING THE CREATION OF THIS WETLAND AREA THE USED OF SILTATION FENCES AND HAYBALES SHALL EMPLOYED TO FILTER SOIL FINES AND TO MINIMIZE SITE EROSION.

9. ALL MEASURES SHALL REQUIRE PERIODIC INSPECTION AND MAINTENANCE DURING CONSTRUCTION. COLLECTED SILTS AND SEDIMENTS SHALL BE PERIODICALLY CLEANED, AS SITE CONDITIONS WARRANT

10. ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE REMOVED AND PROPERLY DISPOSED OF ONCE VEGETATION COVER HAS BEEN ESTABLISHED AND THE THREAT OF EROSION HAS BEEN ELIMINATED.

11 REFER TO DETAIL ON SHEET M-10 FOR TYPICAL GRADING CROSS-SECTION AND CONSTRUCTION REQUIREMENTS.

12 AREA OF PROPOSED MARSH SHALL BE STAKED BY LICENSED SURVEYOR. A BENCH MARK SHALL BE ESTABLISHED FOR CONSTRUCTION AND FUTURE MONITORING PURPOSES AT THAT TIME. PROPOSED GRADING SHALL BE EVALUATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. FINALLY GRADING OF MARSH AREA IS SUBJECT TO POSSIBLE FIELD ADJUSTMENT TO MEET NECESSARY HYDROLOGIC AND AREA REQUIREMENTS. ALL MODIFICATION SUBJECT TO REVIEW AND APPROVAL OF PROJECT ENGINEER AND BIOLOGIST

13. THE COMPLETED MITIGATION AREA SHALL MONITORED BY NOV. 1 OF EACH YEAR, FOR A PERIOD OF NOT LESS THAN THREE YEARS. SPECIFIC GOALS SHALL BE ESTABLISHED BY THE ARMY CORPS OF ENGINEERS. REPORTS SHALL BE SUBMITTED BY DEC. 15 OF EACH YEAR, IN THE MANNER STIPULATED BY THE CORPS

**SHALLOW WATER MARSH - CONSTRUCTION & PLANTING NOTES**

**PROPOSED MITIGATION AREAS**

No Scale

PLAN PREPARED BY:

**MBA Engineering, Inc.**  
 Surveying and Engineering Services  
 211 New Britain Road, Suite 103  
 Kensington, Connecticut 06037  
 (860) 827-0222 Fax (860) 827-9997

PROPOSED

**PISTOL CREEK GOLF CLUB**

LOCATED IN THE TOWNS OF MIDDLETOWN (MIDDLESEX COUNTY) and BERLIN (HARTFORD COUNTY) IN THE STATE OF CONNECTICUT

APPLICATION BY:

**PISTOL CREEK INVESTORS, LLC**

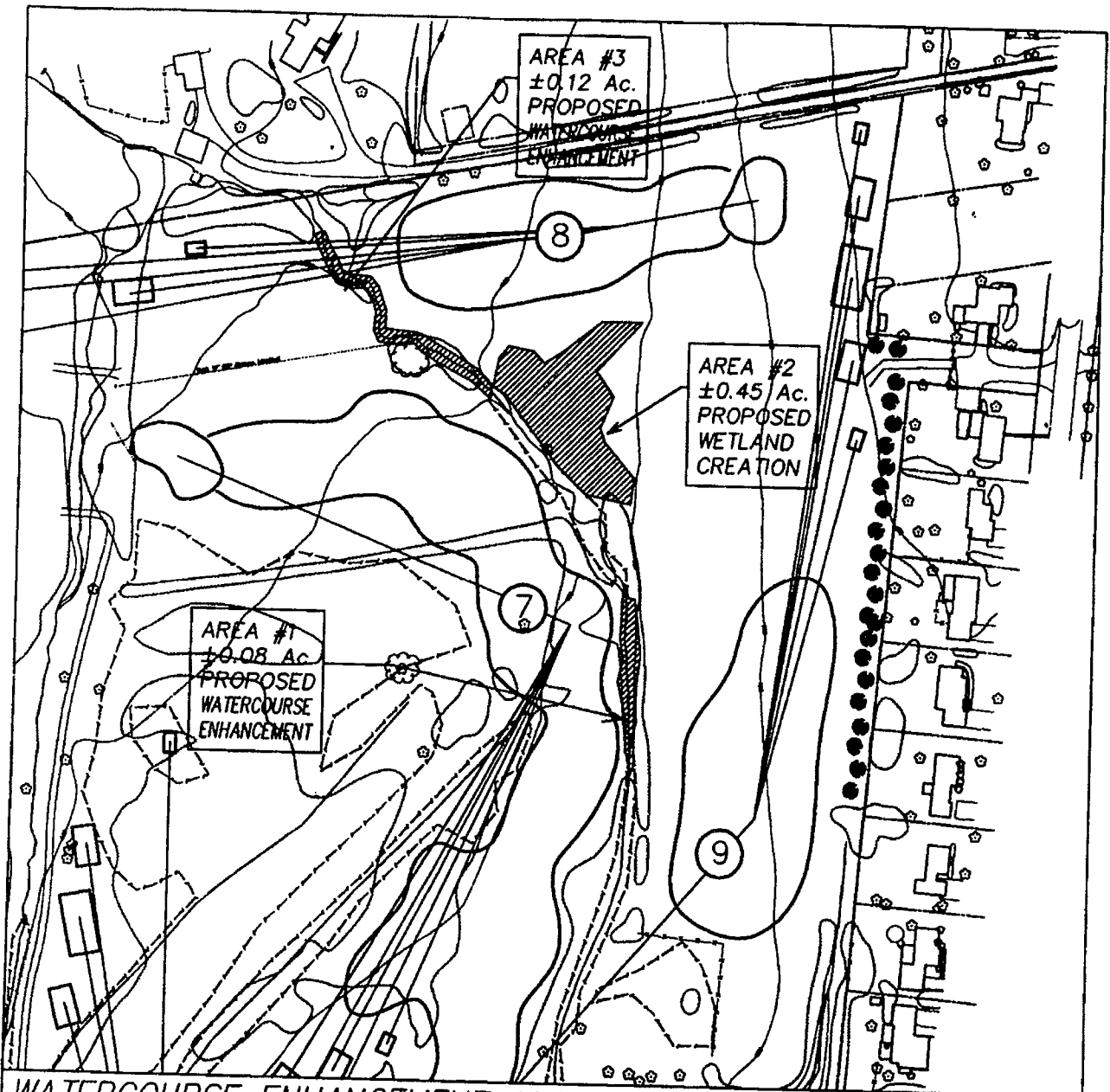
SHEET

M-4


DATE

November 12, 1997

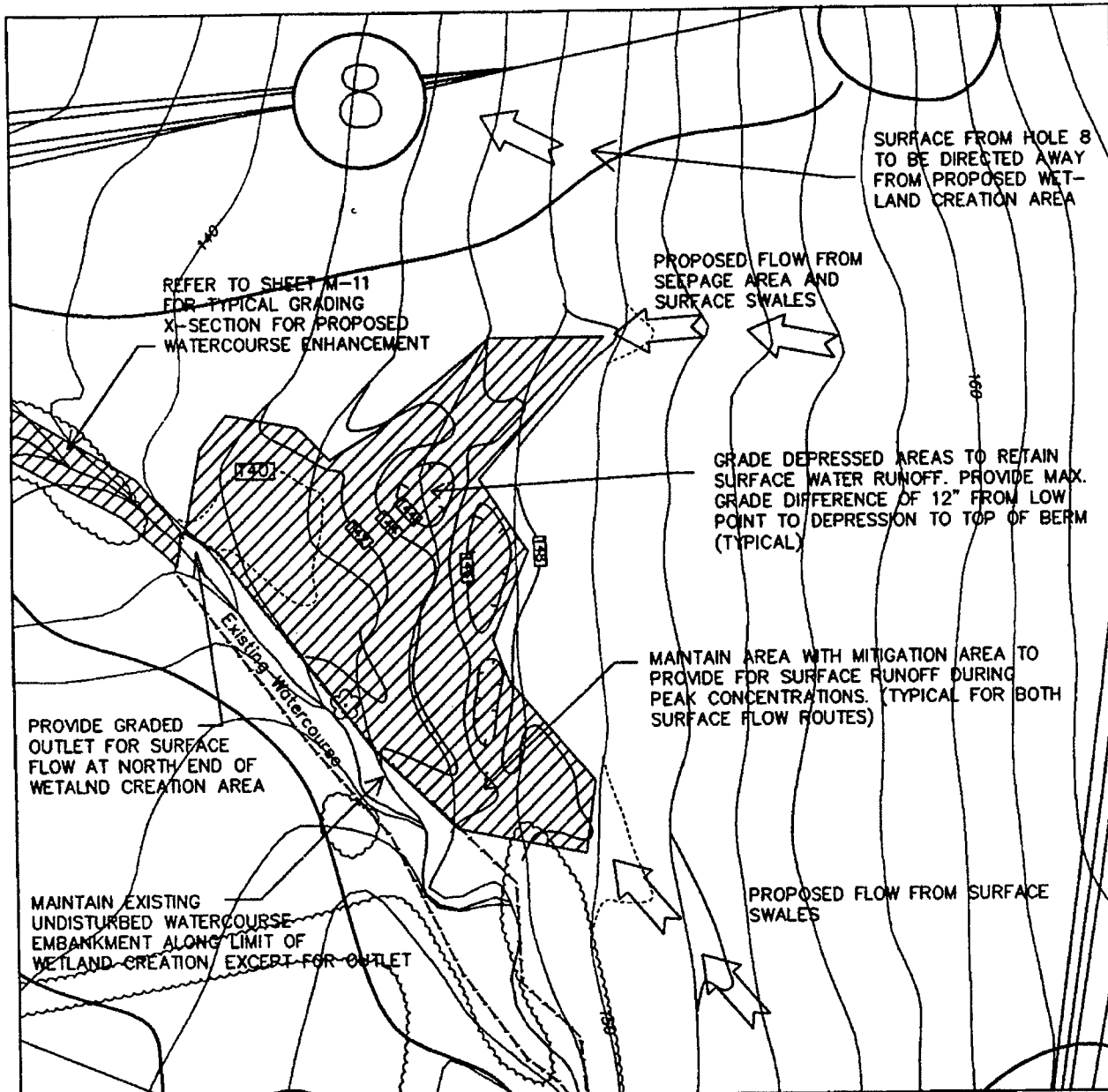
Rev. 1/8/98



**WATERCOURSE ENHANCEMENT AREAS - OVERALL LAYOUT PLAN**  
**PROPOSED MITIGATION AREAS** Scale: 1"=100'

PLAN PREPARED BY:  <b>MBA Engineering, Inc.</b> Surveying and Engineering Services 211 New Britain Road, Suite 103 Kensington, Connecticut 06037 (860) 827-0222 Fax (860) 827-8997	PROPOSED <b>PISTOL CREEK GOLF CLUB</b> LOCATED IN THE TOWNS OF MIDDLETOWN (MIDDLESEX COUNTY) and BERLIN (HARTFORD COUNTY) IN THE STATE OF CONNECTICUT	SHEET <b>M-5</b>
	APPLICATION BY: <b>PISTOL CREEK INVESTORS, LLC</b>	DATE November 12, 1997 Rev. 1/8/98





**WATERCOURSE ENHANCEMENT AREAS - GRADING PLAN**

**PROPOSED MITIGATION AREAS**

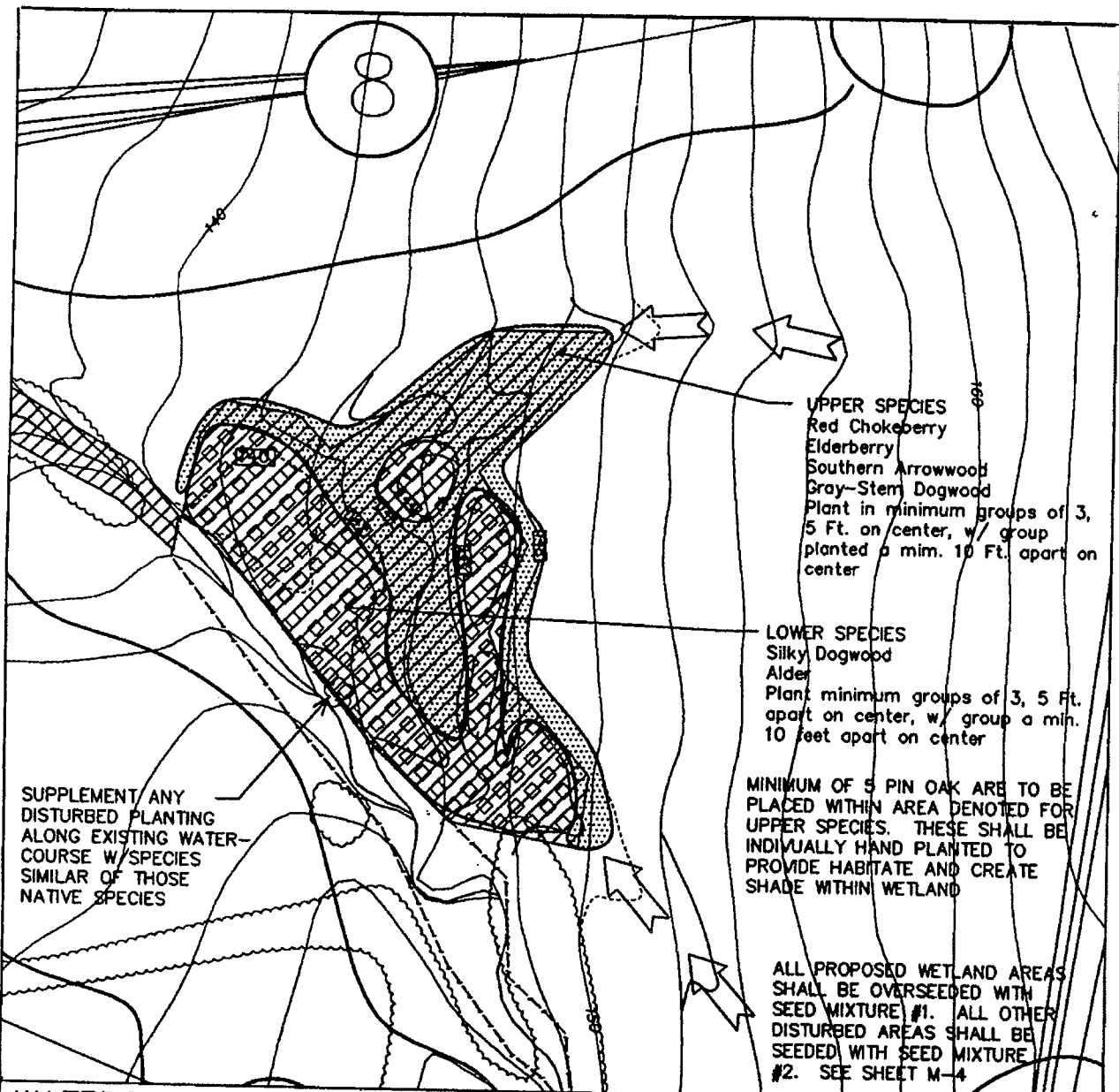
Scale: 1"=60'

PLAN PREPARED BY:

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 Surveying and Engineering Services  
 211 New Britain Road, Suite 103  
 Kensington, Connecticut 06037  
 (860) 827-0222 Fax (860) 827-8997

PROPOSED  
**PISTOL CREEK GOLF CLUB**  
 LOCATED IN THE TOWNS OF  
 MIDDLETOWN (MIDDLESEX COUNTY) and  
 BERLIN (HARTFORD COUNTY)  
 IN THE STATE OF CONNECTICUT  
 APPLICATION BY:  
**PISTOL CREEK INVESTORS, LLC**

SHEET  
**M-6**  
 DATE  
 November 12, 1997  
 Rev. 1/8/98



UPPER SPECIES  
 Red Chokeberry  
 Elderberry  
 Southern Arrowwood  
 Gray-Stem Dogwood  
 Plant in minimum groups of 3,  
 5 Ft. on center, w/ group  
 planted a mim. 10 Ft. apart on  
 center

LOWER SPECIES  
 Silky Dogwood  
 Alder  
 Plant minimum groups of 3, 5 Ft.  
 apart on center, w/ group a min.  
 10 feet apart on center


SUPPLEMENT ANY  
 DISTURBED PLANTING  
 ALONG EXISTING WATER-  
 COURSE W/SPECIES  
 SIMILAR OF THOSE  
 NATIVE SPECIES

MINIMUM OF 5 PIN OAK ARE TO BE  
 PLACED WITHIN AREA DENOTED FOR  
 UPPER SPECIES. THESE SHALL BE  
 INDIVIDUALLY HAND PLANTED TO  
 PROVIDE HABITATE AND CREATE  
 SHADE WITHIN WETLAND

ALL PROPOSED WETLAND AREAS  
 SHALL BE OVERSEEDED WITH  
 SEED MIXTURE #1. ALL OTHER  
 DISTURBED AREAS SHALL BE  
 SEEDDED WITH SEED MIXTURE  
 #2. SEE SHEET M-4

**WATERCOURSE ENHANCEMENT AREAS - PLANTING LAYOUT**

**PROPOSED MITIGATION AREAS** Scale: 1"=60'

PLAN PREPARED BY:  <b>MBA Engineering, Inc.</b> Surveying and Engineering Services 211 New Britain Road, Suite 103 Kensington, Connecticut 06037 (860) 827-0222 Fax (860) 827-8997	PROPOSED <b>PISTOL CREEK GOLF CLUB</b> LOCATED IN THE TOWNS OF MIDDLETOWN (MIDDLESEX COUNTY) and BERLIN (HARTFORD COUNTY) IN THE STATE OF CONNECTICUT	SHEET <b>M-7</b>
	APPLICATION BY: <b>PISTOL CREEK INVESTORS, LLC</b>	DATE November 12, 1997 Rev. 1/8/98

**RECOMMENDED PLANTING SCHEDULE**

**Notation Legend**

**a** - Wetland Creation Area

**b** - Watercourse Enhancement Area

<b>SILKY DOGWOOD</b>	Cornus Amomum	18-24" / B & B Use in areas a & b
<b>ALDER</b>	Ainus serrulata	18-24" / B & B Use in areas a & b
<b>RED CHOKEBERRY</b>	Aronia arbutifolia	18-24" / B & B Use in area a
<b>COMMON ELDERBERRY</b>	Sambucus canadensis	18-24" / B & B Use in area a
<b>SOUTHERN ARROWWOOD</b>	Viburnum dentatum	18-24" / B & B Use in area a
<b>GRAY-STEM DOGWOOD</b>	Comus racemosa	18-24" / B & B Use in area a
<b>PIN OAK</b>	Quercus palustris Total of 5 to be planted	4-5' High / B & B Use in area a
<b>RICE CUTGRASS</b>	Leersia oryzoides	2" peat pot Use in area b
<b>SOFT RUSH</b>	Juncus effusus	2" peat pot Use in area b

**SEED MIXTURES**

REFER TO SEED MIXTURES #1 and #2 ON SHEET M-4 FOR TYPES, APPLICATION RATES AND SPECIES.

**NOTES:**

1. SEEDING MIXTURE #1 SHALL BE USED AS A UNDERSTORY SEEDING WITHIN ALL WETLAND CREATION AND WATERCOURSE ENHANCEMENT AREAS
2. SEEDING MIXTURE #2 SHALL BE USED FOR ALL DISTURBED AREAS ADJACENT TO ALL CREATION AND ENHANCEMENT AREAS.
3. LIGHTLY RAKE ALL SEEDED AREAS TO ENSURE PROPER SOIL-SEED CONTACT.
4. LIGHTLY MULCH ALL SEEDED AREAS WITH WEED-FREE STRAW.
5. NATURAL TOPSOIL USED SHALL CONSIST OF AT LEAST 12% ORGANIC CARBON CONTENT (by weight). MANMADE TOPSOIL, IF USED, SHALL CONSIST OF A MIXTURE OF EQUAL VOLUMES OR ORGANIC AND MINERAL MATERIALS
6. COMMERCIALY PACKAGED PEAT FROM SEDGE, SPHAGNUM, OR REED SOURCES IS SPECIFICALLY

PROHIBITED AS A TOPSOIL AMENDMENT IF THE TOPSOIL CONDITIONS REQUIRE ORGANIC AMENDMENTS. CLEAN LEAF COMPOST WHICH HAS BEEN COMPOSTED FOR A MINIMUM OF 3 YEARS, SHALL BE CONSIDERED A REASONABLE ALTERNATIVE

7. MINIMUM OF 6" OF TOPSOIL SHALL BE USED IN ALL CREATED MITIGATION AREAS OR AREA IMPACTED BY REGRADING
8. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT PREVENT THE INTRODUCTION OF INVASIVE SPECIES (Purple Loosestrife / Lythrum salicaria or Phragmites / Phragmites australis ) INTO ANY AREA DISTURBED BY THE PROPOSED MITIGATION AREA. ANY EXISTING STANDS OF THESE SPECIES, OR THE POSSIBLE INTRODUCTION OF THESE SPECIES INTO IMPACTED AREAS SHALL REQUIRE THERE REMOVAL BY AN APPROPRIATE METHOD OF REMOVAL. THESE TECHNIQUES MAY INCLUDE THE USE OF CHEMICAL, MECHANICAL OR BIOLOGICAL REMOVAL METHODS MONITORING FOR EVASIVE SPECIES WITHIN AND ADJACENT TO THE CREATED WETLAND AREA FOR A PERIOD OF NOT LESS THAN THREE YEARS SHALL BE REQUIRED.
9. ALL PROPER AND REQUIRED SEDIMENTATION AND EROSION CONTROL METHODS SHALL BE UTILIZED DURING THE CREATION OF THIS WETLAND AREA. THE USED OF SILTATION FENCES AND HAYBALES SHALL EMPLOYED TO FILTER SOIL FINES AND TO MINIMIZE SITE EROSION.
10. ALL MEASURES SHALL REQUIRE PERIODIC INSPECTION AND MAINTENANCE DURING CONSTRUCTION. COLLECTED SILTS AND SEDIMENTS SHALL BE PERIODICALLY CLEANED, AS SITE CONDITIONS WARRANT.
11. ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE REMOVED AND PROPERLY DISPOSED OF ONCE VEGETATION COVER HAS BEEN ESTABLISHED AND THE THREAT OF EROSION HAS BEEN ELIMINATED.
12. REFER TO DETAIL ON SHEET M-11 FOR TYPICAL GRADING CROSS-SECTION AND CONSTRUCTION REQUIREMENTS WITHIN WATERCOURSE ENHANCEMENT AREAS
13. AREA OF PROPOSED WETLAND CREATION AREA SHALL BE STAKED BY LICENSED SURVEYOR. A BENCH MARK(S) SHALL BE ESTABLISHED FOR CONSTRUCTION AND FUTURE MONITORING PURPOSES AT THAT TIME. PROPOSED GRADING SHALL BE EVALUATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. FINALLY GRADING OF MARSH AREA IS SUBJECT TO POSSIBLE FIELD ADJUSTMENT TO MEET NECESSARY HYDROLOGIC AND AREA REQUIREMENTS. ALL MODIFICATION SUBJECT TO REVIEW AND APPROVAL OF PROJECT ENGINEER AND BIOLOGIST.
14. THE COMPLETED MITIGATION AREA SHALL MONITORED BY NOV. 1 OF EACH YEAR, FOR A PERIOD OF NOT LESS THAN THREE YEARS. SPECIFIC GOAS SHALL BE ESTABLISHED BY THE ARMY CORPS OF ENGINEERS. REPORTS SHALL BE SUBMITTED BY DEC. 15 OF EACH YEAR, IN THE MANNER STIPULATED BY THE CORPS.

**WATERCOURSE ENHANCEMENT AREA - CONSTRUCTION & PLANTING NOTES**

**PROPOSED MITIGATION AREAS**

No Scale

PLAN PREPARED BY:



**MBA Engineering, Inc.**  
 Surveying and Engineering Services  
 211 New Britain Road, Suite 103  
 Kensington, Connecticut 06037  
 (860) 827-0222 Fax (860) 827-9997

PROPOSED

PISTOL CREEK GOLF CLUB

LOCATED IN THE TOWNS OF MIDDLETOWN (MIDDLESEX COUNTY) and BERLIN (HARTFORD COUNTY) IN THE STATE OF CONNECTICUT

APPLICATION BY:

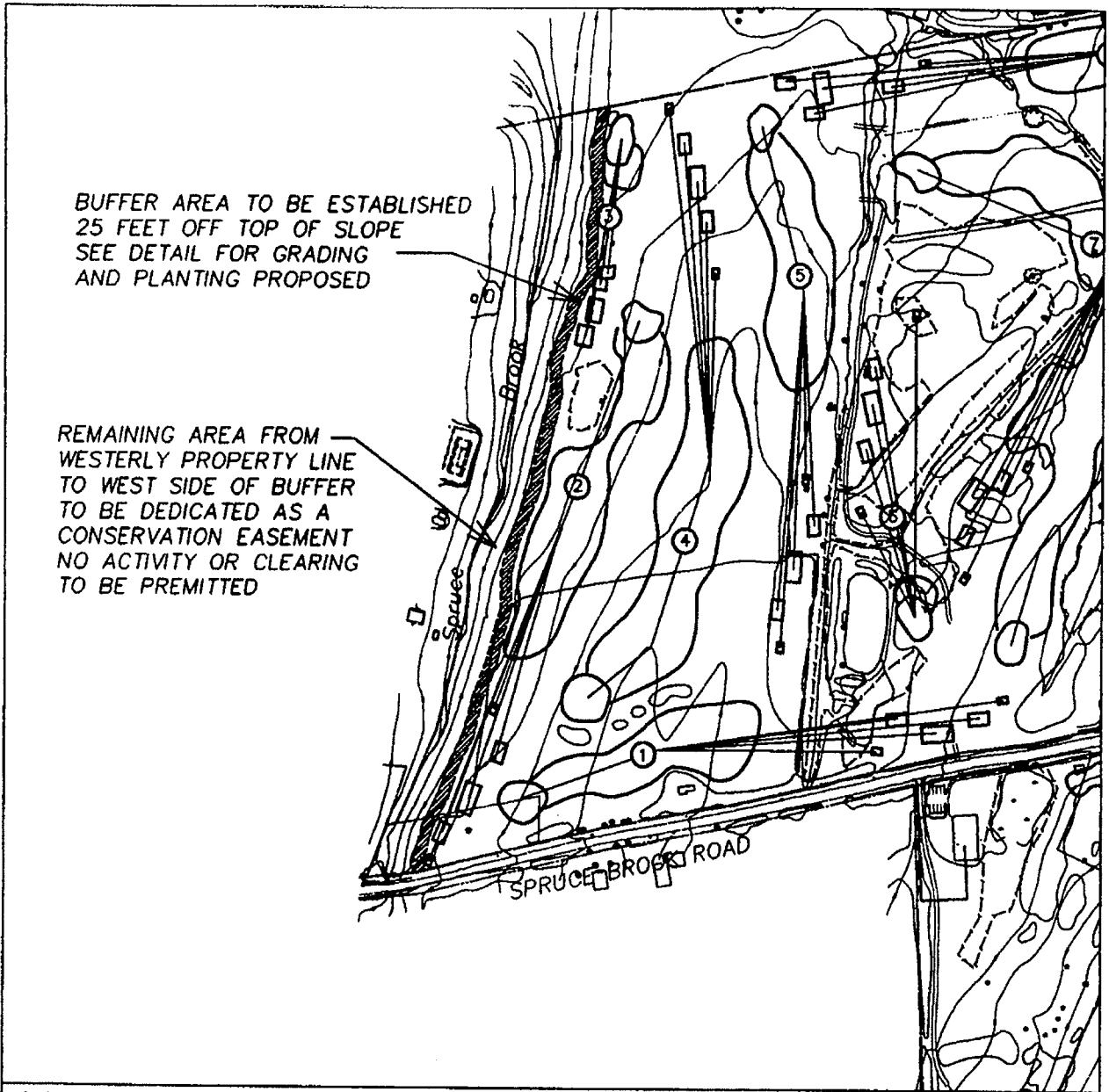
PISTOL CREEK INVESTORS, LLC

SHEET

M-8

DATE

November 12, 1997  
 Rev. 1/8/98



**SPRUCE BROOK BUFFER AREAS**

**PROPOSED MITIGATION AREAS**

Scale: 1"=200'

PLAN PREPARED BY:



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 Surveying and Engineering Services  
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 Kensington, Connecticut 06037  
 (860) 827-0222 Fax (860) 827-9997

PROPOSED

**PISTOL CREEK GOLF CLUB**

LOCATED IN THE TOWNS OF  
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 BERLIN (HARTFORD COUNTY)  
 IN THE STATE OF CONNECTICUT

APPLICATION BY:

**PISTOL CREEK INVESTORS, LLC**

SHEET

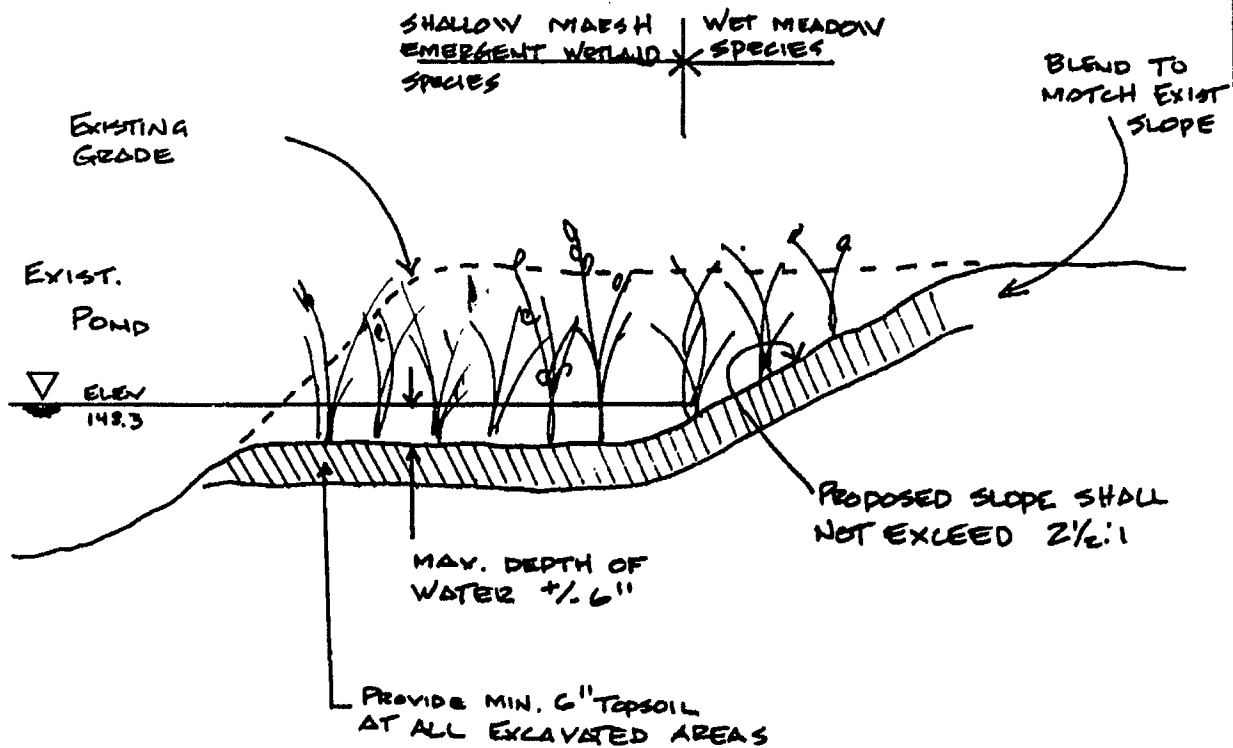
M-9

DATE

November 12, 1997

Rev. 1/8/98

NOTE: WATER FROM EXIST. POND TO BE USED FOR WATER SUPPLY WITHIN NEW MARSH. CARE SHALL BE TAKEN NOT TO DISTURB EXIST. SPRINGS WITHIN POND.



TYPICAL CROSS-SECTION / SHALLOW WATER MARSH

MISC. DETAILS

PROPOSED MITIGATION AREAS

Scale: None

PLAN PREPARED BY:



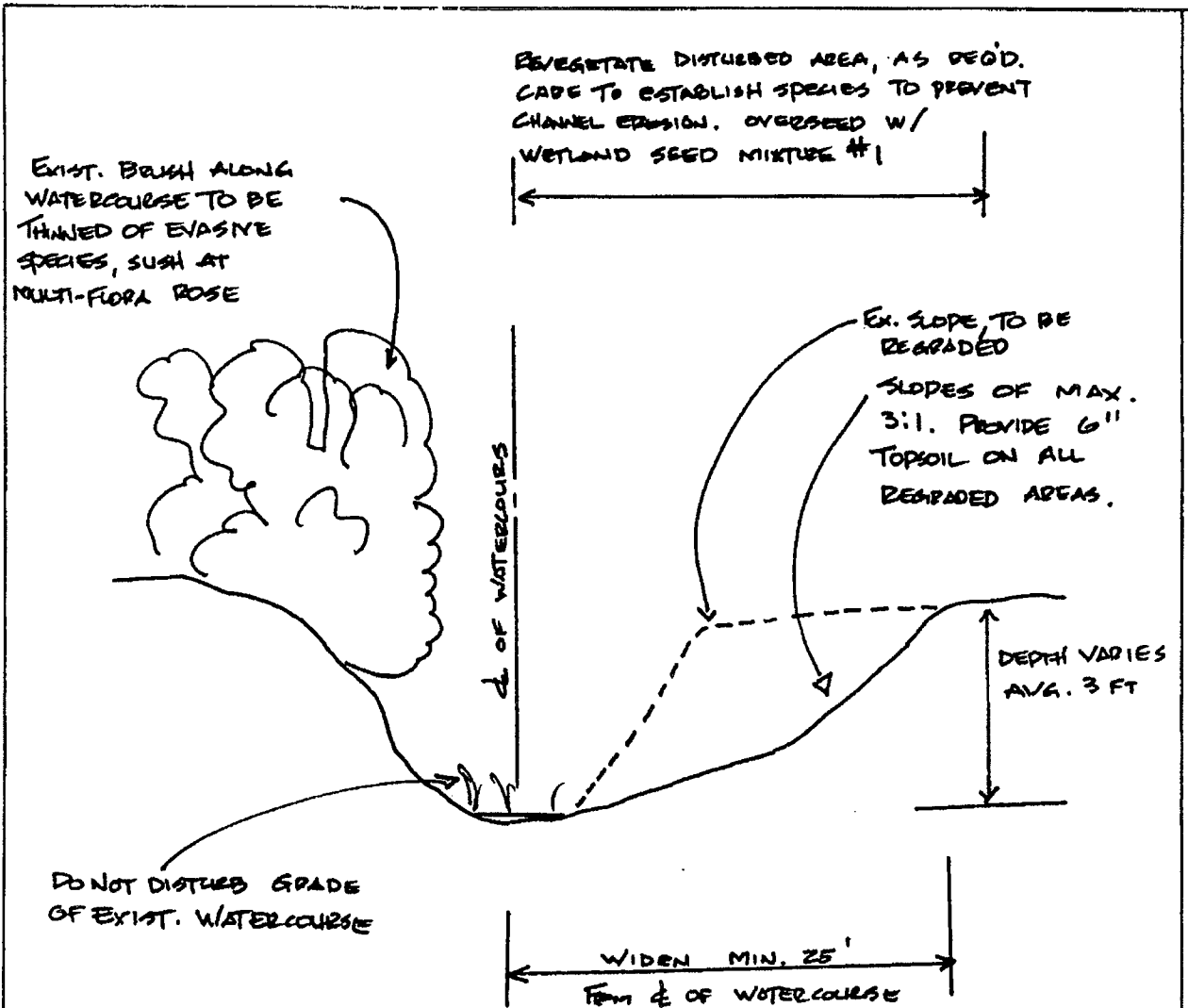
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 (860) 827-0222 Fax (860) 827-9997

PROPOSED  
**PISTOL CREEK GOLF CLUB**  
 LOCATED IN THE TOWNS OF  
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 BERLIN (HARTFORD COUNTY)  
 IN THE STATE OF CONNECTICUT

APPLICATION BY:  
**PISTOL CREEK INVESTORS, LLC**

SHEET  
**M-10**

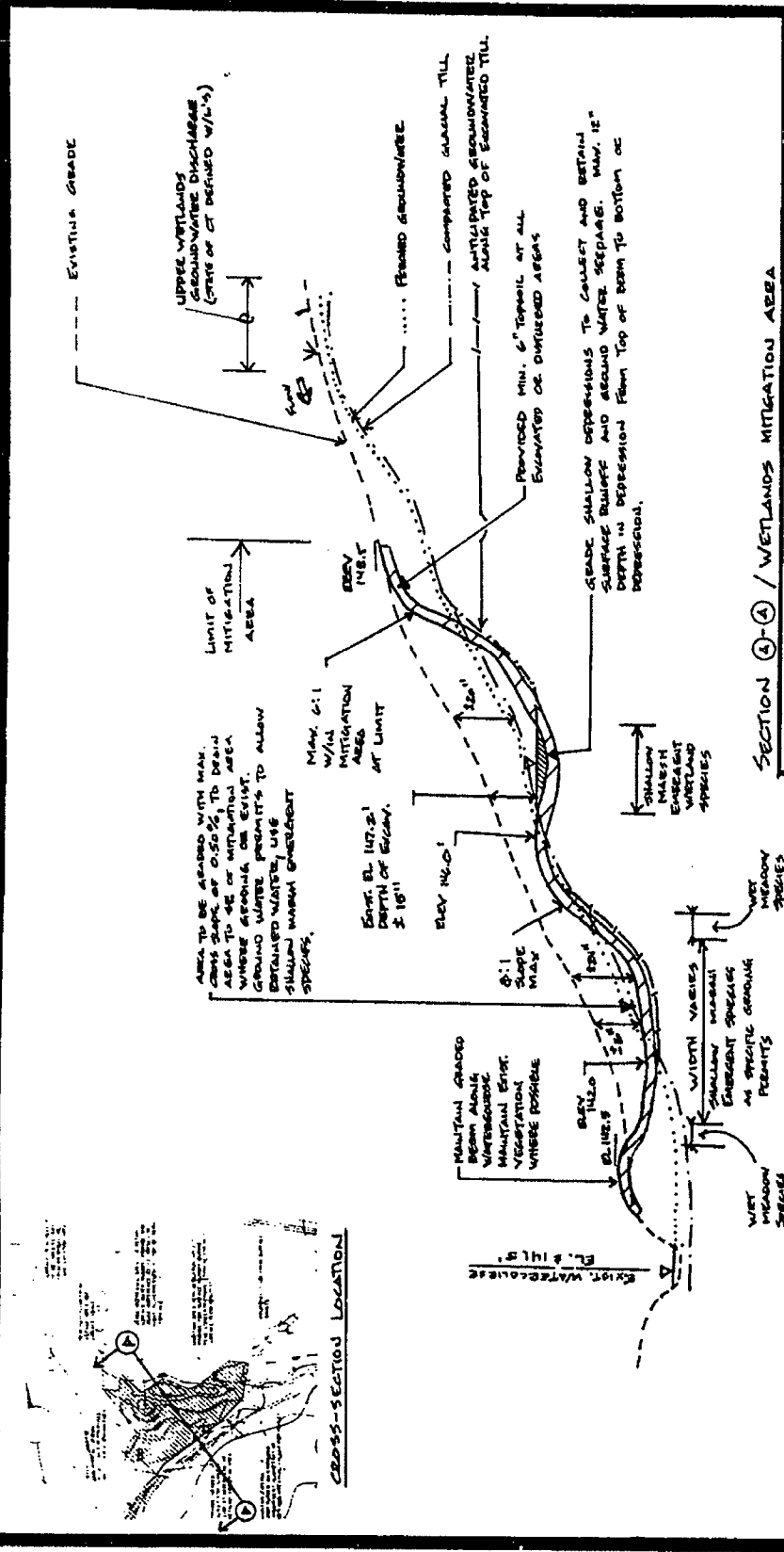
DATE  
 November 12, 1997  
 Rev. 1/8/98



CROSS SECTION  
TYPICAL WATERCOURSE ENHANCEMENT

MISC. DETAILS

PROPOSED MITIGATION AREAS		Scale:
PLAN PREPARED BY: <b>MBA Engineering, Inc.</b> Surveying and Engineering Services 211 New Britain Road, Suite 103 Kensington, Connecticut 06037 (860) 827-0222 Fax (860) 827-9997	PROPOSED <b>PISTOL CREEK GOLF CLUB</b> LOCATED IN THE TOWNS OF MIDDLETOWN (MIDDLESEX COUNTY) and BERLIN (HARTFORD COUNTY) IN THE STATE OF CONNECTICUT	SHEET <b>M-11</b>
	APPLICATION BY: <b>PISTOL CREEK INVESTORS, LLC</b>	DATE November 12, 1997 Rev. 1/8/98



SECTION ①-④ / WETLANDS MITIGATION AREA  
MISC. DETAILS

**PROPOSED MITIGATION AREAS** Scale: NONE  
 SHEET **R2**  
~~M-13~~

PLAN PREPARED BY:  
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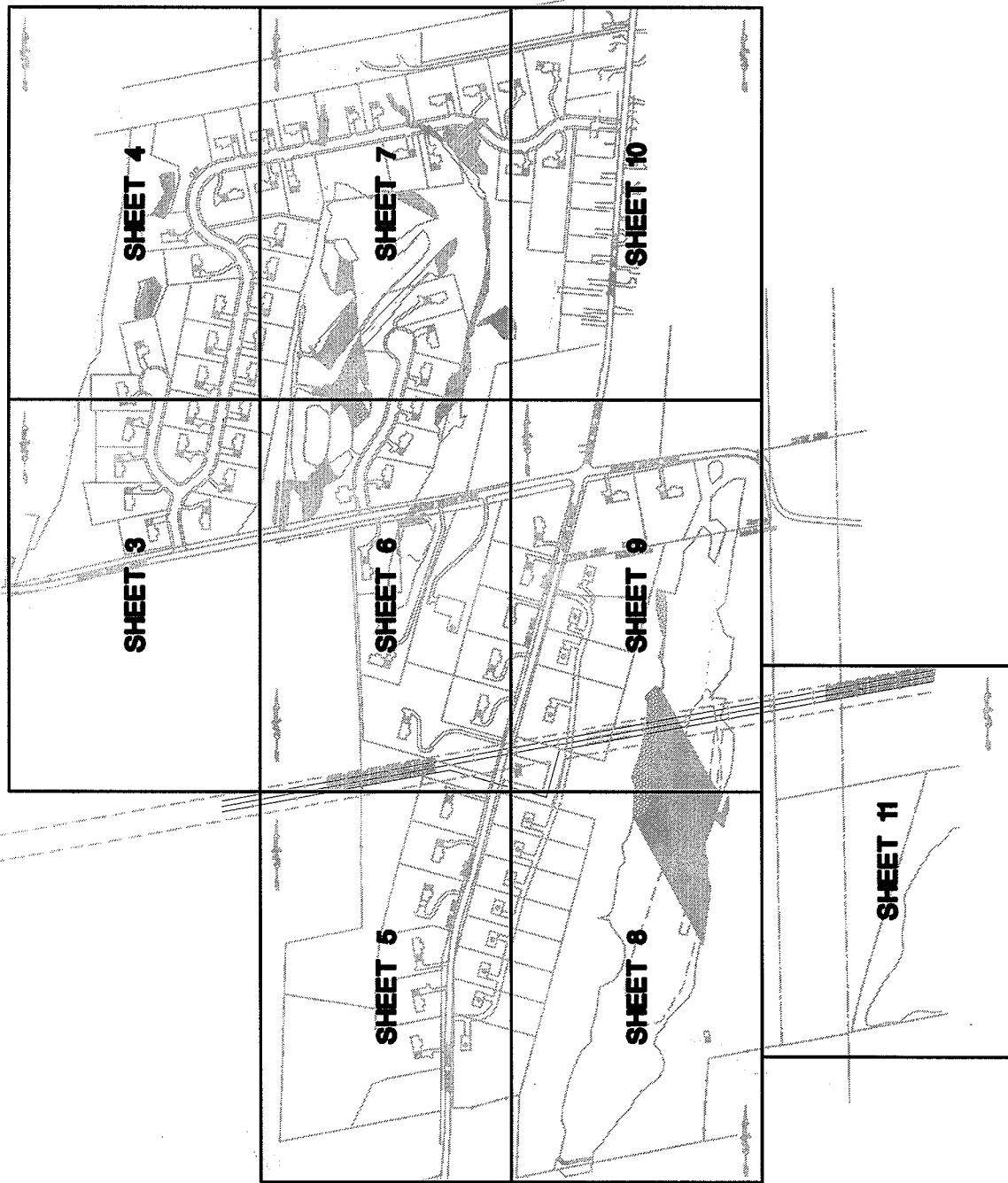
PROPOSED  
**PISTOL CREEK GOLF CLUB**  
 LOCATED IN THE TOWNS OF  
 MIDDLETOWN (MIDDLESEX COUNTY) and  
 BERLIN (HARTFORD COUNTY)  
 IN THE STATE OF CONNECTICUT  
 APPLICATION BY:  
**PISTOL CREEK INVESTORS, LLC**

DATE  
 November 12, 1997  
 Rev. 3/10/98

REFER TO SHEETS M-7 & M-8  
 FOR DETAILED PLANTING SPECIES  
 AND REQUIREMENTS FOR WET  
 MEADOW & UPPER WETLAND AREAS.

SHALLOW WASH PERENNIAL WETLAND SPECIES - QUANTITY UNKNOWN	7 Feet Post	7 Feet Post
BUR-REED	Sagittaria arifolia var ZOC	
SOFT-STEM BUCKRUSH	Sagittaria arifolia var ZOC	





PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: MAY 16, 2007

SCALE: 1" = 150'

SHEET: 1

**RIO VISTA / PISTOL CREEK ESTATES**

**PREVIOUSLY PERMITTED ACTIVITIES**

**SHEET INDEX**

DESIGNED: CB  
 DRAWN: CB  
 CHECKED: SD

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PERMITTED GOLF COURSE WETLAND ACTIVITIES (C.O.E.)



CROSSINGS



CLEARING



FILLING



MITIGATION/ CREATION

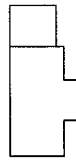
NOTES

1. LIMITS OF GOLF COURSE ACTIVITIES DERIVED FROM MBA ENGINEERING DRAWING FILE. MILONE & MACBROOM INC MAKES NO WARRANTIES AS TO THE ACCURACY OF DATA.
2. PLAN IS INTENDED FOR ILLUSTRATIVE PURPOSES ONLY.

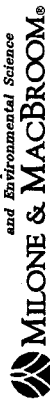
LEGEND

	PROPERTY LINES
	PROPERTY LINE ABUTTERS
	TOWN LINE
	EASMENT
	PROPOSED EDGE OF PAVEMENT
	EXISTING EDGE OF PAVEMENT
	GAS PIPE LINE
	WETLANDS
	WATER COURSE
	EXISTING POND
	EXISTING SWAMP
	PROPOSED LOT NUMBERS
	PROPOSED BUILDING (TYPICAL)

30



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**RIO VISTA / PISTOL CREEK ESTATES**

**PREVIOUSLY PERMITTED ACTIVITIES  
LEGEND AND NOTES**

DESIGNED: CB  
DRAWN: CB  
CHECKED: SD

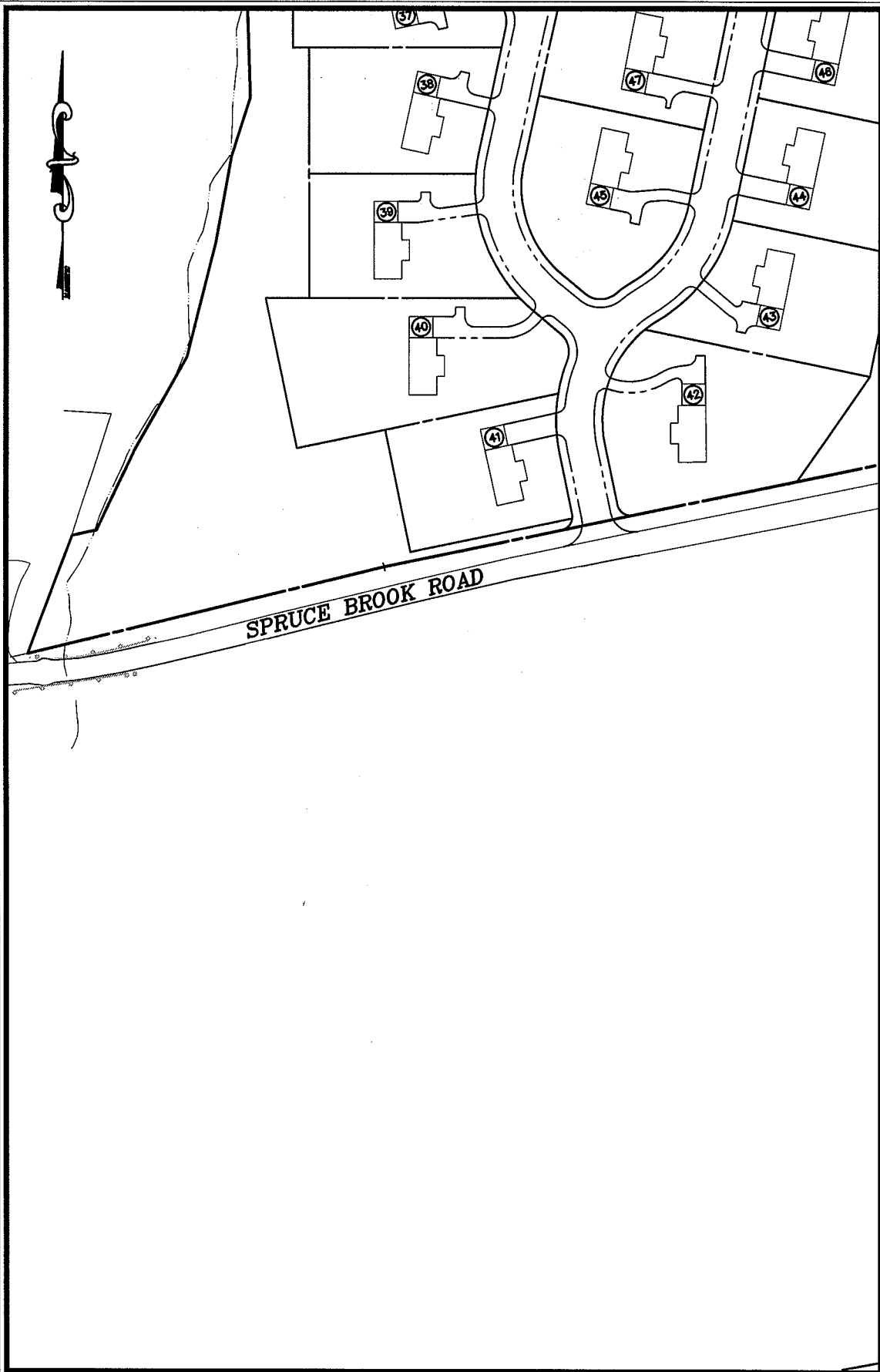
PROJECT LOCATION:  
SPRUCE BROOK ROAD  
BERLIN, CONNECTICUT

DATE: **MAY 16, 2007**

SCALE: **1" = 150'**

SHEET:

**2**



PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: MAY 16, 2007

SHEET: **3**

SCALE: 1" = 150'

**RIO VISTA / PISTOL CREEK ESTATES**

**PREVIOUSLY PERMITTED ACTIVITIES**

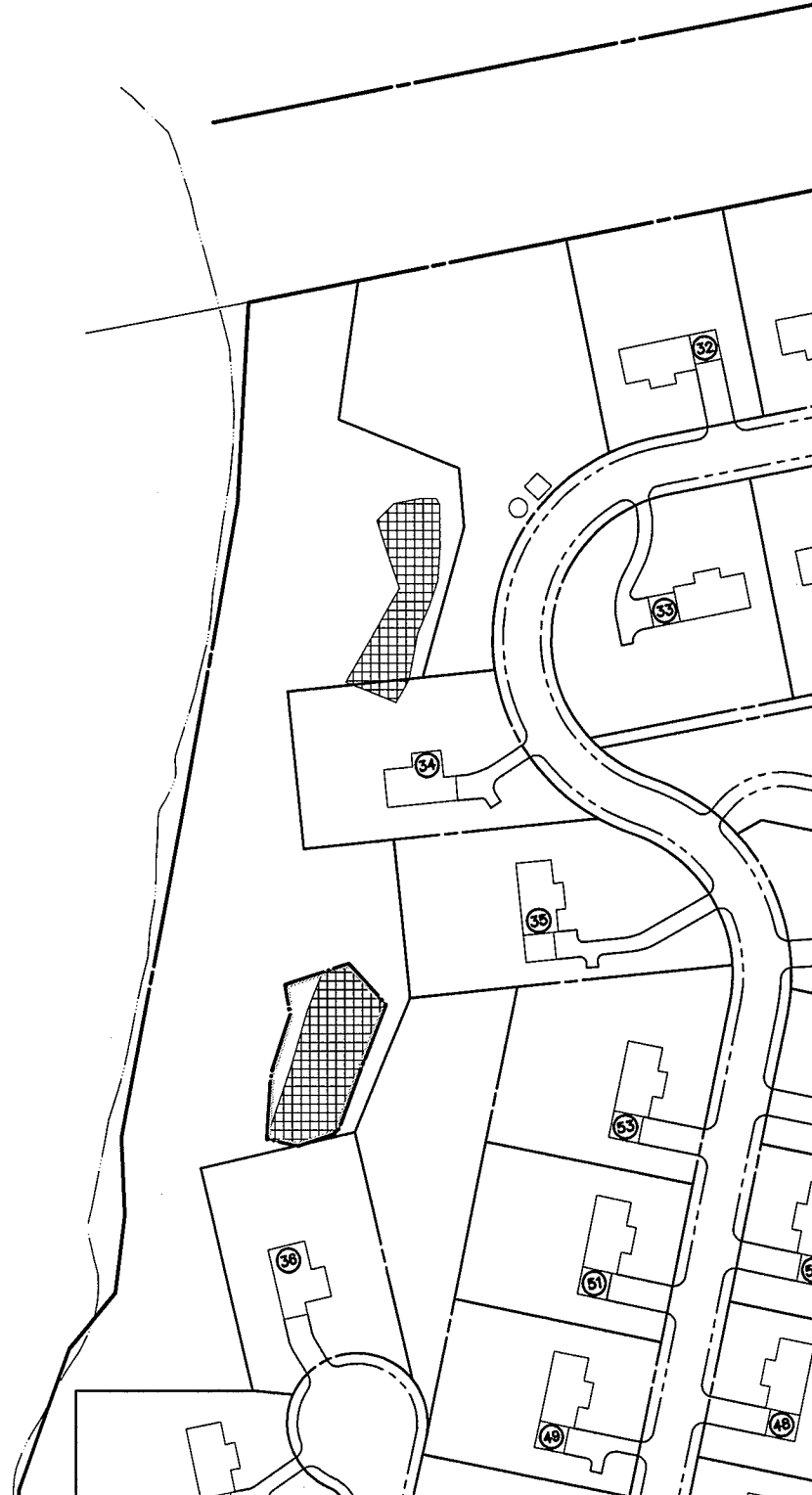
DESIGNED: CB

DRAWN: CB

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PROJECT LOCATION:  
SPRUCE BROOK ROAD  
BERLIN, CONNECTICUT

DATE: MAY 16, 2007

SCALE: 1" = 150'

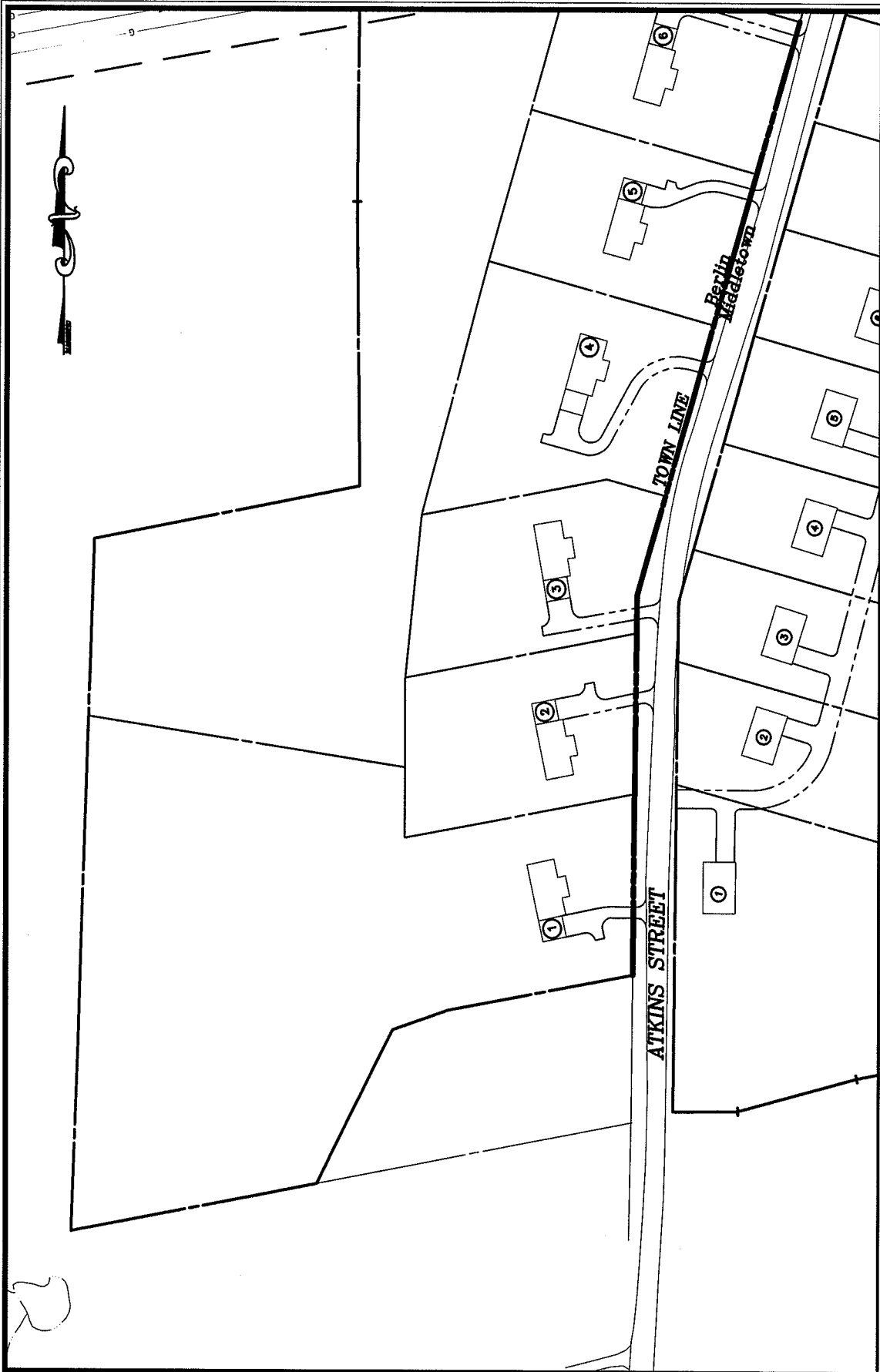
SHEET: 4

**RIO VISTA / PISTOL CREEK ESTATES**

**PREVIOUSLY PERMITTED ACTIVITIES**

DESIGNED: CB  
DRAWN: CB  
CHECKED: SD

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PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: MAY 16, 2007

SCALE: 1" = 150'

SHEET: 5

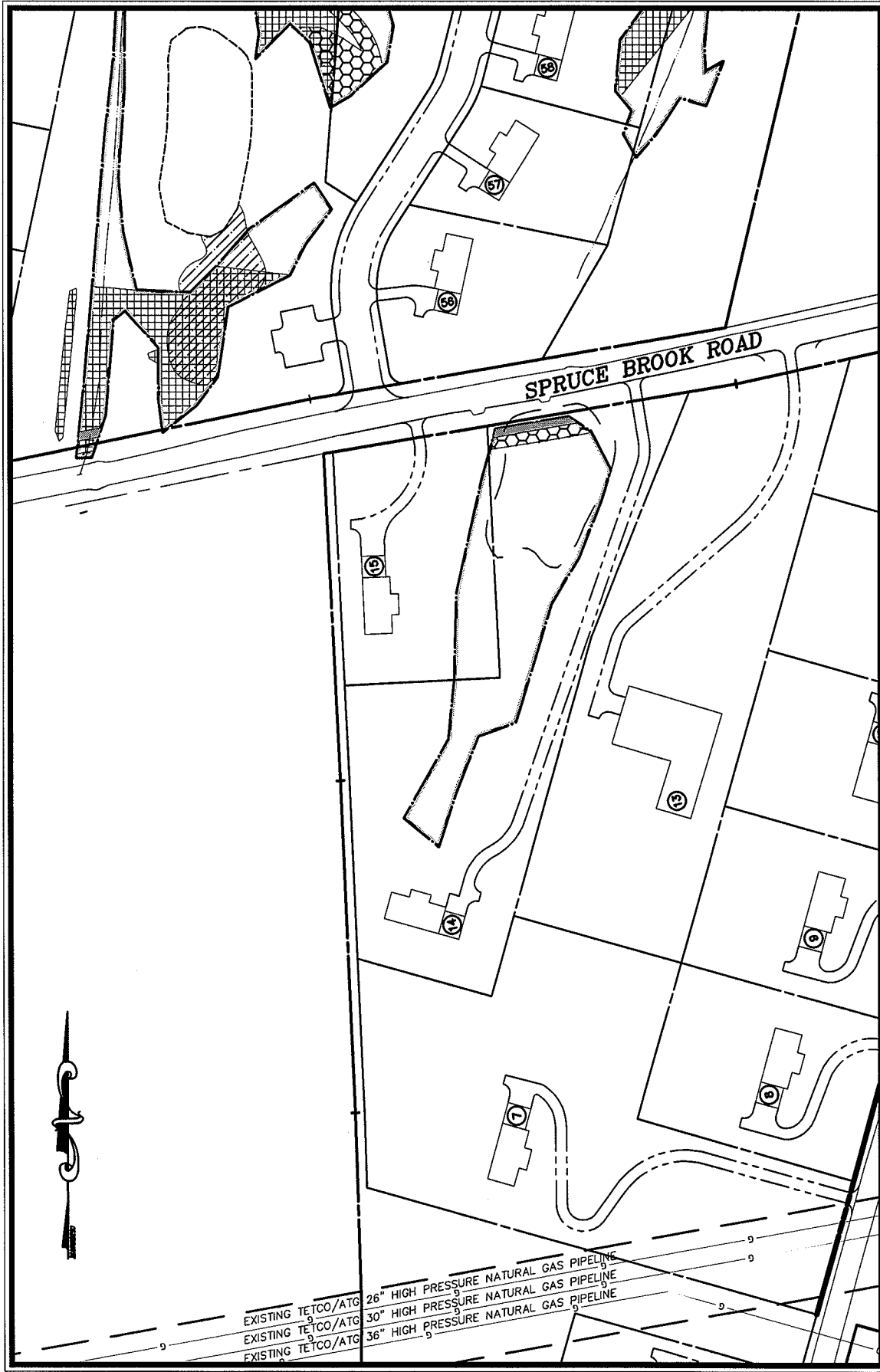
**RIO VISTA / PISTOL CREEK ESTATES**

**PREVIOUSLY PERMITTED ACTIVITIES**

DESIGNED: CB  
 DRAWN: CB  
 CHECKED: SD

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PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: MAY 16, 2007

SHEET: **6**

SCALE: 1" = 150'

**RIO VISTA / PISTOL CREEK ESTATES**

**PREVIOUSLY PERMITTED ACTIVITIES**

DESIGNED: CB  
 DRAWN: CB  
 CHECKED: SD

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PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: MAY 16, 2007

SHEET: **7**

SCALE: 1" = 150'

**RIO VISTA / PISTOL CREEK ESTATES**


**PREVIOUSLY PERMITTED ACTIVITIES**

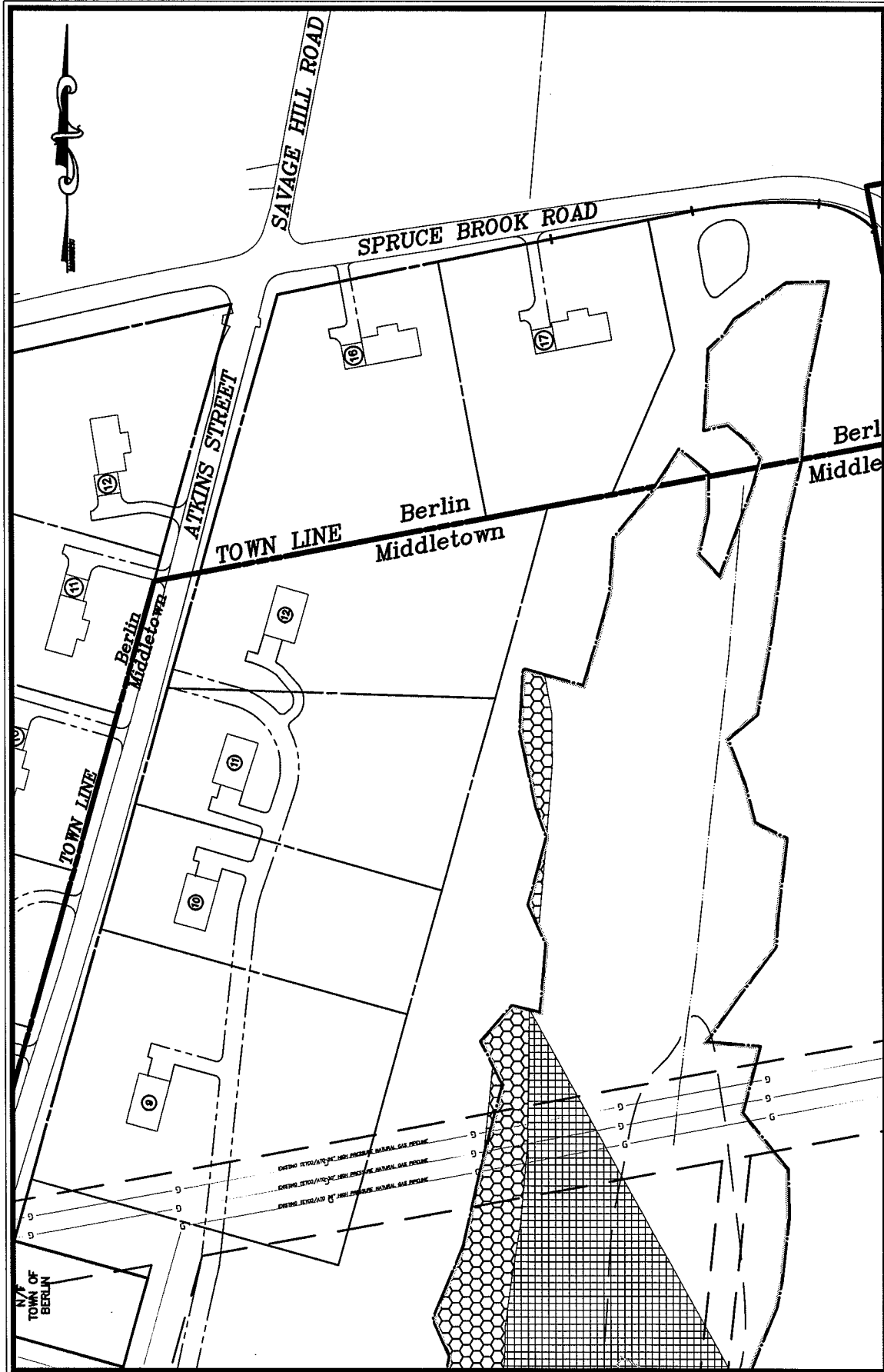
DESIGNED: CB  
 DRAWN: CB  
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<p><b>RIO VISTA / PISTOL CREEK ESTATES</b></p>	<p>PROJECT LOCATION:          SPRUCE BROOK ROAD          BERLIN, CONNECTICUT</p>	
	<p>DESIGNED: CB          DRAWN: CB          CHECKED: SD</p>	<p>DATE: <b>MAY 16, 2007</b>          SCALE: <b>1" = 150'</b></p>
<p><b>PREVIOUSLY PERMITTED ACTIVITIES</b></p>		
<p>  <b>MILONE &amp; MACBROOM</b><sup>®</sup>  <i>Engineering, Architecture          and Environmental Science</i>          99 Realty Drive          Cheshire, Connecticut 06410          (203) 271-1773 Fax (203) 272-9733  <a href="http://www.miloneandmacbroom.com">www.miloneandmacbroom.com</a> </p>		



PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: MAY 16, 2007

SHEET: 9

SCALE: 1" = 150'

**RIO VISTA / PISTOL CREEK ESTATES**

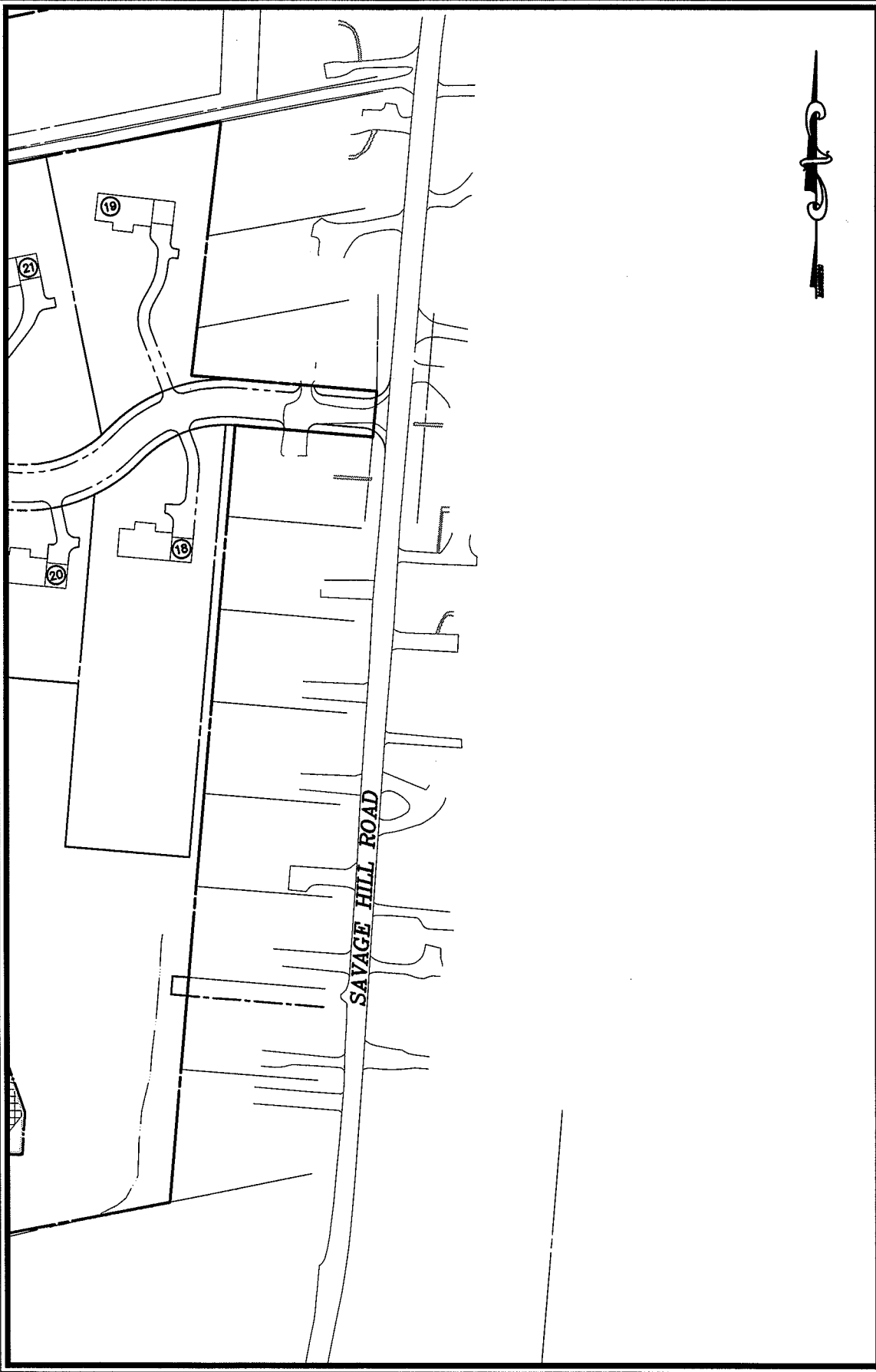
**PREVIOUSLY PERMITTED ACTIVITIES**

DESIGNED: CB  
 DRAWN: CB  
 CHECKED: SD

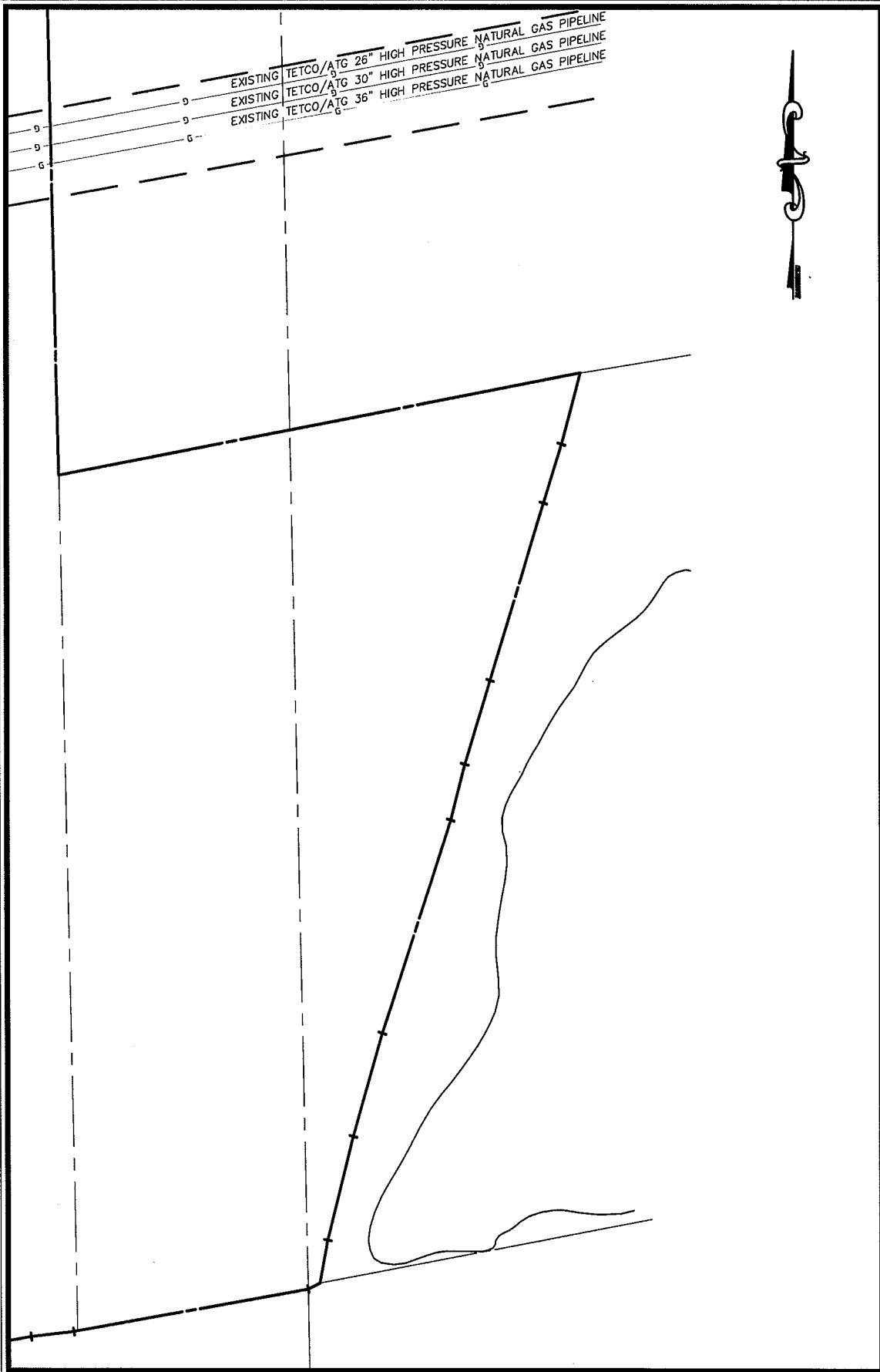
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<p><b>Engineering Landscape Architecture and Environmental Science</b></p> <p><b>MILONE &amp; MACBROOM®</b></p> <p>99 Realty Drive Cheshire, Connecticut 06410 (203) 271-1773 Fax (203) 272-9733 www.miloneandmacbroom.com</p>	<p><b>RIO VISTA / PISTOL CREEK ESTATES</b></p>		<p>PROJECT LOCATION: SPRUCE BROOK ROAD BERLIN, CONNECTICUT</p>
	<p>DESIGNED: CB DRAWN: CB CHECKED: SD</p>	<p>DATE: <b>MAY 16, 2007</b></p> <p>SCALE: <b>1" = 150'</b></p>	
<p><b>PREVIOUSLY PERMITTED ACTIVITIES</b></p>			<p>SHEET: <b>10</b></p>



PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: MAY 16, 2007

SCALE: 1" = 150'

SHEET: 11

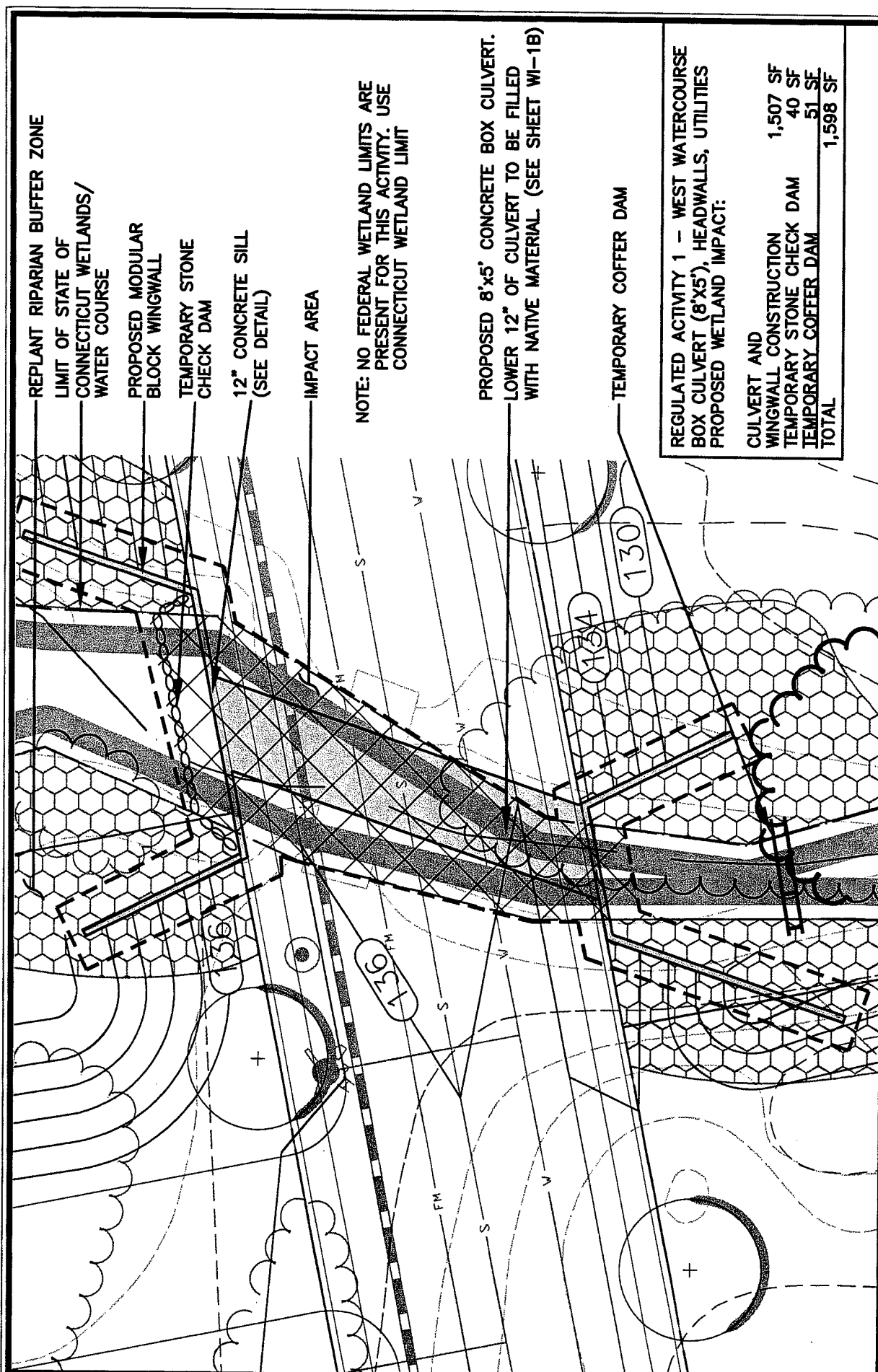
**RIO VISTA / PISTOL CREEK ESTATES**

DESIGNED: CB  
 DRAWN: CB  
 CHECKED: SD

**PREVIOUSLY PERMITTED ACTIVITIES**

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REPLANT RIPARIAN BUFFER ZONE  
 LIMIT OF STATE OF CONNECTICUT WETLANDS/  
 WATER COURSE  
 PROPOSED MODULAR BLOCK WINGWALL  
 TEMPORARY STONE CHECK DAM  
 12" CONCRETE SILL (SEE DETAIL)  
 IMPACT AREA

NOTE: NO FEDERAL WETLAND LIMITS ARE PRESENT FOR THIS ACTIVITY. USE CONNECTICUT WETLAND LIMIT

PROPOSED 8'x5' CONCRETE BOX CULVERT. LOWER 12" OF CULVERT TO BE FILLED WITH NATIVE MATERIAL. (SEE SHEET WI-1B)

TEMPORARY COFFER DAM

REGULATED ACTIVITY 1 - WEST WATERCOURSE BOX CULVERT (8'x5'), HEADWALLS, UTILITIES PROPOSED WETLAND IMPACT:

CULVERT AND WINGWALL CONSTRUCTION	1,507 SF
TEMPORARY STONE CHECK DAM	40 SF
TEMPORARY COFFER DAM	51 SF
<b>TOTAL</b>	<b>1,598 SF</b>

**RIO VISTA**

**WETLAND IMPACTS REGULATED ACTIVITY 1**

Engineer/Architect  
 Landscape Architecture  
 and Environmental Science

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PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: JAN. 26, 2008

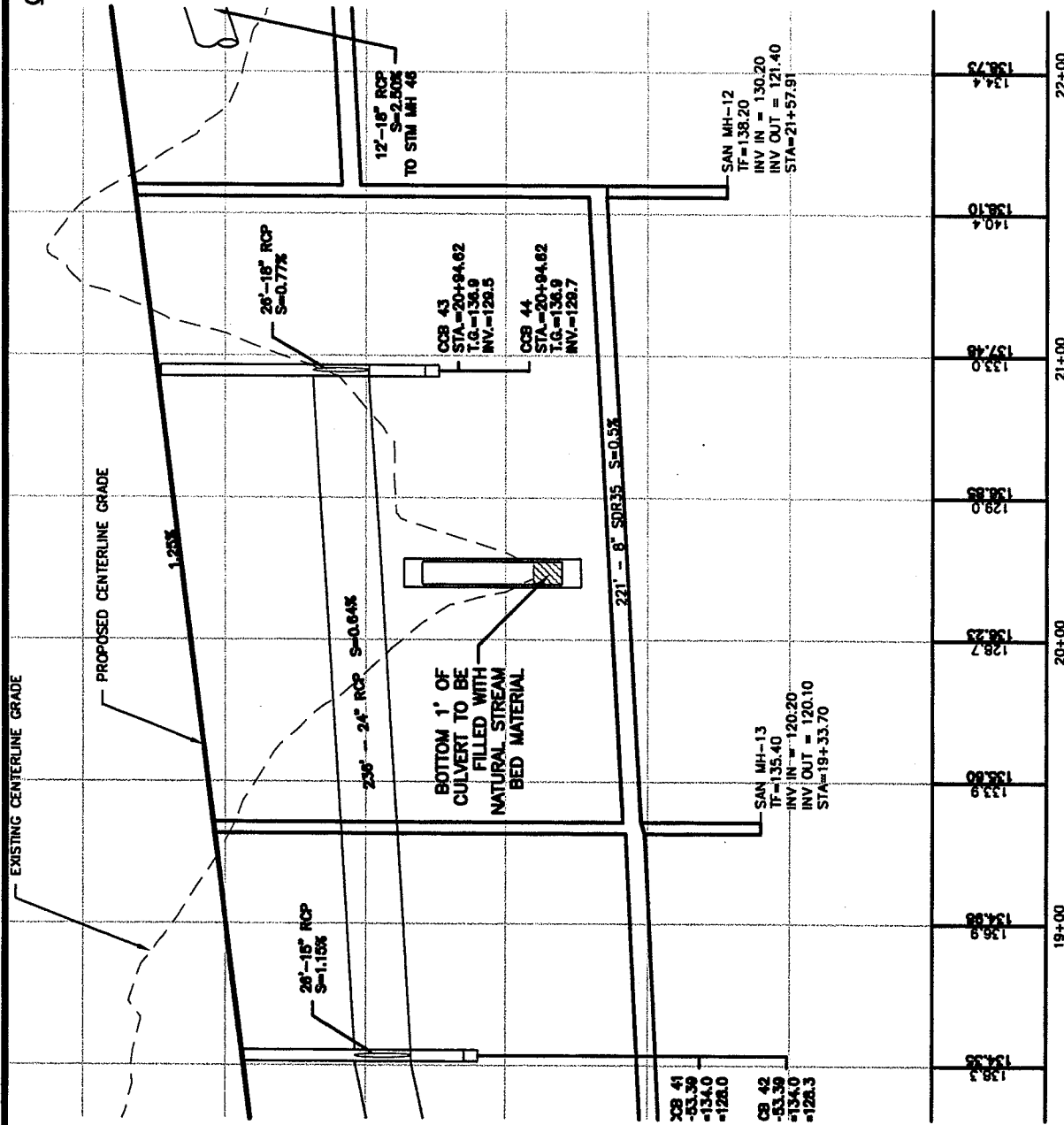
SCALE: 1"=20'

SHEET:

**WI-1A**

**CONSTRUCTION NOTES:**

1. ACTIVITY WITHIN WETLANDS TO TAKE PLACE ONLY WITHIN LIMITS SPECIFIED
2. COFFER DAM TO BE CONSTRUCTED OF SAND BAGS. DIVERSION TO BE PUMP OR GRAVITY BYPASS AT THE DISCRETION OF CONTRACTOR. CONTRACTOR TO SUBMIT SHOP DRAWINGS OF BYPASS FOR APPROVAL BY ENGINEER AND TOWN PRIOR TO CONSTRUCTION.
3. COFFER DAM TO BE REMOVED AS SOON AS BOX CULVERT IS INSTALLED AND HEADWALL FOOTINGS ARE IN PLACE.
4. CHECK DAM TO REMAIN IN PLACE UNTIL COMPLETION OF ALL UPSTREAM CONSTRUCTION AND STABILIZATION OF DISTURBED AREAS.
5. REMOVE CHECK DAM AND COFFER DAM WITHOUT ENCROACHMENT INTO WATERCOURSE BY MACHINERY.



**RIO VISTA**

**WETLAND IMPACTS  
REGULATED ACTIVITY 1**

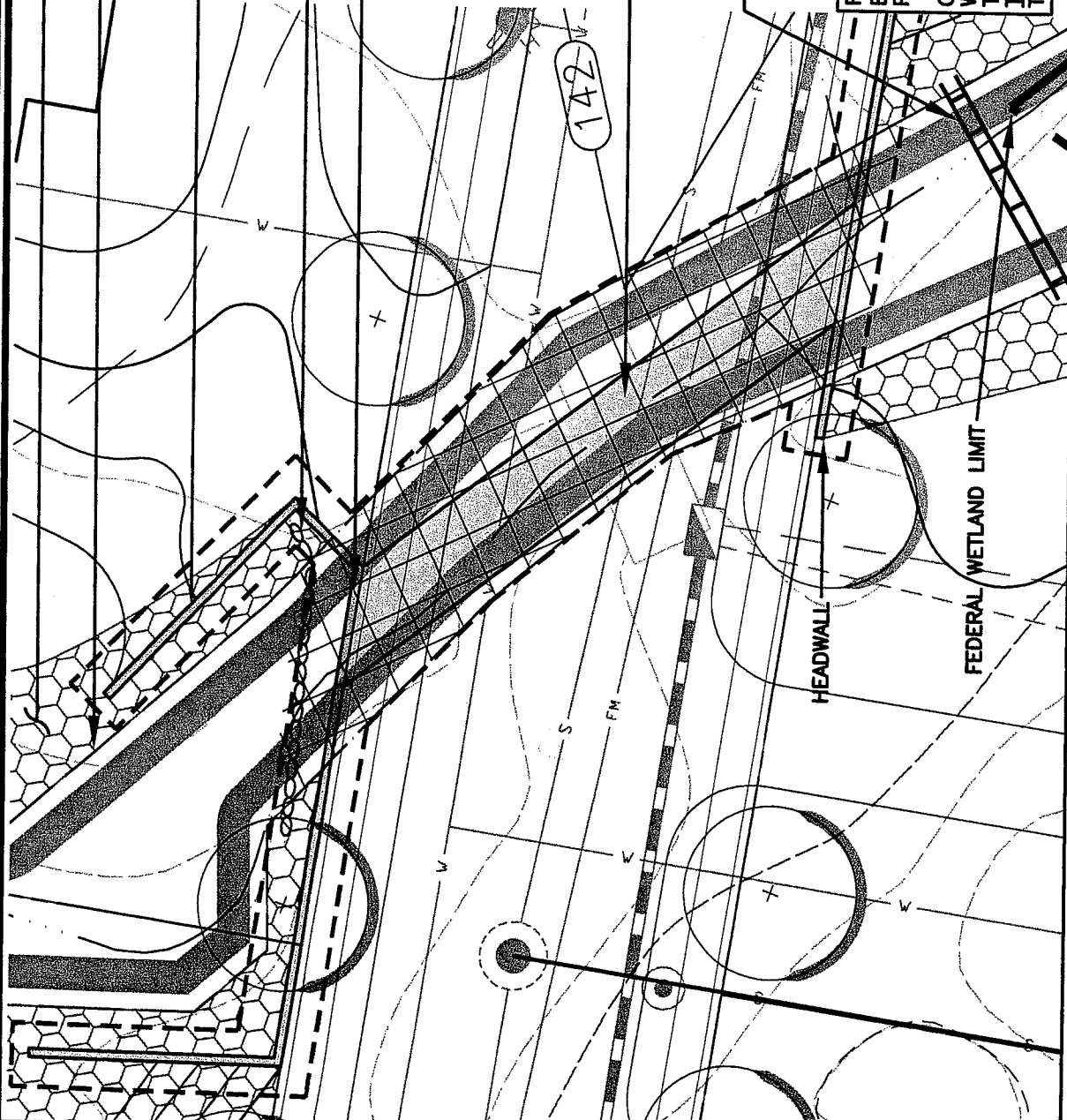
PROJECT LOCATION:  
SPRUCE BROOK ROAD  
BERLIN, CONNECTICUT

DATE: **JAN. 26, 2006**  
SCALE: **1"=60'**

SHEET:  
**WI-1B**

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DESIGNED: CB  
DRAWN: JH  
CHECKED: BR



REPLANT RIPARIAN BUFFER ZONE  
 LIMIT OF STATE OF CONNECTICUT  
 WETLANDS/ WATER COURSE

PROPOSED MODULAR  
 BLOCK WINGWALL

TEMPORARY STONE  
 CHECK DAM  
 12" CONCRETE SILL  
 (SEE DETAIL)

PROPOSED 10'x3'  
 CONCRETE BOX CULVERT

TEMPORARY COFFER DAM

REGULATED ACTIVITY 2 - EAST WATERCOURSE  
 BOX CULVERT (10'x3'), HEADWALLS, UTILITIES  
 PROPOSED WETLAND IMPACT:

CULVERT AND WINGWALL CONSTRUCTION	1,828 SF
TEMPORARY STONE CHECK DAM	38 SF
TEMPORARY COFFER DAM	87 SF
<b>TOTAL</b>	<b>1,953 SF</b>

**RIO VISTA**

**WETLAND IMPACTS  
 REGULATED ACTIVITY 2**

PROJECT LOCATION:

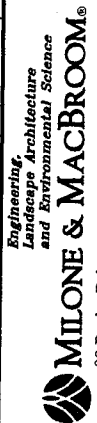
SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

SHEET:

**WI-2A**

DATE: **JAN. 26, 2008**

SCALE: **1"=20'**

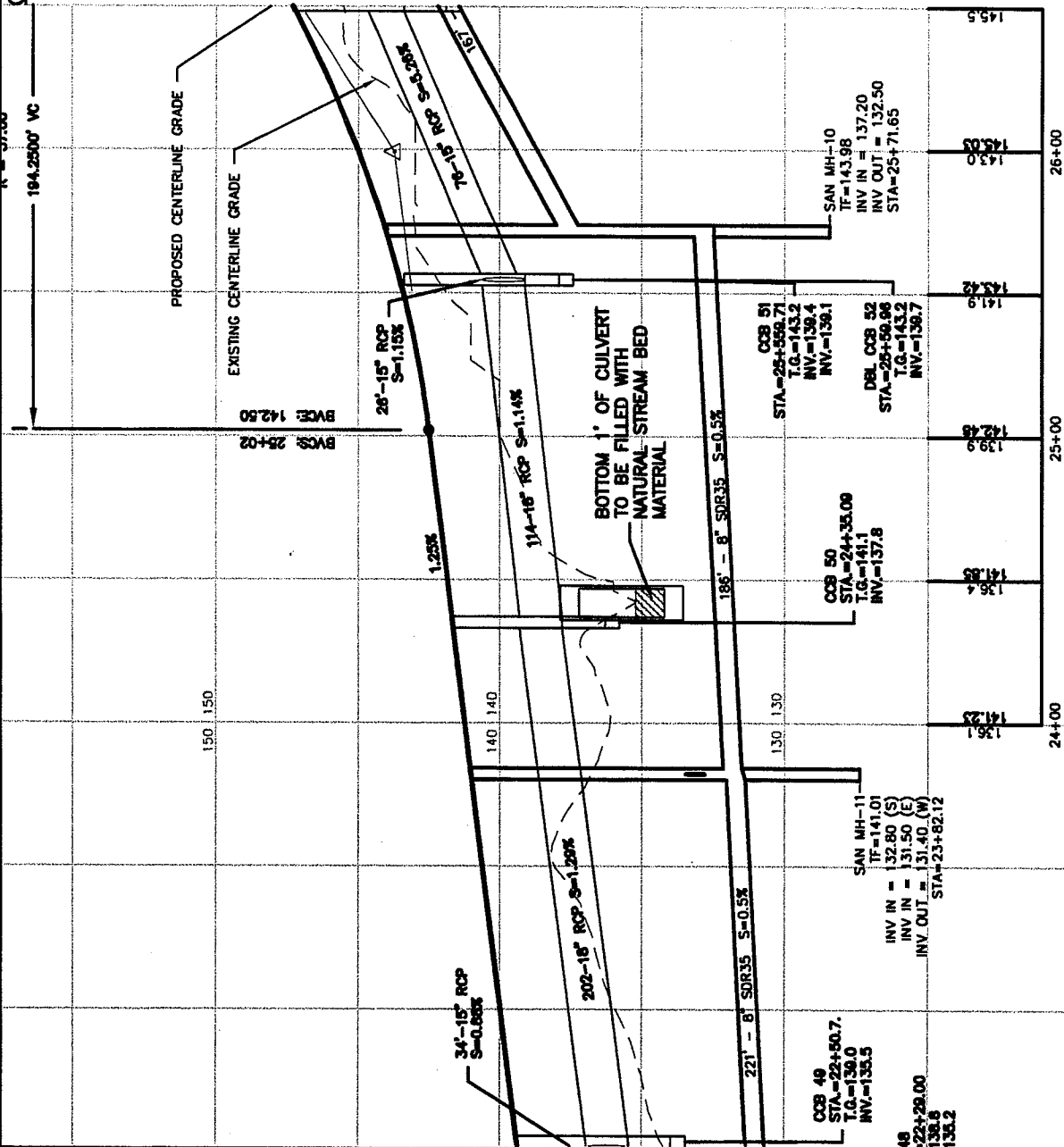


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DESIGNED: CB  
 DRAWN: JH  
 CHECKED: BR

**CONSTRUCTION NOTES:**

1. ACTIVITY WITHIN WETLANDS TO TAKE PLACE ONLY WITHIN LIMITS SPECIFIED
2. COFFER DAM TO BE CONSTRUCTED OF SAND BAGS. DIVERSION TO BE PUMP OR GRAVITY BYPASS AT THE DISCRETION OF CONTRACTOR. CONTRACTOR TO SUBMIT SHOP DRAWINGS OF BYPASS FOR APPROVAL BY ENGINEER AND TOWN PRIOR TO CONSTRUCTION.
3. COFFER DAM TO BE REMOVED AS SOON AS BOX CULVERT IS INSTALLED AND HEADWALL FOOTINGS ARE IN PLACE.
4. CHECK DAM TO REMAIN IN PLACE UNTIL COMPLETION OF ALL UPSTREAM CONSTRUCTION AND STABILIZATION OF DISTURBED AREAS.
5. REMOVE CHECK DAM AND COFFER DAM SEDIMENT WITHOUT ENCROACHMENT INTO WATERCOURSE BY MACHINERY.



PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: JAN. 26, 2006  
 SCALE: 1"=60'

SHEET:  
**WI-2B**

**RIO VISTA**

**WETLAND IMPACTS  
 REGULATED ACTIVITY 2**

DESIGNED: CB  
 DRAWN: JH  
 CHECKED: BR

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**CONSTRUCTION NOTES:**

1. ACTIVITY WITHIN WETLANDS TO TAKE PLACE ONLY WITHIN LIMITS SPECIFIED.
2. SIDECAST ALL EXCAVATED MATERIAL OUTSIDE OF WETLANDS.
3. REPLACE EXCAVATED MATERIAL AND COMPACT TO EXISTING GRADE.
4. RESTORE WITH WETLAND SEED MIX SPECIFIED ON SHEET LA-9

LIMIT OF INLAND WETLANDS/ WATER COURSE

TEMPORARY TRENCH CONSTRUCTION LIMITS (MAXIMUM TRENCH 10FT.)

PROPOSED CONCRETE WALL WITH V-NOTCH WEIR (SEE DETAIL) INV WEIR - MATCH TO EXISTING STREAMBED ELEVATION 146.0± TOP OF WALL - ELEVATION 152.0

FEDERAL WETLAND LIMIT

REGULATED ACTIVITY 4 - WEIR STRUCTURE  
PROPOSED WETLAND IMPACT:

PERMANENT 134 SF  
TEMPORARY TRENCH 356 SF  
TOTAL 490 SF

PROJECT LOCATION:

SPRUCE BROOK ROAD  
BERLIN, CONNECTICUT

DATE: JAN. 26, 2008

SCALE: 1"=20'

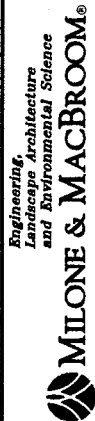
SHEET:

**WI-3A**

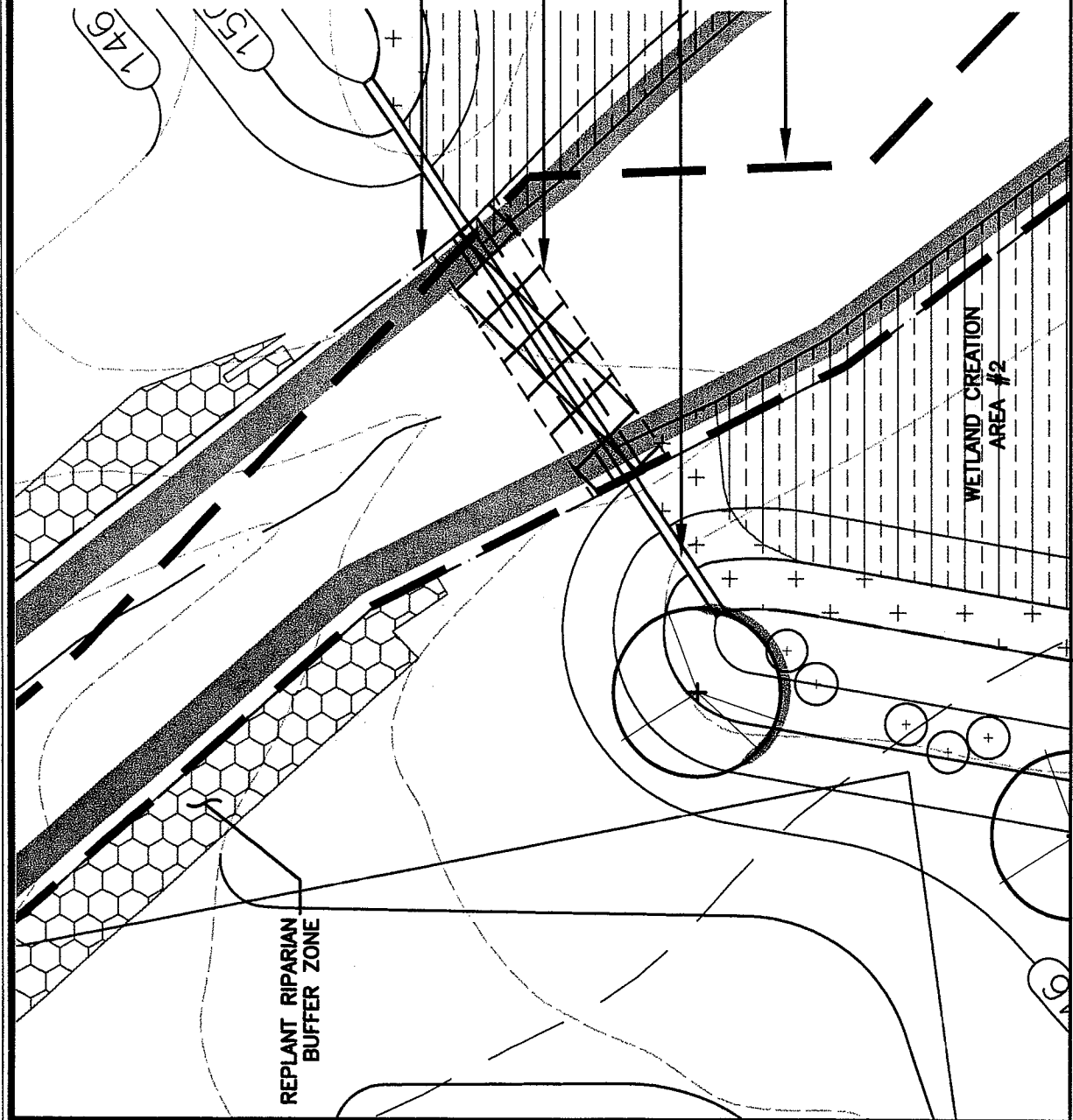
**RIO VISTA**

**WETLAND IMPACTS  
REGULATED ACTIVITY 3**

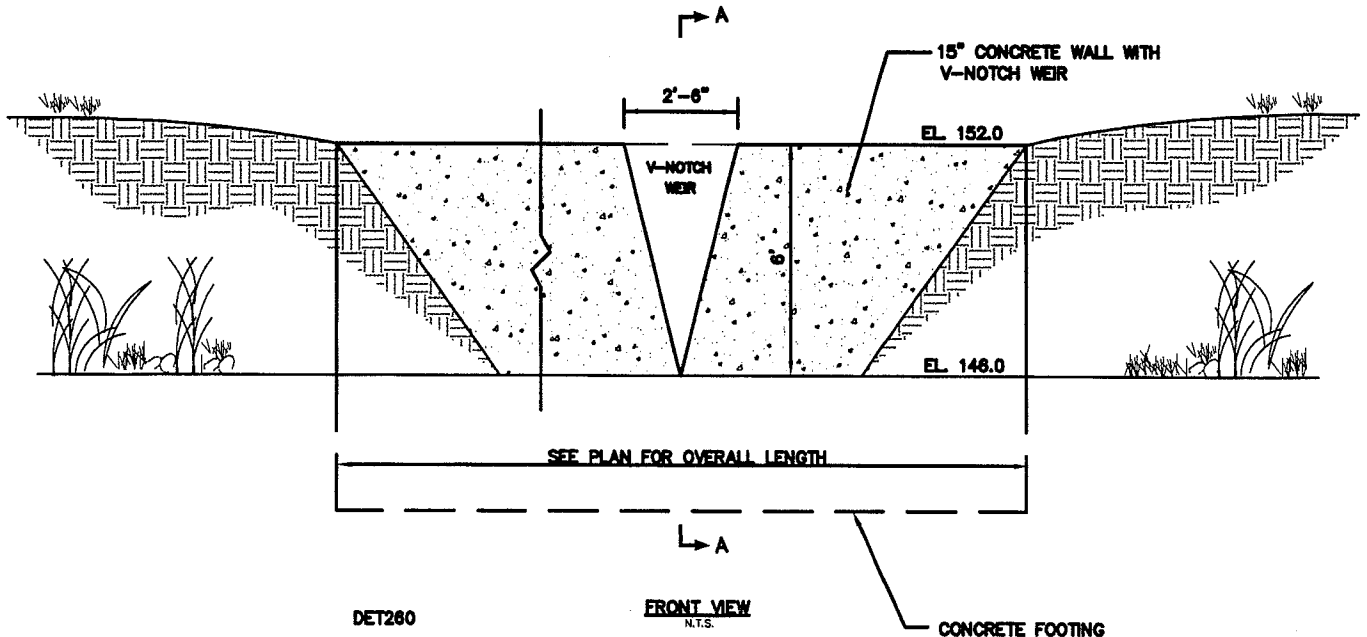
DESIGNED: CB  
DRAWN: JH  
CHECKED: BR



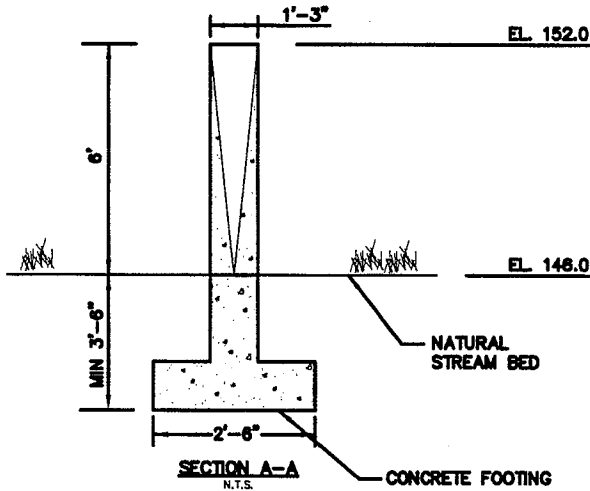
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Drawing: C:\SOS\PROJ\2730-01\DWG\CURRENT\WETLAND-IMPACTS.DWG Log# 2007-02-06-11:18 AM - 3B



**TOP OF BERM ELEVATION** 152.0  
**100-YR STORM ELEVATION** 151.01  
**V-NOTCH DIMENSIONS (WxH)** 2.5'x6.0'  
**V-NOTCH INVERT** 146.0



**CONCRETE WALL WITH V-NOTCH WEIR DETAIL**  
NOT TO SCALE

**CONSTRUCTION NOTES:**

1. ACTIVITY WITHIN WETLANDS TO TAKE PLACE ONLY WITHIN LIMITS SPECIFIED.
2. SIDECAST ALL EXCAVATED MATERIAL OUTSIDE OF WETLANDS.
3. REPLACE EXCAVATED MATERIAL AND COMPACT TO EXISTING GRADE.
4. RESTORE WITH WETLAND SEED MIX SPECIFIED ON SHEET LA-9

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MMI #: 2730-01  
 DWG: Wetland-Impacts.dwg  
 LSH: ---

**RIO VISTA**  
**WETLAND IMPACTS**  
**REGULATED ACTIVITY 4**

LOCATION:  
**SPRUCE BROOK ROAD**  
**BERLIN, CONNECTICUT**  
 DATE: **FEBRUARY 6, 2007**  
 SCALE: **N.T.S.**

SHEET:  
**WI-3B**

Plotted by: GWENW On this date: Fri, 2007 Feb 9 - 11:18am



PROPOSED WALKING PATH

NOTE: NO FEDERAL WETLAND LIMITS ARE PRESENT FOR THIS ACTIVITY. USE CONNECTICUT WETLAND LIMIT

LIMIT OF STATE OF CONNECTICUT WETLANDS/ WATER COURSE (DRAINAGE DITCH)

CENTERLINE OF STATE WETLANDS

EXISTING CART PATH

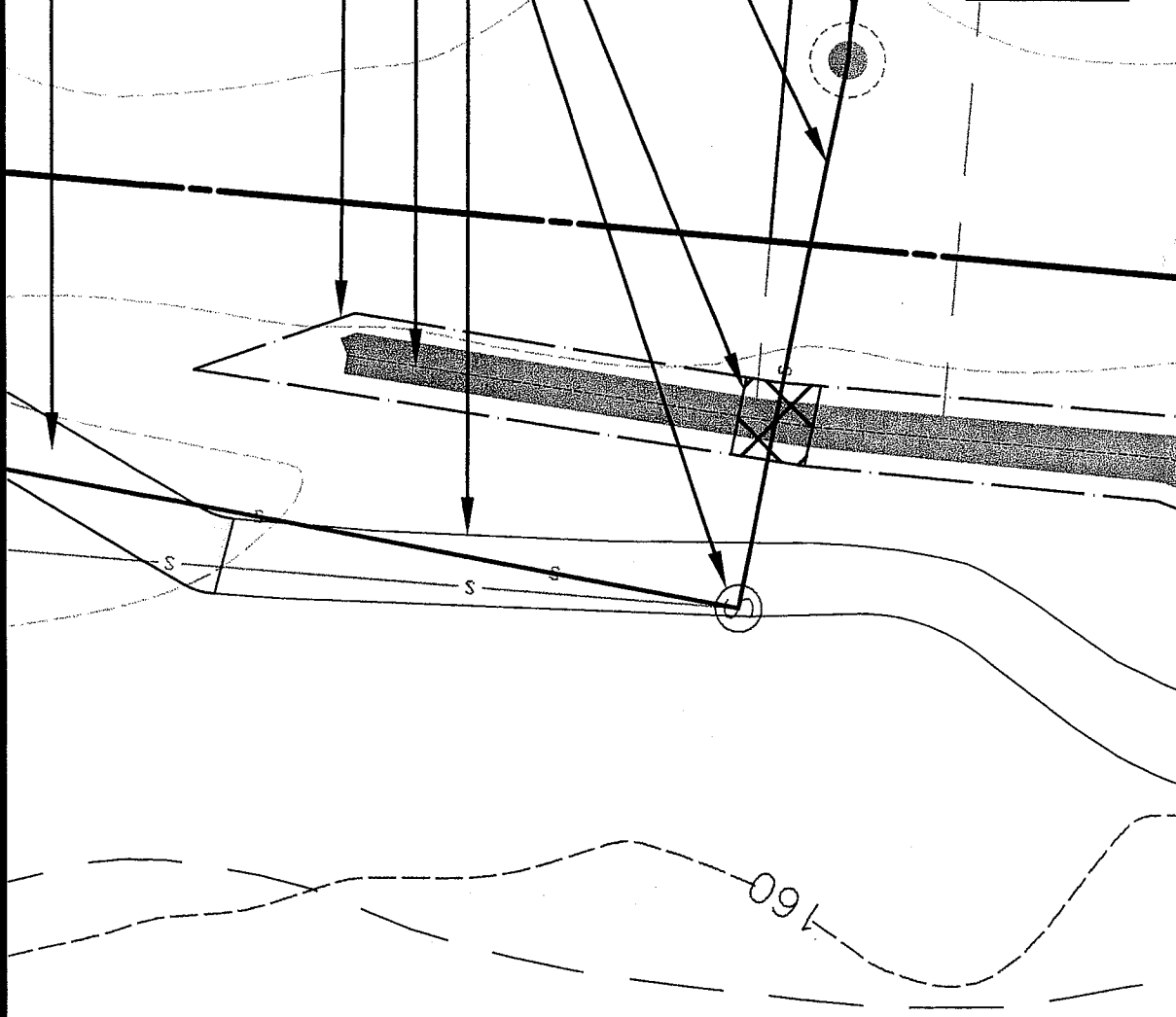
EXISTING MANHOLE

TEMPORARY TRENCH LIMIT

PROPOSED 8" SANITARY SEWER

PROPOSED MANHOLE

REGULATED ACTIVITY 4 - INSTALL 8" SANITARY SEWER
PROPOSED WETLAND IMPACT:
TEMPORARY TRENCH 68 SF
TOTAL 68 SF



### RIO VISTA

### WETLAND IMPACTS REGULATED ACTIVITY 4

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DESIGNED: CB  
 DRAWN: JH  
 CHECKED: BR

PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: JAN 26, 2008

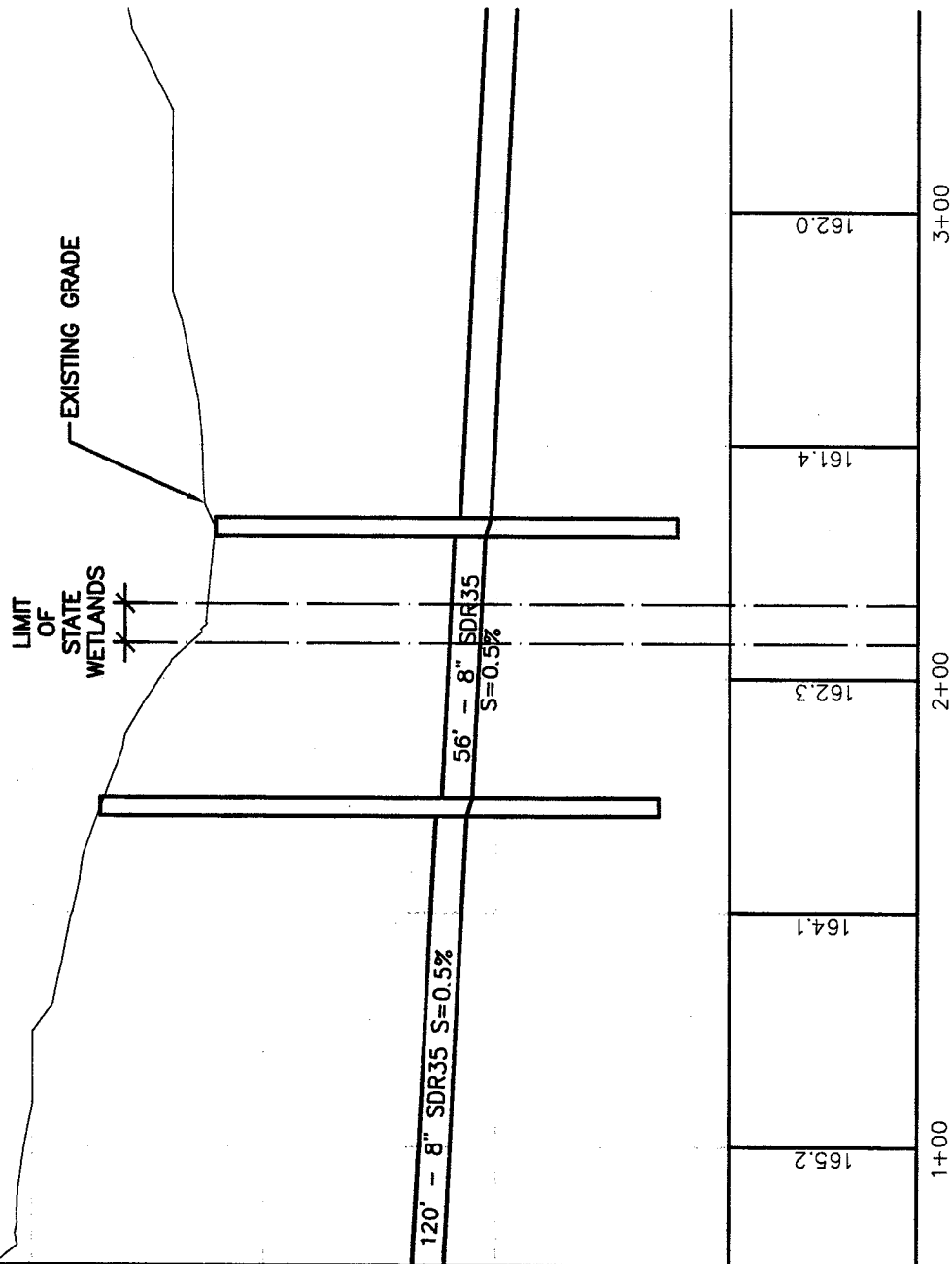
SCALE: 1"=20'

SHEET:

**WI-4A**

**CONSTRUCTION NOTES:**

1. ACTIVITY WITHIN WETLANDS TO TAKE PLACE ONLY WITHIN LIMITS SPECIFIED.
2. SIDECAST ALL EXCAVATED MATERIAL OUTSIDE OF WETLANDS.
3. REPLACE EXCAVATED MATERIAL AND COMPACT TO EXISTING GRADE.
4. RESTORE WITH WETLAND SEED MIX SPECIFIED ON SHEET LA-9.



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**RIO VISTA**  
**WETLAND IMPACTS**  
**REGULATED ACTIVITY 3**

PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

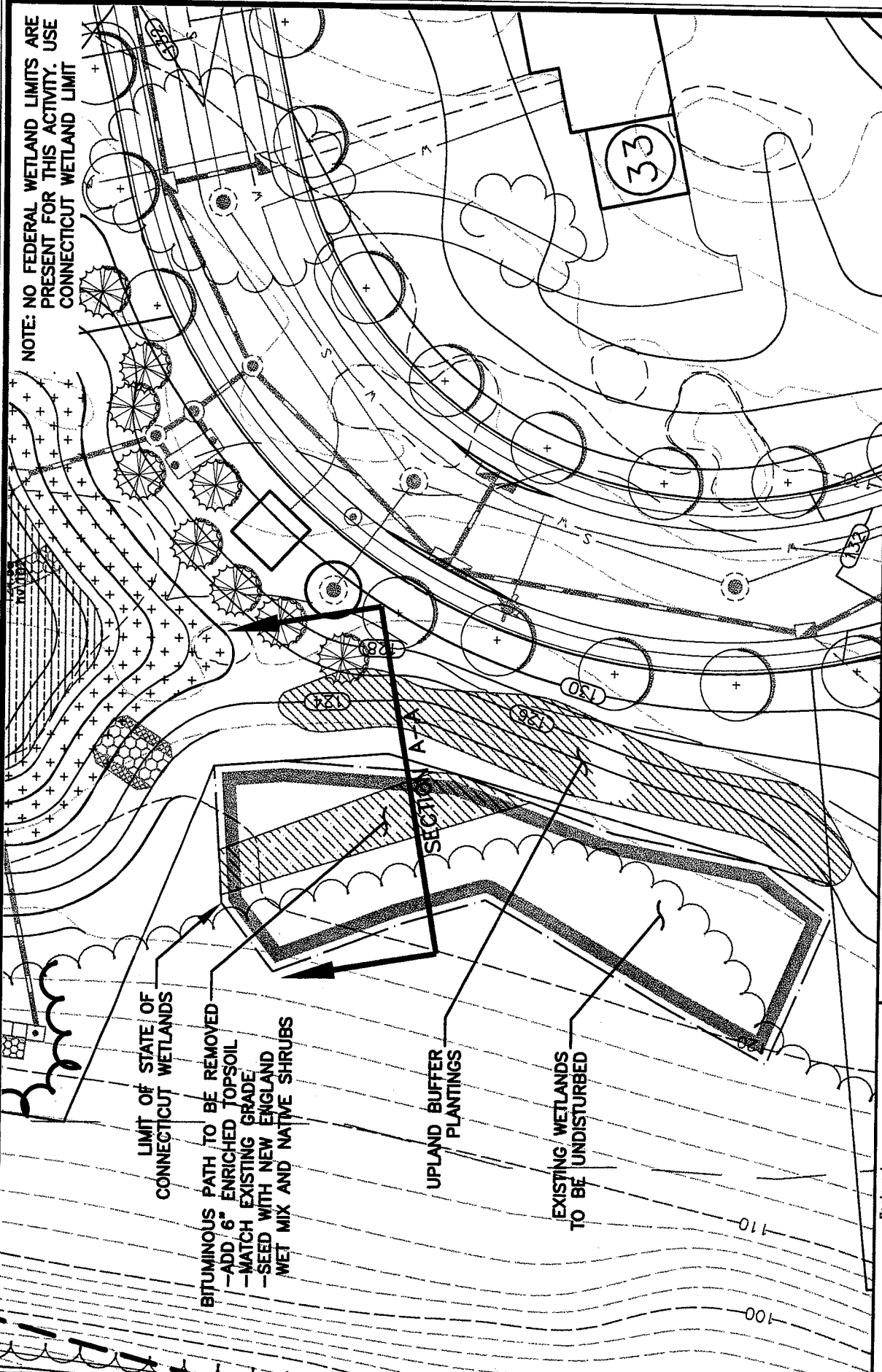
DATE: **JAN. 26, 2006**

SCALE: **1"=40'**

DESIGNED: CB  
 DRAWN: JH  
 CHECKED: BR

SHEET:  
**WI-4B**

NOTE: NO FEDERAL WETLAND LIMITS ARE PRESENT FOR THIS ACTIVITY. USE CONNECTICUT WETLAND LIMIT



BITUMINOUS PATH TO BE REMOVED  
 -ADD 6" ENRICHED TOPSOIL  
 -MATCH EXISTING GRADE  
 -SEED WITH NEW ENGLAND  
 WET MIX AND NATIVE SHRUBS

UPLAND BUFFER  
 PLANTINGS

EXISTING WETLANDS  
 TO BE UNDISTURBED

**RIO VISTA**

**WETLAND MITIGATION  
 ACTIVITY 1**

PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: **JAN. 26, 2006**

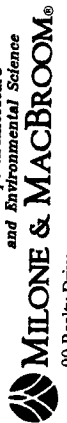
SCALE: **1"=40'**

DESIGNED: CB  
 DRAWN: JH  
 CHECKED: BR

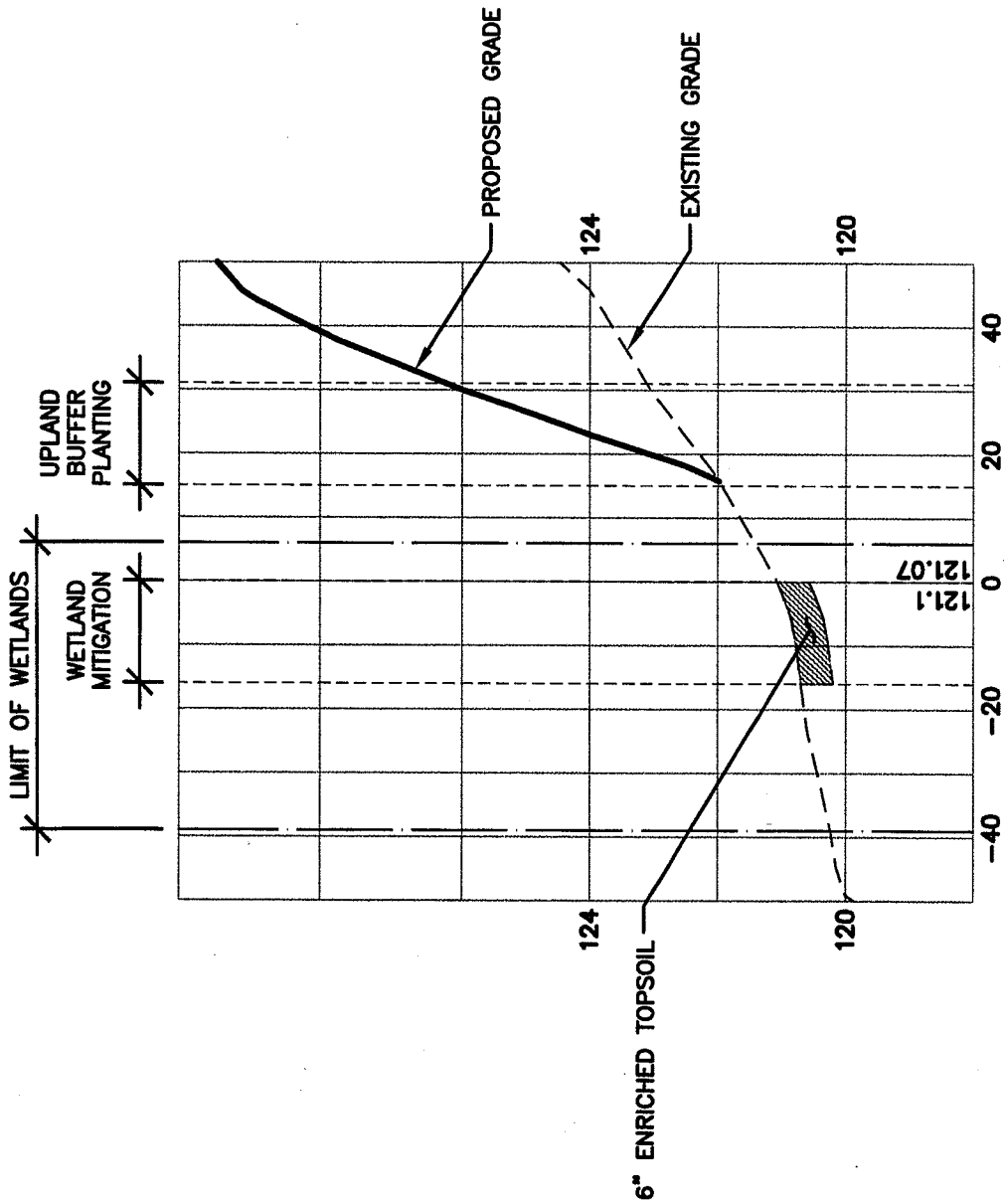
SHEET:

**WM-1-A**

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PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: JAN. 26, 2008

SCALE: 1"=30'

SHEET:

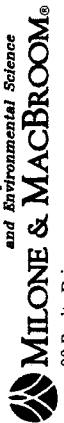
**WM-1-B**

**RIO VISTA**

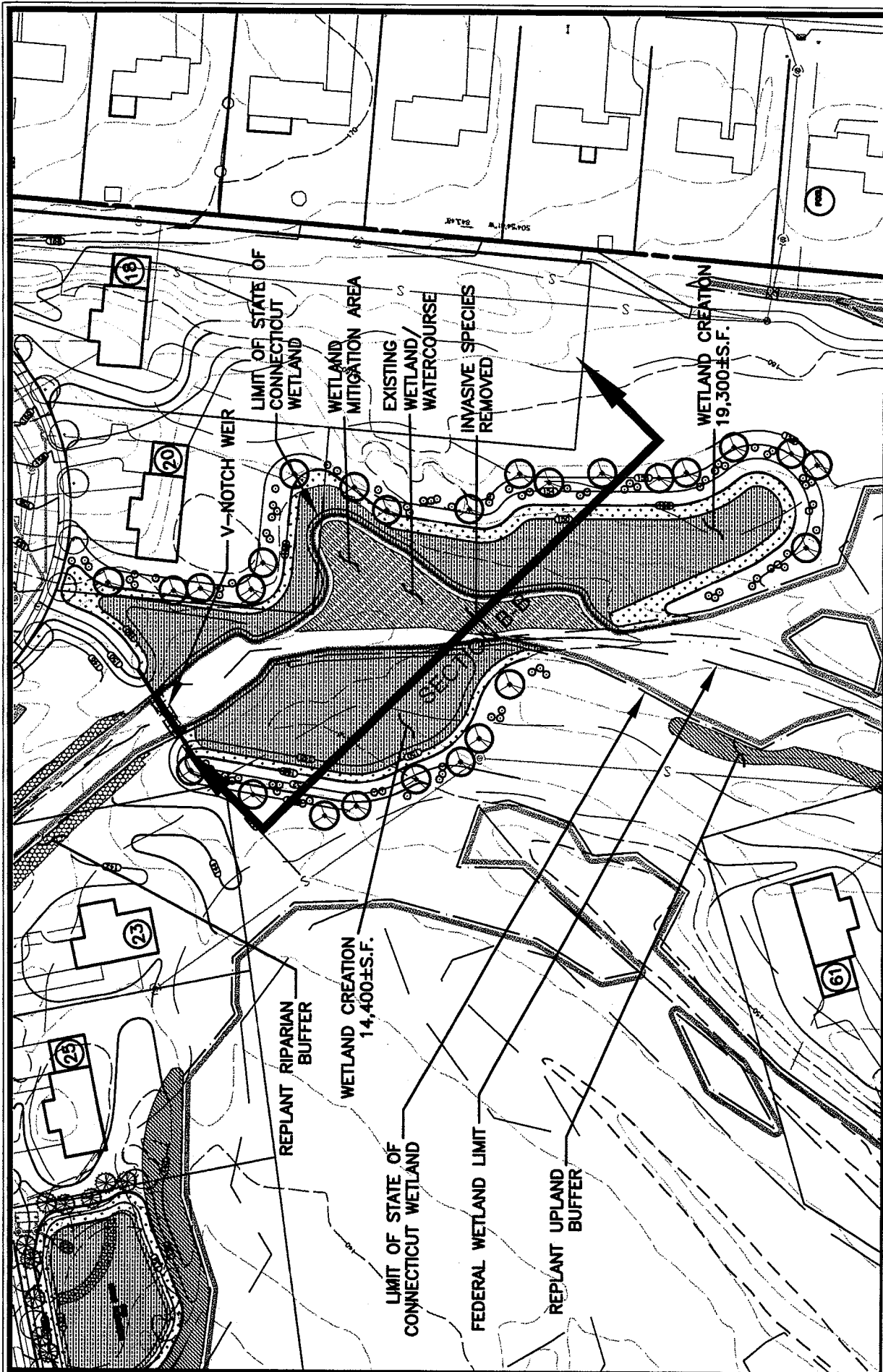
**WETLAND MITIGATION  
 ACTIVITY 1**

DESIGNED: CB  
 DRAWN: JH  
 CHECKED: BR

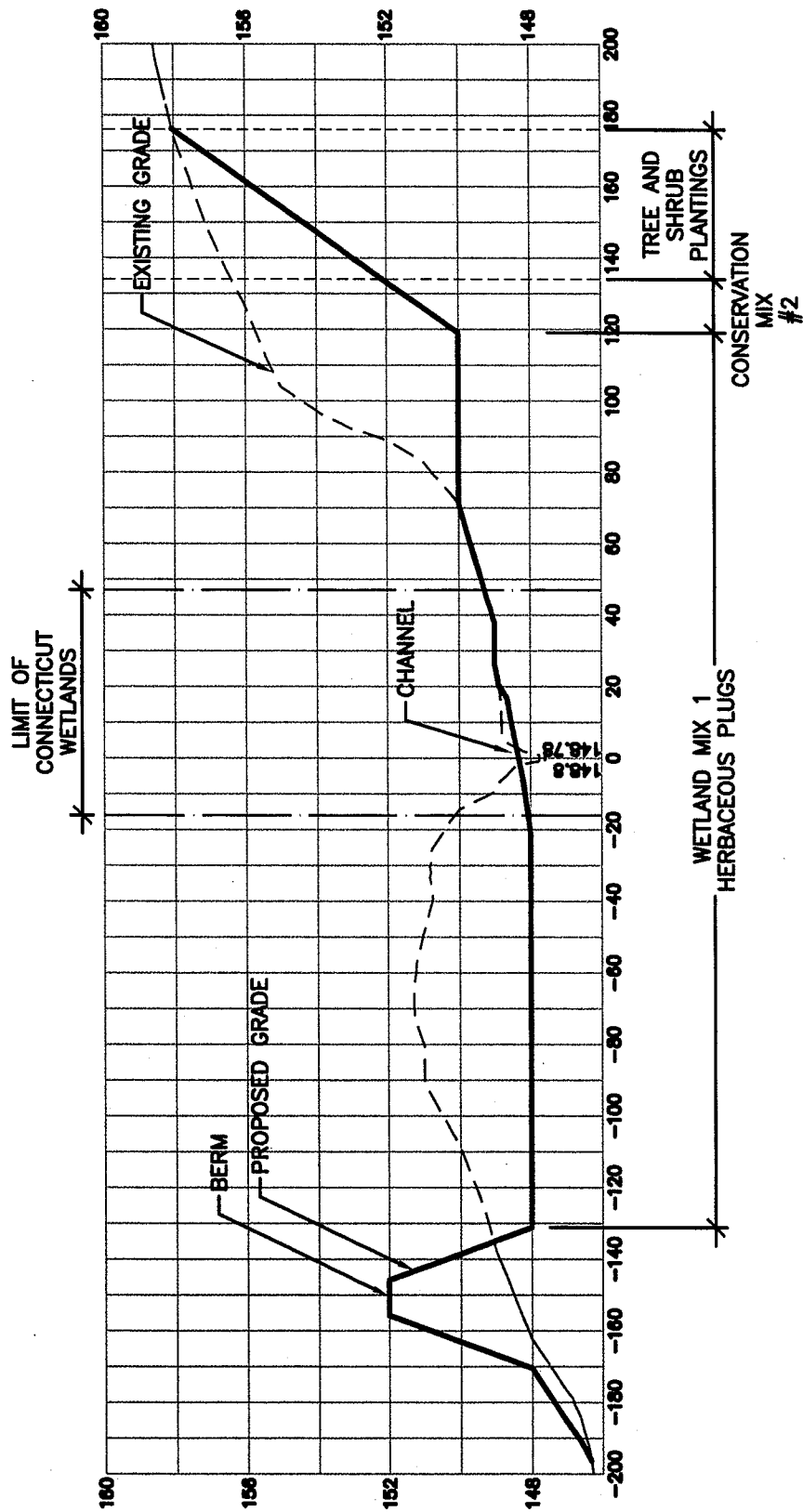
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<b>PROJECT LOCATION:</b> SPRUCE BROOK ROAD BERLIN, CONNECTICUT		<b>DATE:</b> JAN. 26, 2008		<b>SHEET:</b> <b>WM-2&amp;3-A</b>
		<b>SCALE:</b> 1"=100'		
<b>RIO VISTA</b>		<b>DESIGNED:</b> CB		
		<b>DRAWN:</b> JH		
<b>WETLAND MITIGATION</b> <b>ACTIVITY 2 &amp; 3</b>		<b>CHECKED:</b> BR		
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PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: JAN. 26, 2008  
 SCALE: 1"=50'

SHEET:  
**WM-2&3-B**



**RIO VISTA**

**WETLAND MITIGATION  
 ACTIVITY 2 & 3**

DESIGNED: CB  
 DRAWN: JH  
 CHECKED: BR

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# WETLAND CREATION PLANT LIST

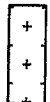
SHADE TREES	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
 Quantities T.B.D.	Acer rubrum	Red Maple	1.5"-2" CAL	B & B, 6' MIN. BRANCHING HT.
	Platanus occidentalis	Sycamore	1.5"-2" CAL	B & B, 6' MIN. BRANCHING HT.
	Quercus palustris	Pin Oak	1.5"-2" CAL	B & B, 6' MIN. BRANCHING HT.
SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
 Quantities T.B.D.	Cornus amomum	Silky Dogwood	24"-30" HT.	FULL & DENSE
	Ilex verticillata	Common Winterberry	24"-30" HT.	FULL & DENSE
	Vaccinium corymbosum	Highbush Blueberry	24"-30" HT.	FULL & DENSE
	Viburnum dentatum	Northern Arrowwood	24"-30" HT.	FULL & DENSE
	Alnus Rugosa	Speckled Alder	24"-30" HT.	FULL & DENSE
	Ciethra Alnifolia	Sweet Pepperbush	24"-30" HT.	FULL & DENSE

### ABBREVIATIONS

- REV. = REVISION
- QTY. = QUANTITY
- SPR. = SPREAD
- HT. = HEIGHT
- B&B = BALL AND BURLAP
- GAL. = GALLON
- CAL. = CALIPER
- CONT. = CONTAINER
- MIN. = MINIMUM




**SEED MIX #1**  
 MIX SHALL BE NEW ENGLAND WET MIX  
 SEED RATE: 25 POUND PER ACRE  
 AS MANUFACTURED BY:  
 NEW ENGLAND WETLAND PLANTS, INC.  
 800 MAIN STREET AMHERST, MA 01002  
 PHONE: (413) 256-1752 OR APPROVED EQUAL  
 SEED RATE: 1/2 LBS./1,000 SF



**SEED MIX #2**  
 MIX SHALL BE NEW ENGLAND CONSERVATION/WILDLIFE MIX  
 SEED RATE: 25 POUND PER ACRE  
 AS MANUFACTURED BY:  
 NEW ENGLAND WETLAND PLANTS, INC.  
 800 MAIN STREET AMHERST, MA 01002  
 PHONE: (413) 256-1752 OR APPROVED EQUAL  
 SEED RATE: 1/2 LBS./1,000 SF

TOTAL QTY.	SUPPLEMENTAL HERB PLUGS TO BE PLANTED AT OR BELOW ELEVATION 150.0 FEET FOR BOTH BASINS
300	BLUE FLAG IRIS <i>IRIS VERSICOLOR</i>
300	AMERICAN BUR-REED <i>SPARGANIUM AMERICANUM</i>
300	AMERICAN SWEET FLAG <i>ACORUS AMERICANUS</i>
300	THREE-SQUARE BULRUSH <i>SCHOENOPLECTUS (SCIRPUS) AMERICANUS</i>
300	TUSSOCK SEDGE <i>CAREX STRICTA</i>



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**RIO VISTA**

**WETLAND CREATION  
PLANT LIST**

PROJECT LOCATION:  
 SPRUCE BROOK ROAD  
 BERLIN, CONNECTICUT

DATE: **FEBRUARY 2, 2007**

SCALE: **NTS**

SHEET: **WM-PL**