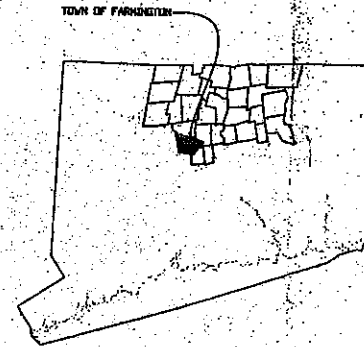


DESIGN: DIVERSION AND ACCESS ROAD  
 PREPARED FOR: SIMMONS FARM  
 PREPARED BY: NATURAL RESOURCES CONSERVATION SERVICE, WINDSOR, CT.  
 IN COOPERATION WITH: NORTH CENTRAL CONSERVATION DISTRICT  
 DRAWING NO.: CT-01-H-07-01  
 ENGINEERING JOB CLASS I

APPROVED BY: \_\_\_\_\_  
 TITLE: \_\_\_\_\_

GENERAL LOCATION MAP



TOWN OF FARMINGTON



OPERATION AND MAINTENANCE

1. ERODED AREAS SHOULD BE RESEEDED OR SODDED PROMPTLY.
2. APPLY 400 LBS. TO 500 LBS. PER ACRE OF 10-10-10 FERTILIZER TO NEWLY SEEDED DIVERSION DURING THE SECOND GROWING SEASON AND AS NEEDED THEREAFTER TO MAINTAIN VIGOROUS COVER.
3. THE DIVERSION SHALL BE MAINTAINED BY KEEPING IT FREE AND CLEAN OF FLOW REDUCING MATERIALS.
4. ANY SPREADING OF MANURE ON ADJACENT FIELDS SHALL BE KEPT A MINIMUM OF 50 FT. AWAY FROM DIVERSION EDGES.
5. MOW THE VEGETATION IN THE CHANNEL AT LEAST ONCE PER YEAR TO PREVENT ESTABLISHMENT OF WOODY VEGETATION.

QUANTITIES

DIVERSION	400 L.F.
1. EXCAVATION	250 C.Y.
2. EARTHFILL	235 C.Y.
3. JUTE MAT	1,350 S.Y.
4. LIME, FERTILIZER, SEED, MULCH	0.75 AC.
ACCESS ROAD	515 L.F.
1. GRAVEL FOR ROAD	287 C.Y.
2. WOVEN GEOTEXTILE	716 S.Y.

INDEX

SHEET NO.	
1	COVER SHEET
2	PLAN VIEW AND CONTOURS
3	PROFILE AND DETAILS
4	CROSS SECTIONS
5	POLLUTION AND SEDIMENT CONTROL

NOTE: THE LAND OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.

 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	SIMMONS FARM TOWN OF FARMINGTON, HARTFORD COUNTY, CONNECTICUT DIVERSION AND ACCESS ROAD COVER SHEET		
	Date 1/97	Approved By <i>John M. Balle</i>	Title Civil Engineer
	Assigned JEG Drawn JEG	Checked JAL	Date 3/97 4/97
Out File WORKING/DWG		Drawing No. CT-01-H-07-01	
Sheet 1 of 5			

CENTERLINE OF WATERWAY WITH  
TOP WIDTH = 20 FT., DEPTH = 1.8 FT.  
SEE SHEETS 3 AND 4 FOR DETAILS.

LEVEL UP SPREADER,  
20' FT. LENGTH, FROM  
STN. 04+00 TO 04+20  
(WORK INTO EXISTING GRADE)

IRON PIN  
ELEV. = 105.24 FT.

PROPOSED ACCESS ROAD  
320 L.F., SEE SHEET 3 FOR  
DETAILS.

BM - TOP OF FEED BUNK  
NORTHWEST CORNER  
ASSUMED ELEV. = 100.00 FT.

STN. 0001  
ELEV. = 87.45 FT.

PROPOSED ACCESS ROAD  
195 L.F., SEE SHEET 3 FOR  
DETAILS.

DAIRY  
BARN

BARN/  
STAND

IRON PIN  
ELEV. = 93.58 FT.

STN. 0002  
ELEV. = 90.47 FT.

CATCH BASIN  
TOP OF GRATE  
ELEV. = 100.77 FT.

BUNKER  
SILD

FEED BUNK PAD

TOWN FARM ROAD

### LEGEND

- △ HUB
- ⊕ BENCHMARK
- ✕✕ FENCE
- ▭ PROPOSED ACCESS RD.
- CATCH BASIN
- DECIDUOUS TREE
- IRON PIN
- TEST PIT

CONTOURS ARE IN 2 FT. INTERVALS



OCTOBER 19, 2009  
SOL TEST PIT LOG

The very deep soil description is as follows (all textures are USDA soil textures)

- 0 to 3 inches, A horizon, 7.5YR 2.5/1 loamy sand, disturbed
- 3 to 6 inches B horizon, 7.5YR 4/1 loamy sand, very fine sandstone
- 6 to 13 inches, BC horizon, 7.5YR 4/1 gravelly loamy sand, 2nd United Soil Classification System
- 13 to 20 inches, C<sub>1</sub> horizon, 7.5YR 4/1 gravelly sand, 2nd, 2P-2M United Soil Classification System
- 20 to 23 inches, C<sub>2</sub> horizon, 7.5YR 4/1 sand, 2M, 2P-2M United Soil Classification System
- 23 to 25 inches, C<sub>3</sub> horizon, 7.5YR 4/1 fine sand, common, medium, distinct 7.5YR 4/1 subangular stone in the matrix, 2M, 2P-2M United Soil Classification System
- 25 to 28 inches, C<sub>4</sub> horizon, 7.5YR 4/3 stratified sand and coarse sand, fine, coarse, prominent 7.5YR 4/3 reduce concentrations in the matrix, 2M, 2P-2M United Soil Classification System
- 28 to 30 inches, C<sub>5</sub> horizon, 10YR 4/3 sand, fine, medium, distinct 7.5YR 4/3 reduce concentrations in the matrix, 2M, 2P-2M United Soil Classification System
- 30 to 33 inches, C<sub>6</sub> horizon, 7.5YR 4/3 fine sand, common, medium, distinct 7.5YR 4/3 subangular stone in the matrix, fine, medium, distinct 7.5YR 4/3 and fine, medium, prominent 7.5YR 4/3 reduce concentrations in the matrix, 2M, 2P-2M United Soil Classification System
- 33 to 102 inches, C<sub>7</sub> horizon, 7.5YR 4/3 stratified sand and coarse sand, fine, coarse, prominent 7.5YR 4/3 reduce concentrations in the matrix, 2M, 2P-2M United Soil Classification System

Around the test pit area, the top soil has been removed (about 3 inches remains) and a very firm layer about 2 inches thick (the 2H horizon) has formed over the years due to compaction. This compacted layer has a moderately slow or slow estimated hydraulic conductivity resulting in ponding on the surface. In the test pit, the seasonal high water table was noted at 22 inches from the soil surface. This is where the water table is high enough to cause radon-like fumes or nitrogen gas which induces wastes.

### SEEDING SPECIFICATION

Seed all disturbed areas with the following mixture:  
 Kentucky Bluegrass — 20 lbs./ac.  
 Creeping Red Fescue — 20 lbs./ac.  
 Perennial Ryegrass — 3 lbs./ac.

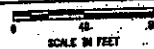
The seeding dates shall be between April 1 and June 15, or between August 15 and September 15.

Apply ground limestone according to soil test recommendations or at a rate of 2 tons per acre.

Apply fertilizer according to soil test recommendations or apply 400 lbs. of 10-10-10 or its equivalent per acre.

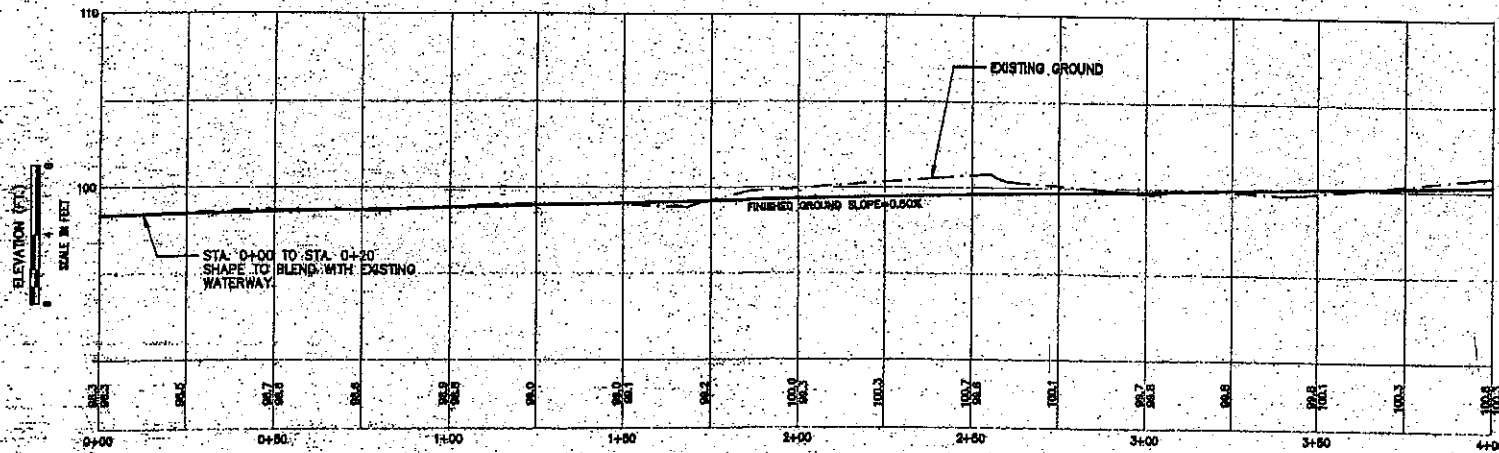
Apply hay or straw mulch to all seeded areas at the rate of 1.5 to 2.0 tons per acre.

### PLAN VIEW



NOTE: THE LANDOWNER IS RESPONSIBLE FOR NOTIFYING ALL UTILITIES BY CALLING BEFORE YOU DIG (1-800-922-4455).

Scale	1" = 20'
Designed by	JG
Drawn by	AS
Checked by	JL
Approved by	
Date	1/07
Title	1
SIMONS FARM TOWN OF FARMINGTON, HARTFORD COUNTY, CONNECTICUT DIVERSION AND ACCESS ROAD PLAN VIEW	
USDA NRCs U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	
Soil File	WORKING.DWG
Sheet No.	CT-01-H-07-1
Sheet	2 of 5



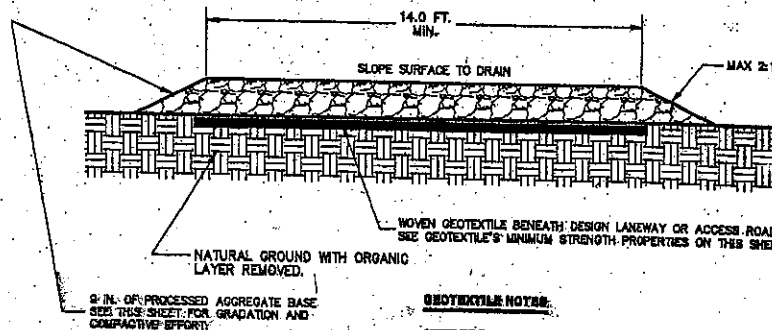
HORIZONTAL DISTANCE  
SCALE IN FEET  
**PROFILE OF CENTERLINE OF DIVERSION**

**CONSTRUCTION NOTES**

1. THE LANDOWNER IS RESPONSIBLE FOR NOTIFYING ALL UTILITIES BY CALLING BEFORE YOU DIG 1-800-922-4455.
2. THE OUTLETS AND GRATES ON THE EXISTING CATCH BASINS SHALL BE KEPT FREE AND CLEAN FROM ALL FLOW REDUCING MATERIALS.
3. THE DIVERSION SHALL BE EXCAVATED AS SHOWN ON THE DRAWINGS.
4. ALL BRUSH, TREES, STUMPS AND SIMILAR MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION AREA AND DISPOSED OF IN SUCH A MANNER AS NOT TO INTERFERE WITH PROPER FUNCTIONING OF THE DIVERSION.
5. SOIL REMOVED FROM DIVERSION SHALL BE DEPOSITED WHERE IT WILL NOT INTERFERE WITH FLOW OF WATER IN THE DIVERSION.
6. THE TOPSOIL MAY BE SAVED AND SPREAD IN THE CONSTRUCTED DIVERSION IF NECESSARY FOR OBTAINING A GOOD VEGETATIVE COVER. WHERE THIS IS DONE THE DIVERSION SHALL BE OVER-EXCAVATED TO ALLOW FOR REPLACEMENT OF THE TOPSOIL WITHOUT ENCROACHING ON THE DESIGN CROSS SECTION.
7. VEGETATION IN DIVERSION SHALL BE ESTABLISHED BY SEEDING. SEE SHEET 2 FOR SEEDING SPECIFICATION.
8. JUTE MESH WITH MULCH AND TACKIFIER SHALL BE USED TO PROTECT THE CENTER PORTION OF THE WATERWAY UNTIL VEGETATION BECOMES ESTABLISHED.
9. INSTALL JUTE MESH ACCORDING TO MANUFACTURERS RECOMMENDATIONS.

**GRAVEL FOR ACCESS ROAD**

LOCATION	MATERIAL	MAXIMUM ROCK SIZE (THICKNESS)	WATER CONTENT	COMPACTION REQUIREMENT	SQUARE FEET PER TON	RELEASE BY WEIGHT
ALL FILL AREAS FOR ACCESS ROADS	GRADATION SHALL CONFORM WITH 67-DAY PROCESSED AGGREGATE BASE SECTION 608.01, FORM 615, 1992 EDITION, AND NO MORE THAN 6% BY WEIGHT SHALL PASS THE 200 SIEVE.	2 1/2"	THOROUGHLY WET BUT NOT SO WET AS TO CAUSE ADHESION OF THE MATERIAL TO THE COMPACTION EQUIPMENT.	CLASS II HAND COMPACTION WITH A MINIMUM OF 3 PASSES PER 6" LIFT OF A MANUALLY OPERATED POWER TAMPER OR PLATE VIBRATOR NEARING AT LEAST 100 LBS. OR AN EQUIVALENT METHOD.	2 1/2"	100
					2"	95-100
					1 1/2"	50-75
					1"	25-45
					3/4"	5-20
					NO	2-12
					200	0-5



**GEOTEXTILE NOTES**

GEOTEXTILE SHALL BE USED BENEATH DESIGN HEAVY USE AREA GRAVEL LAYER AS NOTED IN THE DRAWINGS, OR AS SPECIFIED BY THE NRCS PROJECT ENGINEER.  
 THIS MATERIAL MUST MEET HIGH SURVIVABILITY CRITERIA:  
 -GRAS STRENGTH ASTM D-1682 = 130 LBS. OR BETTER  
 -PUNCTURE STRENGTH ASTM D-751-69 = 85 LBS. OR BETTER  
 -TENSILE STRENGTH ASTM D-751-69 = 500 PLS. OR BETTER  
 -TEAR STRENGTH ASTM D-3417 = 50 LBS. OR BETTER

**TYPICAL SECTION OF ACCESS ROAD.**  
N.T.S.

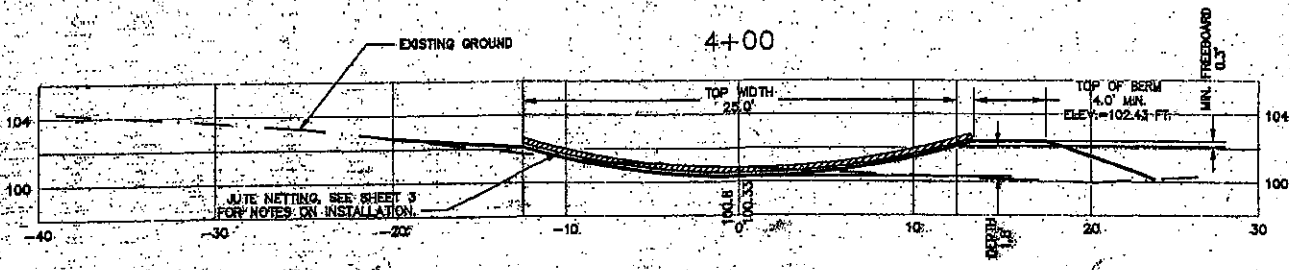
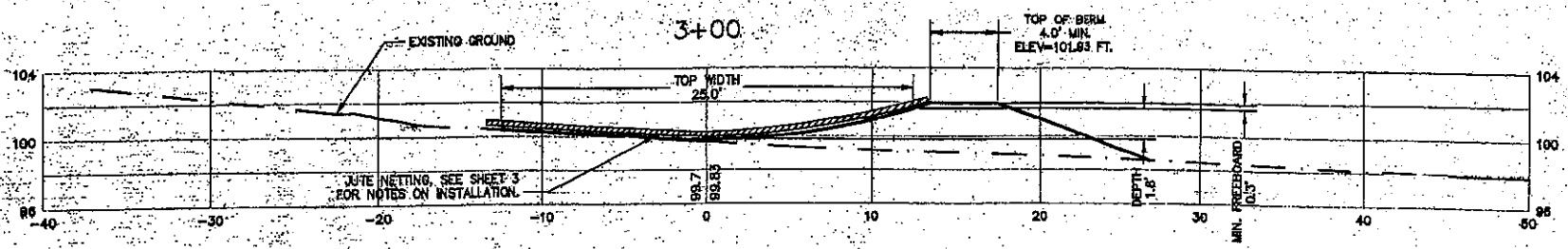
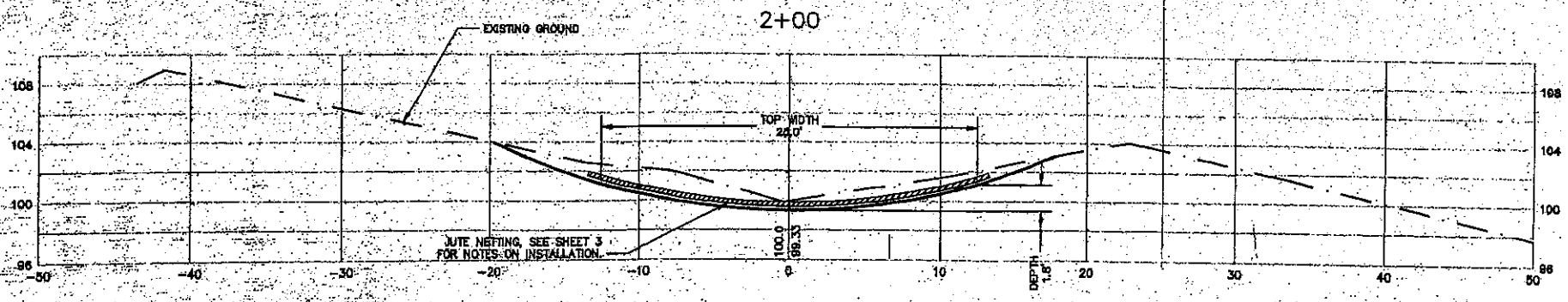
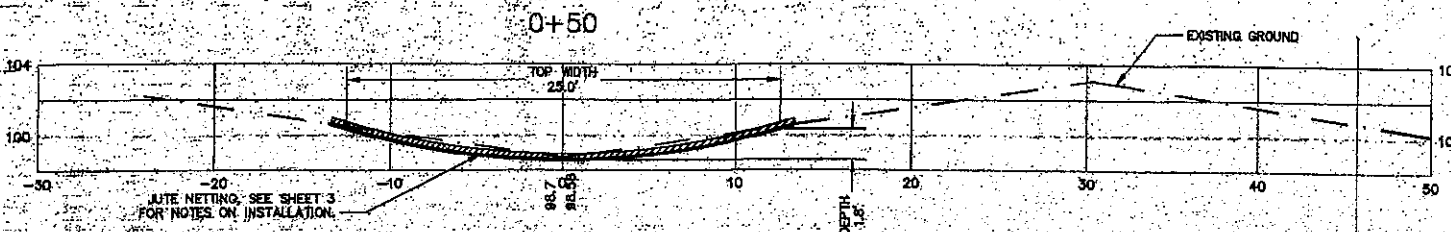
SIMONS FARM  
TOWN OF FARMINGTON, HARTFORD COUNTY, CONNECTICUT  
DIVERSION AND ACCESS ROAD

**PROFILE OF DIVERSION & ACCESS ROAD DETAIL**

NRC S  
USDA  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

Drawn	Checked
1/07	4/07
Approved By	Title
1/07	4/07

Sheet 3 of 5



CROSS SECTIONS OF DIVERSION  
(LOOKING UPSTREAM)



<p>U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE</p>	<p>SIMMONS FARM TOWN OF FARMINGTON, HARTFORD COUNTY, CONNECTICUT DIVERSION &amp; ACCESS ROAD DIVERSION SECTION VIEW</p>			
	<p>Designed: JEG</p>	<p>Drawn: JEG</p>	<p>Checked: JEG</p>	<p>Date: 4/07</p>
	<p>Approved By: [Signature]</p>	<p>Checked: JEG</p>	<p>Date: 5/07</p>	<p>Title: [Blank]</p>
	<p>Working No. CT-01-H-07-1 Sheet 2 of 5</p>			

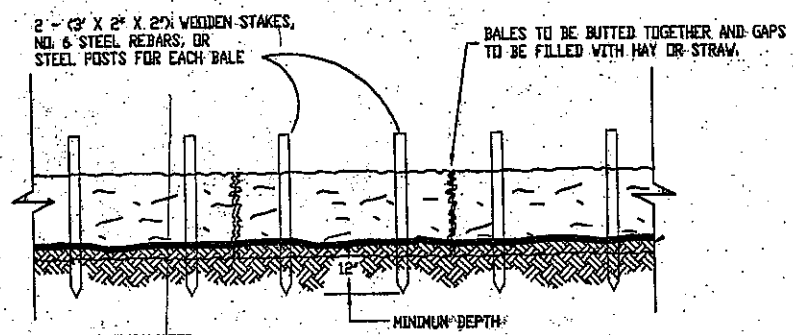
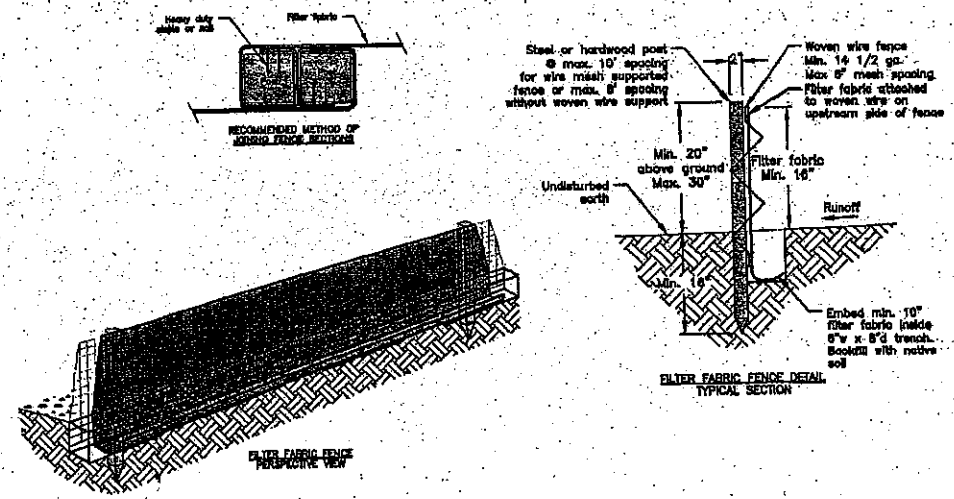
## EROSION AND SEDIMENT CONTROL NOTES

- ) Erosion and sediment control measures will be installed prior to and during clearing, grading, and excavation. Silt fence (bale type or fabric type) shall be installed as needed, or as instructed by the NRCS project engineer.
- ) Posts shall (36) inch minimum length constructed of either of the following materials: Steel "T" or "U" type, or 2" x 2" hardwood.
- ) Woven wire used as additional fence support shall be minimum 14.5 gauge with (6) inch maximum mesh spacing.
- ) Woven wire shall be placed along the uphill side of the fence and fastened with wire ties or (1) inch staples along the uphill side of the posts.
- ) Filter fabric shall be fastened to woven wire according to manufacturers recommendation, or with ties every (24) inches at top and mid-section.
- ) Where two pieces of filter fabric adjoin each other they shall be overlapped by (6) inches and folded.
- ) Where two posts meet to join fence sections, the tops of the posts shall be secured together with wire.
- ) The fence shall be constructed along the contour as much as possible.
- ) Ends of fences shall be extended up the slope to prevent runoff from migrating around the end of the fence.
- ) Inspection of the fence shall be performed weekly, or immediately after a rain event, or when bulges appear in the fence. Accumulated silt shall not be allowed to exceed (1/2) height of the fabric. Repair and or replacement of damaged fence shall be completed promptly, as needed.
- ) Accumulated silt shall be removed and disposed of in an approved site in such a manner that it will not contribute to off-site siltation.
- ) Mulching and final seeding shall follow completed segments of the work. See specification for seeding requirements.
- ) All fencing shall be removed when the construction site is fully stabilized so as to not impede storm flow or drainage.
- ) All chemicals, fuels, and lubrications, shall be located, stored, and disposed of in such a manner as to prevent their entry into wetland or watercourse. No equipment or machinery shall be stored, cleaned or repaired within a wetland or watercourse.

## SEEDING RECOMMENDATIONS AND SPECIFICATIONS

1. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RESULTS OR 300 POUNDS 10-10-10 AND 2 TONS OF LIME PER ACRE.
2. RECOMMENDED SEEDING DATES ARE APRIL 1 - JUNE 15 AND AUGUST 15 - SEPTEMBER 30.
3. MULCH ALL DISTURBED AREAS WITH STRAW OR HAY AT THE RATE OF 100LBS/1000 FT.

\* NOTE: OTHER SUITABLE SEED MIXTURES MAY BE USED INSTEAD OF THE ABOVE



NOTE: EXISTING GROUND TO BE EXCAVATED THE MINIMUM WIDTH OF A BALE TO A DEPTH OF 4". BACKFILL AND COMPACT EXCAVATED SOIL ON THE UPHILL SIDE OF THE BARRIER.

## SEEDING REQUIREMENTS

SEED MIXTURE	LBS/ACRE	LBS/1,000 Sq. Ft.
KENTUCKY BLUEGRASS	20	.5
PERENNIAL RYE	5	.25
CREeping RED FESCUE	20	.5
<b>Total</b>	<b>45</b>	<b>1.25</b>

SIMMONS FARM  
TOWN OF FARMINGTON, HARTFORD COUNTY, CONNECTICUT  
DIVISION AND ACCESS ROAD  
POLLUTION AND SEDIMENT CONTROL

**USDA** **NRCS**  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

DATE	DATE	APPROVED BY
1/07	3/07	1/07
DESIGNED BY	DRAWN BY	CHECKED BY

Cat File  
 WORKING.DWG  
 Drawing No.  
 CT-01-H-07-1  
 Sheet 5 of 5