

**Erosion/Sediment Control Barrier**

Bales should be placed in a single row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another. All bales should be either wire-bound or string-tied. Bales should be installed so that bindings are oriented around the sides rather than along the tops and bottoms of the bales to prevent deterioration of the bindings.

The barrier should be entrenched and backfilled. A trench should be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked and chinked, the excavated soil should conform to the ground level on the downhill side and should be built up to 4 inches against the uphill side of the barrier.

Each bale should be securely anchored by at least two stakes driven through the bale. The first stake in each bale should be driven toward the previously laid bale to force the bales together. Stakes should be driven deep enough into the ground to securely anchor the bales.

The gaps between bales should be chinked (filled by wedging) with straw to prevent water from escaping between the bales. (Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency.)

Inspection should be frequent and repair or replacement should be made promptly as needed.

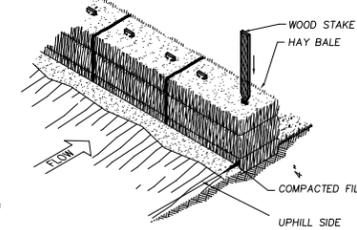
Bale barriers should be removed when they have served their usefulness, but not before the upslope areas have been permanently stabilized.

Inspection should be made after each storm event and repair or replacement should be made promptly as needed.

Cleanout of accumulated sediment at the bales is necessary if 1/2 of the original height of the bales becomes filled with sediment.

**DETAIL HAY BALE EROSION BARRIER**

SCALE: NONE



**EROSION CONTROL & SOIL STABILIZATION PROGRAM**

**TEMPORARY STABILIZATION**

1. DENuded SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME.
  2. ALL DISTURBED SLOPES, SHALL BE SEEDED AND PROTECTED.
  3. THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH THE STATE D.O.T. STANDARDS.
  4. THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS, BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
  5. THE DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING PERMANENT SEEDING MIXTURES:
- | SEEDING MIXTURE     | POUNDS PER ACRE | POUNDS PER 1000 S.F. |
|---------------------|-----------------|----------------------|
| TALL FESCUE         | 20              | 0.45                 |
| CREeping RED FESCUE | 20              | 0.45                 |
| BIRDFOOT TREFOL     | 8               | 0.20                 |
| TOTAL               | 48              | 0.70                 |
6. TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW, OR FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELISOR BLANKETS) THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE OWNER.
  7. HAY OR STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 3,000 - 4,000 LBS/AC.
  8. ALL HAY BALES OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
  9. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN A PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE.
  10. ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT.
  11. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN 15 DAYS OF FINAL GRADING.
  12. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS, SHALL HAVE SIDE SLOPES NO GREATER THAN 30% AND STOCKPILES SHALL ALSO BE SEEDED AND/OR STABILIZED.
  13. ON BOTH STEEP AND LONG SLOPES CONSIDERATION SHALL BE GIVEN TO "CRIMPING" OR "TRACKING" TO TACK DOWN MULCH APPLICATIONS.
  14. REFERENCE THE SEDIMENTATION CONTROL PROGRAM AND ORDER OF PROCEDURE FOR PROPER COORDINATION.
  15. THE DRAINAGE SYSTEM SHALL RECEIVE ONE FINAL CLEANING PRIOR TO ACCEPTANCE OF THE OVERALL PROJECT BY THE OWNER. SEDIMENTS SHALL BE DISPOSED OF IN A PROPER MANNER.

**ORDER OF PROCEDURE:**

1. IMMEDIATELY UPON COMPLETION OF THE CLEARING OPERATION AND PRIOR TO ANY ROUGH GRADING, TEMPORARY HAY BALES AND SILT FENCES SHALL BE PLACED OUTSIDE THE LIMITS OF CONSTRUCTION PER PLANS.
2. ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE PERIODICALLY MAINTAINED AS PER THE RESPECTIVE PROGRAMS FOR TEMPORARY CONTROL.
3. IF WORK PROGRESS IS TO BE INTERRUPTED AT ANY TIME, REFERENCE EROSION AND SEDIMENTATION PROGRAMS FOR TEMPORARY CONTROL.
4. TEMPORARY HAY BALES AND SILT FENCES ALONG AND AT THE ENDS OF ROADWAYS MAY ALSO BE REMOVED AFTER FINAL SOIL STABILIZATION HAS BEEN ACHIEVED AND APPROVED.
5. INLET PROTECTIONS MUST REMAIN UNTIL SUCH TIME THAT A DESIRABLE STAND OF GRASS OR COVER HAS BEEN ESTABLISHED AND THE PROJECT RECEIVES A FAVORABLE APPROVAL FOR FINAL ACCEPTANCE FROM THE ENGINEER.
6. ESTIMATED TIME OF CONSTRUCTION, 6 MONTHS.

**SEDIMENTATION CONTROL PROGRAM:**

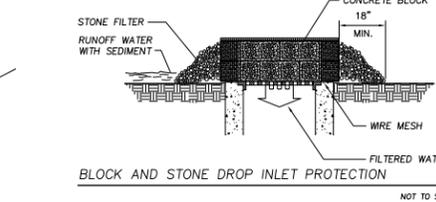
1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING ROADWAYS.
2. ALL DISTURBED AREAS SUBJECT TO EROSION TENDENCIES WHETHER THEY BE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SLOPE PROTECTION.
3. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND MAINTAIN ALL SEDIMENTATION CONTROL DEVICES PROMPTLY AFTER EACH RAINFALL.
5. CARE SHOULD BE TAKEN SO AS NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECT TO STORM WATER FLOW.
6. ADDITIONAL HAY BALES OR SILT FENCES SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE OWNER.
7. ALL SEDIMENTS SHALL BE REMOVED FROM THE DRAINAGE FACILITIES WHEN DIRECTED BY THE OWNER OR LOCAL TOWN OR STATE OFFICIALS.
8. AT THE END OF EACH WORK DAY THE CONTRACTOR SHALL BE RESPONSIBLE FOR SWEEPING THE CONSTRUCTION ENTRANCE AND GREAT ROAD (AS NEEDED).

**OPERATION & MAINTENANCE PLAN**

1. A CONTINUOUS HAYBALE AND SILTATION FENCE BARRIER WILL BE INSTALLED AND MAINTAINED ALONG THE PERIMETER OF ALL CONSTRUCTION ACTIVITIES AS SHOWN ON THE SITE PLANS.
2. INLETS OF ALL NEW CATCH BASINS SHALL RECEIVE A FILTER FABRIC SEDIMENT FILTER DURING CONSTRUCTION AND BEFORE FINAL SITE STABILIZATION.
3. EROSION/SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AFTER EACH STORM EVENT AND REPAIRED OR REPLACED AS NECESSARY. THEY SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE SITE.
4. A TEMPORARY CONSTRUCTION ENTRANCE ACCESS ROAD SHALL BE DESIGNATED. SWEEPING OF THIS ENTRANCE AND OF THE ACCESS ROAD (AS NEEDED) SHALL BE PERFORMED AT THE END OF EACH WORK DAY.
5. AT THE END OF CONSTRUCTION WHEN FINAL STABILIZATION HAS BEEN ACHIEVED, ALL DRAINAGE STRUCTURES SHALL BE CLEANED FROM ALL ACCUMULATED SEDIMENTS, THE PAVED AREAS SHALL BE CLEAN FROM DIRT, DEBRIS OR ANY LOOSE MATERIAL THAT MAY END UP IN A DRAINAGE STRUCTURE.
6. A CONCRETE WASHING PIT APPROXIMATELY 5 YARDS IN VOLUME WILL BE ESTABLISHED AWAY FROM THE WETLANDS AREA. CONCRETE WASHING PIT TO BE LINED WITH PLASTIC. WASH WATER TO BE DRUMMED AND TRANSPORTED TO A DISPOSAL FACILITY. RESIDUAL DEBRIS TO BE PROPERLY DISPOSED OF.
7. DUST TO BE CONTROLLED BY SPRAYING THE SITE AT A MINIMUM OF TWO TIMES A DAY.

**POST CONSTRUCTION PHASE**

- ONCE CONSTRUCTION IS COMPLETE, POST DEVELOPMENT STORM WATER CONTROLS ARE TO BE OPERATED AND MAINTAINED IN COMPLIANCE WITH THE FOLLOWING PERMANENT MAINTENANCE PROCEDURES:
1. CATCH BASINS SHALL BE INSPECTED AND CLEANED ON A QUARTERLY BASIS OR AFTER LARGE RAINSTORMS.
  2. ALL CATCH BASINS SHALL BE TREATED WITH MOSQUITO LARVICIDE AS REQUIRED TO PREVENT THE FORMATION OF MOSQUITO BREEDING GROUNDS.
  3. IN CASE OF AN OIL SPILL, CLEAN UP SHOULD BE PERFORMED IMMEDIATELY.
  4. ALL PAVED AREAS ON-SITE ARE TO BE SWEEPED ONCE A MONTH DURING THE LATE SPRING, SUMMER, AND EARLY FALL SEASONS AT A MINIMUM OR AS REQUIRED TO PREVENT SEDIMENT ACCUMULATION.
  5. ALL LANDSCAPED AREAS ARE TO BE MAINTAINED, IN GRASSED AREAS BARE SOIL SHOULD BE RESEEDED WITH GRASS. ALL SOIL AROUND THE PLANTS SHOULD BE MULCHED WITH A MIN. OF 4".
  6. THE COORDINATION OF PARKING LOT SWEEPING WILL BE THE RESPONSIBILITY OF EXXONMOBIL.



**REFERENCE:**

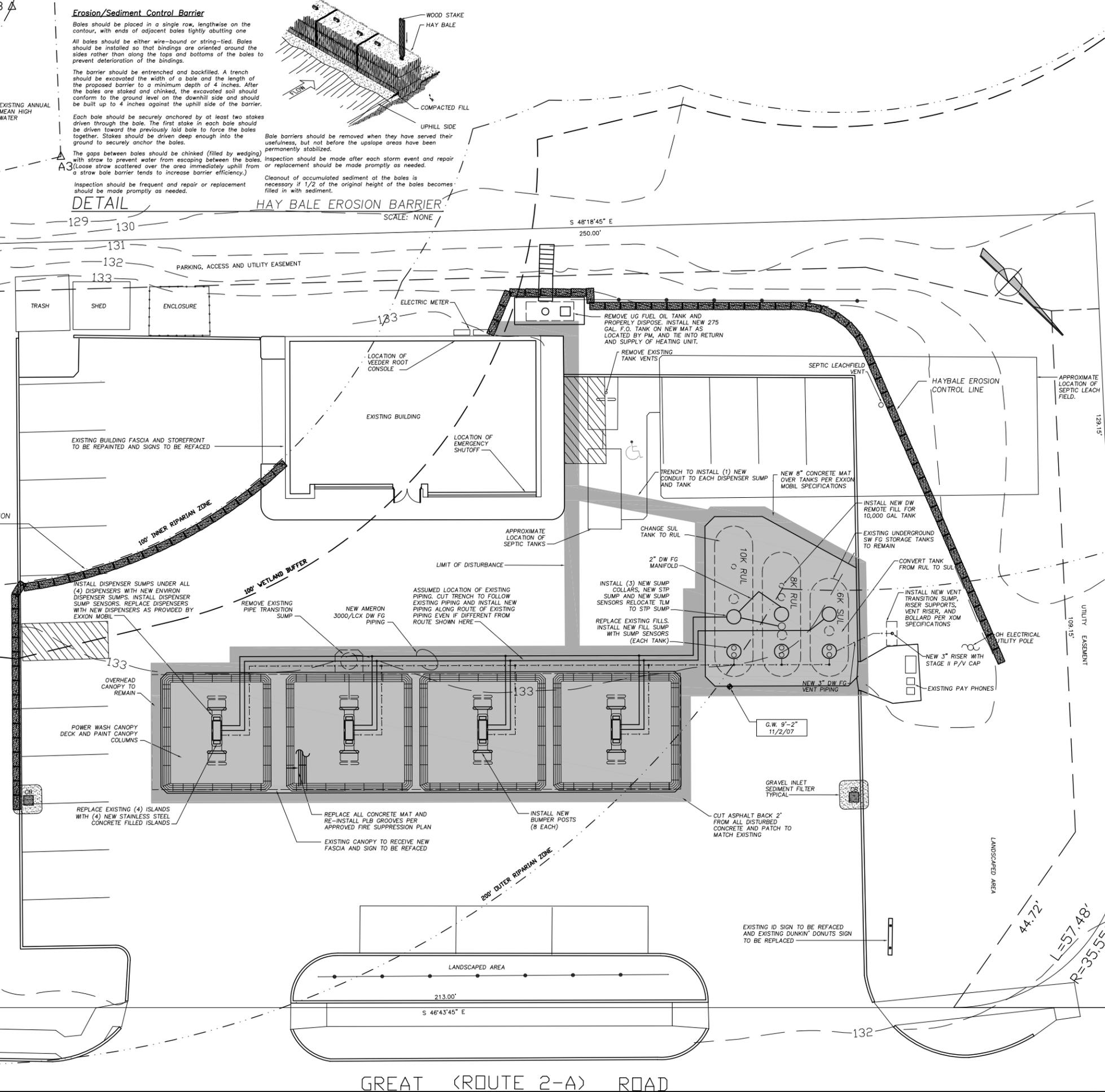
PROPERTY LINES AND OTHER TOPOGRAPHIC INFORMATION SHOWN ON THIS DRAWING WERE TAKEN FROM A PLAN ENTITLED: "PLOT PLAN" PREPARED BY: LANDMARK ENGINEERING & SURVEYING, 583 CHESTNUT STREET, LYNN, MA 01904 PHONE: 781-592-7016, SCALE: 1"=20' DATED: 3/21/08 & "SEPTIC SYSTEM EMERGENCY REPAIR PLAN" PREPARED BY: BOHLER ENGINEERING, P.C., 325 TURNPIKE ROAD, SOUTHBORO, MA 01772, SCALE: 1"=20', DATED: 10/31/01 SITE FIELDING BY AYOUB ENGINEERING ON 11/2/07



Prepared By: [Signature]  
Checked By: [Signature]  
Date: 11/2/07

**SOIL EROSION & SEDIMENT CONTROL PLAN**

44 GREAT ROAD  
ACTON, MA  
Project  
RAS Number  
Design Type  
Building Type / Size  
Building Style  
Blg. Code: Scale: 1"=10'  
Drawn By / Approved By: MW  
Date:  
Issued For: 3/24/08  
Project No:  
3667  
Drawing No.



GREAT (ROUTE 2-A) ROAD