

ROBERT RICHARDS, LAKE ROAD
EROSION & SEDIMENTATION CONTROL NARRATIVE

This project consists of the construction of 520(+/-) lf of driveway; installation of underground utilities such as electric, telephone, and cable TV and development of one residential lot with well water supply and on-site septic system. Site disturbance will consist of approximately 0.70 ac. of disturbed area for construction of the driveway and house site development.

Erosion Controls for Driveway Construction:

Before any site work is done a construction entrance shall be installed at the edge of Lake Road to prevent the tracking of any soil from the site. If sediment build up causes the construction entrance to lose its effectiveness, remove stone and filter fabric and replace with clean filter fabric and stone.

Silt fence/hay bale barriers shall be placed along the edge of the driveway during construction to entrap sediment. Disturbed areas along sides of driveway shall be stabilized immediately after grading with temporary vegetation and permanently seeded and mulched at the end of construction.

Erosion Controls for Culvert Construction:

The culvert pipe shall be installed during times of low flow (ie. Summer months) to minimize the potential of impacts to the surrounding wetland. Modified rip rap shall be installed at the inlet and outlet of the pipe to prevent erosion and to dissipate energy. Silt fence/hay bale barriers shall be installed down gradient of the pipe outlet to collect sediment during construction. Disturbed areas shall be stabilized immediately after grading with temporary vegetative cover and permanently seeded and mulched at the end of construction.

Erosion Controls for Lot Development:

Lot disturbance will be kept to a minimum, silt fence/hay bale barriers shall be placed down gradient of any lot excavation as proposed. Disturbed areas shall be stabilized immediately after grading with temporary vegetation and permanently seeded and mulched at the end of construction.

GENERAL NOTES

ALL CONSTRUCTION METHODS TO CONFORM TO CONN. D.O.T. FORM 816 AND/OR THE TOWN STANDARD SPECIFICATIONS.

ALL UTILITIES TO BE INSTALLED UNDERGROUND.

ALL DRAINAGE EASEMENTS, UNLESS OTHERWISE NOTED, TO BE CONVEYED TO THE TOWN.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATION OF EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND FOR COORDINATING CONNECTION OF PROPOSED AND EXISTING UTILITIES.

ANY UNSUITABLE MATERIAL IN PAVEMENT AREAS TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL AS DIRECTED BY THE TOWN.

TOWN MAY REQUIRE CHANGES TO THE PLAN TO ADDRESS PROBLEMS THAT MAY RESULT IN THE FIELD.

ALL UNDERGROUND UTILITIES TO BE INSTALLED/DIRECTED BY APPROPRIATE AUTHORITIES.

ALL UNDERGROUND UTILITIES MUST BE INSTALLED BEFORE ROADWAY PAVEMENT.

FOUNDATION DRAINS SHALL BE DEPICTED ON ALL PLOT PLANS.

HOUSE SITE DEVELOPMENT

THE DRIVEWAY SHOULDERS SHOULD BE STABILIZED IMMEDIATELY UPON COMPLETION OF ROUGH GRADING. SHOULDER SEED BED PREPARATION SHOULD FOLLOW THE GENERAL NOTES PROVIDED. HAY BALES OR FILTER FABRIC SHOULD BE USED TO ENTRAP ANY SEDIMENT GENERATED FROM EXPOSED SOIL SURFACES. DRIVEWAY ROADBEDS SHALL BE STABILIZED WITH COMPACTED ROAD AGGREGATE AS SOON AS POSSIBLE.

TOPSOIL AND EXCAVATED SUBSOIL FROM THE FOUNDATION AREA SHOULD BE STOCKPILED WITHIN THE AREA OF DISTURBANCE IF NOT USED FOR ONSITE REGRADING. EACH STOCKPILE MUST BE ADEQUATELY RINGED WITH SEDIMENT CONTROL MATERIALS (IE. HAY BALES AND/OR FABRIC FENCE.)

ANY ADDITIONAL STOCKPILING OF LUMBER OR BUILDING MATERIALS SHOULD ALSO BE CONFINED TO THE AREA OF DISTURBANCE. SIMILARY, VEHICULAR MOVEMENT SHOULD BE DIRECTED TO ESTABLISHED PARKING AREAS. PROPOSED LEACHING SYSTEM AREAS MUST NOT BE IMPACTED BY VEHICULAR TRAFFIC OR UTILIZED AS PARKING AREAS. DEVELOPMENT OF SEWAGE DISPOSAL LEACHING AREAS SHOULD BE STAGED TO FOLLOW HOUSE SITE PREPARATION. ONLY THE PRIMARY LEACHING SYSTEM NEED BE CLEARED OF EXISTING VEGETATION IN COORDINATION WITH APPROVED SEPTIC SYSTEM DESIGN. RESERVE AREAS SHOULD REMAIN UNALTERED IF SITE CONDITIONS PERMIT.

SOIL BOUNDARIES AND SOIL TYPES TAKEN FROM THE MAP AND GEOGRAPHIC CENTER, UNIVERSITY OF CONNECTICUT. SOIL BOUNDARIES HAVE BEEN ADJUSTED IN RELATION TO EXISTING TOPOGRAPHY AND KNOWN SOIL CONDITIONS, SUCH AS WETLAND BOUNDARIES.

STUMPAGE AND DEBRIS SHALL NOT BE BURIED ON SITE. BLASTED ROCK THAT CANNOT BE USED AS LANDSCAPE BACKDROP OR AS STABILIZATION MATERIAL SHALL BE TAKEN OFF SITE TO A SUITABLE LOCATION.

THE PLOT PLAN SHALL INDICATE PROPOSED SEDIMENTATION AND EROSION CONTROLS. ALSO THE PROPOSED HOUSE LOCATION, LOT GRADING LIMIT OF TREE CLEARING, DRIVEWAY DESIGN, SEPTIC SYSTEM DESIGN AND SITE DRAINAGE PLAN SHALL BE SHOWN. THESE PLANS SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE TOWN.

UPON APPROVAL OF INDIVIDUAL SITE PLAN DEVELOPMENT, THE LIMITS OF DEVELOPMENT SHOULD BE ESTABLISHED IN THE FIELD FOR EACH PROPOSED RESIDENTIAL STRUCTURE. DISTURBANCE LIMITS OF 25-30 FEET BEYOND THE PHYSICAL DIMENSIONS OF THE STRUCTURE ARE RECOMMENDED.

LOT WILL REQUIRE AN ENGINEERED SEPTIC SYSTEM.

LEACHING FIELDS ARE TO BE LOCATED IN AREAS DESIGNATED ON SITE PLAN.

GENERAL

THESE GUIDELINES SHALL APPLY TO ALL WORK CONSISTING OF ANY AND ALL TEMPORARY AND/OR PERMANENT MEASURES TO CONTROL WATER POLLUTION AND SOIL EROSION AS MAY BE REQUIRED, DURING THE CONSTRUCTION OF THE PROJECT.

IN GENERAL, ALL CONSTRUCTION ACTIVITIES SHALL PROCEED IN SUCH A MANNER SO AS NOT TO POLLUTE ANY WETLANDS, WATERCOURSE, WATERBODY, AND CONDUIT CARRYING WATER, ETC. THE CONTRACTOR SHALL LIMIT, INsofar AS POSSIBLE, THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION METHODS, AND IMMEDIATELY PROVIDE PERMANENT AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT WETLANDS, WATERCOURSES AND WATERBODIES, AND TO PREVENT, INsofar AS POSSIBLE, EROSION ON THE SITE.

CONSTRUCTION METHODS, IN GENERAL, SHALL BE IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (2002) BY THE STATE OF CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION.

LAND GRADING

GENERAL:

1. THE RESHAPING OF THE GROUND SURFACE BY EXCAVATION AND FILLING OR A COMBINATION OF BOTH, TO OBTAIN PLANNED GRADES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING BASIC CRITERIA:
 - A) THE CUT FACE OF EARTH EXCAVATION SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
 - B) THE PERMANENT EXPOSED FACES OF FILLS SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
 - C) THE CUT FACE OF ROCK EXCAVATION SHALL NOT BE STEEPER THAN ONE HORIZONTAL TO FOUR VERTICAL (1:4).
 - D) NO FILL SHOULD BE PLACED WHERE IT WILL SLIDE, OR WASH UPON THE PREMISES OF ANOTHER OWNER OR UPON ADJACENT WETLANDS, WATERCOURSE OR WATERBODY.
 - E) INSTALLATION OF SEDIMENT AND EROSION CONTROLS SUCH AS HAY BALES AND SILT FENCES SHALL BE ESTABLISHED PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITIES. ALL SEDIMENT AND EROSION CONTROL STRUCTURES MUST BE MONITORED AND MAINTAINED BY THE CONTRACTOR UNTIL THE SOIL SURFACE IS STABILIZED.
 - F) IF NECESSARY, LATERAL WATER DIVERSIONS SHALL BE INSTALLED ACROSS THE GRADED ROADWAY TO PREVENT DOWNSLOPE OUTFLOW AND EROSION.
 - G) HAY BALES SHALL BE STAKED AND SILT FENCES SHALL BE PROPERLY SECURED. SEDIMENT WILL BE REMOVED FROM ALL CATCHMENTS AS NECESSARY.
 - H) PRIOR TO ANY REGRADING, STONE APRON SHALL BE PLACED BY THE ENTRANCE TO THE WORK AREA IN ORDER TO REDUCE MUD AND OTHER SEDIMENTS FROM LEAVING THE SITE.
 - I) PROVISIONS SHOULD BE MADE TO CONDUCT SURFACE WATER SAFELY TO STORM DRAINS, TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
 - J) EXCAVATIONS SHOULD NOT BE MADE SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTY WITHOUT PROTECTING SUCH PROPERTY FROM EROSION, SLIDING, SETTLING OR CRACKING.

TOPSOILING

GENERAL:

1. TOPSOIL SHALL BE SPREAD OVER ALL EXPOSED AREAS IN ORDER TO PROVIDE A SOIL MEDIUM HAVING FAVORABLE CHARACTERISTICS FOR THE ESTABLISHMENT, GROWTH AND MAINTENANCE OF VEGETATION.
2. REMOVE ALL LARGE STONES, TREE LIMBS, ROOTS, AND CONSTRUCTION DEBRIS.
3. APPLY LIME ACCORDING TO SOIL TEST OR AT THE RATE OF TWO (2) TONS PER ACRE.

MATERIAL:

1. TOPSOIL SHOULD HAVE PHYSICAL, CHEMICAL AND BIOLOGICAL CHARACTERISTICS FAVORABLE TO THE GROWTH OF PLANTS.
2. TOPSOIL SHOULD HAVE A SANDY OR LOAMY TEXTURE.
3. AN ORGANIC MATTER CONTENT OF BETWEEN 6 AND 20 (6-20%) PERCENT IS HIGHLY DESIRABLE. AVOID LIGHT COLORED LOWER SUBSOIL MATERIAL.

APPLICATION:

1. AVOID SPREADING WHEN TOPSOIL IS WET OR FROZEN.
2. SPREAD TOPSOIL UNIFORMLY TO A DEPTH OF AT LEAST FOUR (4") INCHES.

EROSION CHECKS

GENERAL:

1. TEMPORARY PERVIOUS BARRIERS USING BALES OF HAY OR STRAW, HELD IN PLACE WITH STAKES DRIVEN THROUGH THE BALES AND INTO THE GROUND, OR SEDIMENT FILTER FABRIC FASTENED TO A FENCE POST AND BURIED INTO THE GROUND, SHALL BE INSTALLED AND MAINTAINED AS REQUIRED TO CHECK EROSION AND REDUCE SEDIMENTATION.

CONSTRUCTION:

1. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED INTO THE SOIL A MINIMUM OF FOUR (4") INCHES.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY WOOD STAKES OR REINFORCEMENT BARS DRIVEN THROUGH THE BALES AND INTO THE GROUND. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD THE PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
4. FILTER FABRIC SHALL BE SECURELY FASTENED AT THE TOP OF A THREE (3') FOOT HIGH FENCE AND BURIED A MINIMUM OF FOUR (4") INCHES INTO THE SOIL. SEAMS BETWEEN SECTIONS OF FILTER FABRIC SHALL OVERLAP A MINIMUM OF TWO (2') FEET.

INSTALLATION AND MAINTENANCE:

1. BALED HAY EROSION BARRIERS SHALL BE INSTALLED AT ALL STORM SEWER INLETS.
2. BALED HAY EROSION BARRIERS AND SEDIMENT FILTER FENCES SHALL BE INSTALLED AT THE LOCATIONS INDICATED ON THE PLAN AND IN ADDITIONAL AREAS AS MAY BE DEDIED APPROPRIATE DURING CONSTRUCTION.
3. ALL EROSION CHECKS SHALL BE MAINTAINED UNTIL ADJACENT AREAS ARE STABILIZED.
4. INSPECTION SHALL BE FREQUENT (AT MINIMUM MONTHLY AND BEFORE AND AFTER HEAVY RAIN) AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. EROSION CHECKS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE.

WINDBLOWN SEDIMENT

GENERAL:

1. ALL WINDBLOWN SEDIMENTS SHALL BE CONTROLLED AT ALL TIMES. THE SITE CONTRACTOR IS RESPONSIBLE FOR APPLYING DUST CONTROL AS OFTEN AS NEEDED TO PREVENT ANY WINDBLOWN SEDIMENTS FROM LEAVING THE SITE. PREDETERMINED TRAFFIC ROUTES FOR ALL TRAFFIC SHALL BE ESTABLISHED BY THE SITE CONTRACTOR TO STABILIZED ROUTES. TEMPORARY AND PERMANENT MULCHING AND TEMPORARY AND PERMANENT VEGETATIVE COVER SHALL BE USED TO MINIMIZE THE NEED FOR DUST CONTROL. MECHANICAL SWEEPERS SHALL BE USED ON ALL PAVED SURFACES TO PREVENT DUST BUILD UP DURING THE COURSE OF SITE WORK.

METHODS:

1. SPRAY ON ADHESIVES ARE ACCEPTABLE AND SHOULD BE APPLIED ACCORDING TO MANUFACTURER'S GUIDELINES.
2. WATER IS ACCEPTABLE BUT MUST BE APPLIED OFTEN IN HOT, DRY WEATHER.
3. CALCIUM CHLORIDE IS ACCEPTABLE BUT MUST BE APPLIED AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE.
4. CRUSHED STONE OR COARSE GRAVEL CAN ALSO BE USED.

TEMPORARY VEGETATIVE COVER

GENERAL:

1. TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED ON ALL UNPROTECTED AREAS THAT PRODUCE SEDIMENT AREAS WHERE FINAL GRADING HAS BEEN COMPLETED AND AREAS WHERE THE ESTIMATED PERIOD OF BARE SOIL EXPOSURE IS LESS THAN 12 MONTHS.

SITE PREPARATION:

1. INSTALL REQUIRED SURFACE WATER CONTROL MEASURES.
2. REMOVE LOOSE ROCK, STONE, AND CONSTRUCTION DEBRIS FROM AREA.
3. APPLY LIME ACCORDING TO SOIL TEST OR AT A RATE OF ONE (1) TON OF GROUND DOLOMITIC LIMESTONE PER ACRE (5 LBS. PER 100 SQUARE FEET).
4. APPLY FERTILIZER ACCORDING TO SOIL TEST OR AT THE RATE OF 300 LBS. OF 10-10-10 PER ACRE (7 LBS. PER 1,000 SQUARE FEET.)
5. UNLESS HYDROSEEDING, WORK IN LIME AND FERTILIZER TO A DEPTH OF FOUR (4") INCHES USING A DISK OR ANY SUITABLE EQUIPMENT.
6. TILLAGE SHOULD ACHIEVE A REASONABLY UNIFORM, LOOSE SEEDBED. WORK ON CONTOUR IF SITE IS SLOPING.

ESTABLISHMENT:

1. USE ANNUAL RYEGRASS AT A RATE OF 40 LBS./AC. OR SUITABLE EQUIVALENT AS SPECIFIED IN THE "GUIDELINES".
2. SEEDING TO BE DONE FROM APRIL 1ST TO JUNE 15 OR AUGUST 1ST TO OCTOBER 1ST. WINTER STABILIZATION PLANTINGS TO BE NO LATER THAN OCTOBER 1ST. THIS INCLUDES STOCKPILE AREAS.
3. APPLY SEED UNIFORMLY ACCORDING TO THE RATE INDICATED BY BROADCASTING, DRILLING, OR HYDRAULIC APPLICATION.
4. UNLESS HYDROSEEDING, COVER RYEGRASS SEEDS WITH NOT MORE THAN 1/4 INCH OF SOIL WITH SUITABLE EQUIPMENT. COVER SUDANGRASS AND SMALL GRAINS WITH 1/2 INCH SOIL.
5. MULCH IMMEDIATELY AFTER SEEDING, IF REQUIRED, ACCORDING TO THE GUIDELINES IN THE "GUIDELINES".

PERMANENT VEGETATIVE COVER

GENERAL:

1. PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED AS VARIOUS SECTIONS OF THE PROJECT ARE COMPLETED IN ORDER TO STABILIZE THE SOIL, REDUCE DOWNSTREAM DAMAGE FROM SEDIMENT AND RUNOFF AND TO ENHANCE THE AESTHETIC NATURE OF THE SITE. IT WILL BE APPLIED TO ALL CONSTRUCTION AREAS SUBJECT TO EROSION WHERE FINAL GRADING HAS BEEN COMPLETED AND A PERMANENT COVER IS NEEDED.

SITE PREPARATION:

1. INSTALL REQUIRED SURFACE WATER CONTROL MEASURES.
2. REMOVE LOOSE ROCK, STONE AND CONSTRUCTION DEBRIS FROM AREA.
3. PERFORM ALL PLANTING OPERATIONS PARALLEL TO THE CONTOURS OF THE SLOPE.
4. APPLY TOPSOIL AS INDICATED ELSEWHERE HEREIN.
5. APPLY FERTILIZER ACCORDING TO SOIL TEST OR:

— SPRING SEEDING:
WORK DEEPLY IN SOIL, BEFORE SEEDING, 300 LBS OF 10-10-10 FERTILIZER PER ACRE (7 LBS PER 1,000 SQUARE FEET); THEN SIX (6) TO EIGHT (8) WEEKS LATER APPLY ON THE SURFACE AN ADDITIONAL 300 LBS OF 10-10-10 FERTILIZER PER ACRE.

— FALL SEEDING:
WORK DEEPLY IN SOIL, BEFORE SEEDING, 600 LBS OF 10-10-10 FERTILIZER PER ACRE (14 LBS PER 1,000 SQUARE FEET).

ESTABLISHMENT:

1. SMOOTH AND FIRM SEEDBED WITH CULTIPACKER OR OTHER SIMILAR EQUIPMENT PRIOR TO SEEDING (EXCEPT WHEN HYDROSEEDING).
2. SELECT ADAPTED SEED MIXTURE AS FOLLOWS. NOTE RATES AND THE SEEDING DATES.

SUNNY TO PARTIALLY SUNNY SITES

	LBS./ACRE	LBS./1000 S.F.
KENTUCKY BLUEGRASS	20	0.50
CREeping RED FESCUE	20	0.50
PERENNIAL RYEGRASS	05	0.10
TOTAL	45	1.10

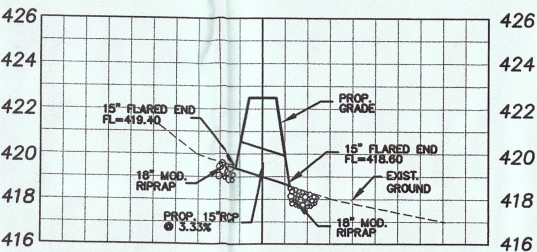
SHADY SITES

	LBS./ACRE	LBS./1000 S.F.
CREeping RED FESCUE	50	1.00
PERENNIAL RYEGRASS	05	0.10
TOTAL	55	1.10

DROUGHTY SITES

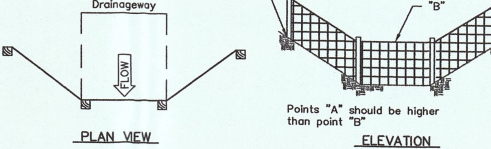
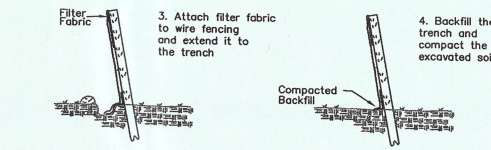
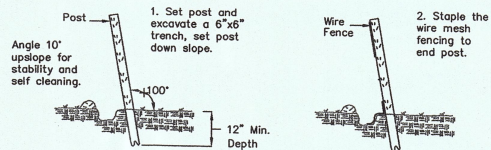
	LBS./ACRE	LBS./1000 S.F.
CREeping RED FESCUE	40	1.00
TALL FESCUE	20	0.50
TOTAL	60	1.50

3. FINAL SEEDING SHALL TAKE PLACE PRIOR TO OCTOBER 1ST AS SEEDING AFTER THIS DATE RUNS A DISTINCT CHANCE OF FAILURE DUE TO ADVERSE WEATHER. ANY AREAS THAT ARE DISTURBED BETWEEN OCTOBER 1ST AND APRIL 1ST SHALL BE STABILIZED BY NON-VEGETATIVE MEANS SUCH AS HEAVY MULCHING WITH A BINDER OR JUTE MATTING WHICH WILL HAVE TO BE REMOVED BEFORE FINAL SEEDING AND THEN REPLACED AFTER FINAL SEEDING.
4. APPLY SEED UNIFORMLY ACCORDING TO RATE INDICATED, BY BROADCASTING, DRILLING, OR HYDRAULIC APPLICATION.
5. COVER GRASS AND LEGUME SEEDS WITH NOT MORE THAN 1/4 INCH OF SOIL WITH SUITABLE EQUIPMENT (EXCEPT WHEN HYDROSEEDING).
6. MULCH IMMEDIATELY AFTER SEEDING IF REQUIRED, ACCORDING TO THE GUIDELINES IN THE "GUIDELINES".
7. USE PROPER INOCULANT ON ALL LEGUME SEEDINGS, USE FOUR (4) TIMES NORMAL RATE WHEN HYDROSEEDING.

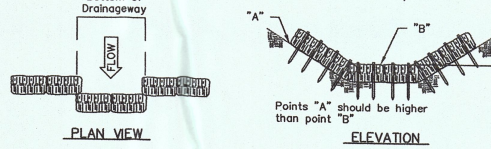
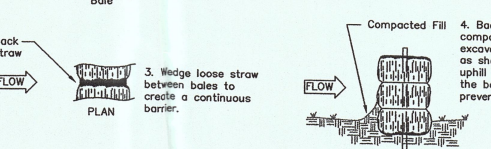
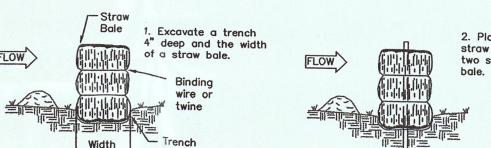


DRIVEWAY CULVERT CROSS-SECTION

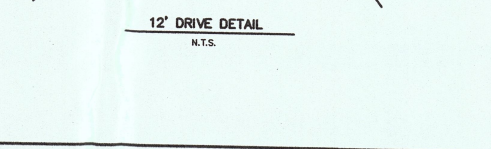
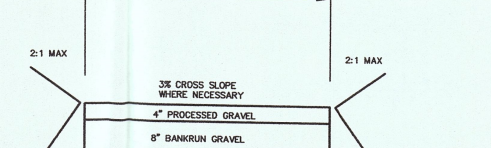
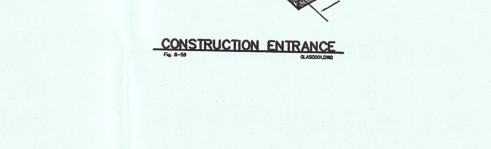
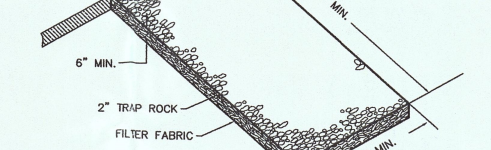
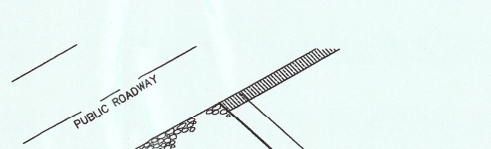
SCALE:
HORIZ. 1"=40'
VERT. 1"=4'



PLACEMENT AND CONSTRUCTION
OF A SYNTHETIC FILTER BARRIER



PLACEMENT AND CONSTRUCTION
OF A STRAW BALE BARRIER



I HEREBY DECLARE TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS PLAN IS SUBSTANTIALLY CORRECT.

P.E. # 0396

MEGSON & HEAGLE
CIVIL ENGINEERS & LAND SURVEYORS, LLC
81 RANKIN ROAD
GLASTONBURY, CONN. 06033
PHONE (860) 659-0587

GENERAL NOTES AND DETAILS
LAKE ROAD
PREPARED FOR
ROBERT RICHARDS
ANDOVER, CONN.

REV. 8-4-05 CONDITIONS OF APPROVAL
REV. 6-28-05 TOWN COMMENTS

CK. BY:	JLH
DRW. BY:	JHS
DATE:	6-6-05
SCALE:	1"=40'
SHEET	2 OF 2
MAP NO.	212-95-1SP