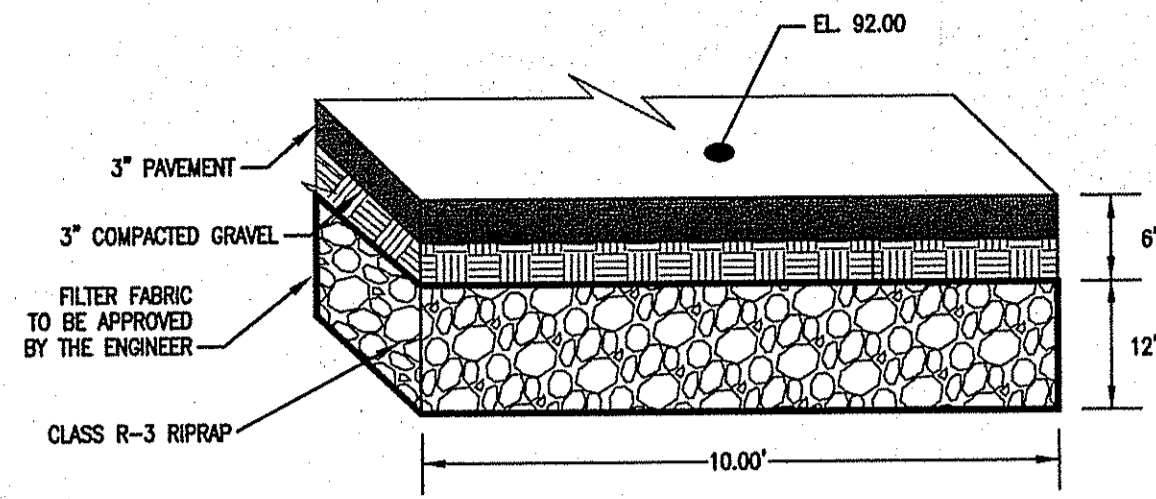
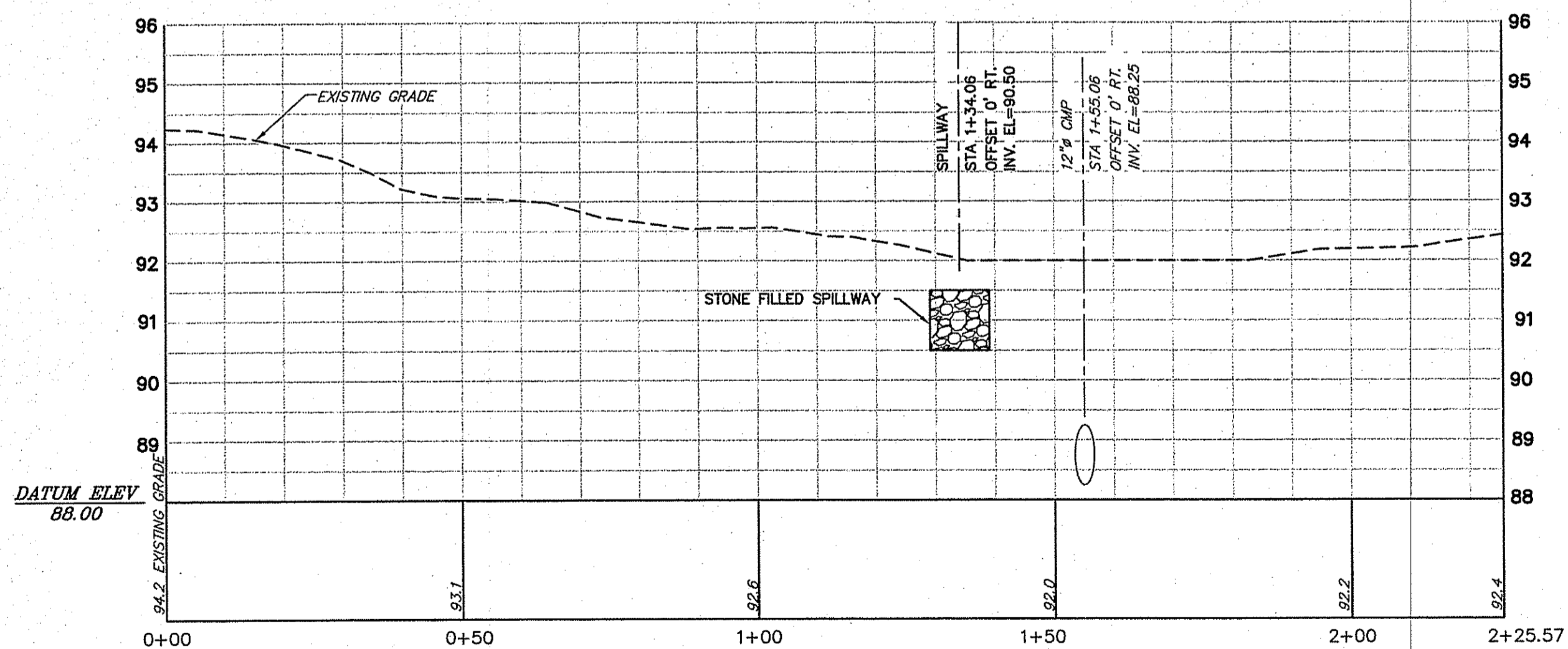
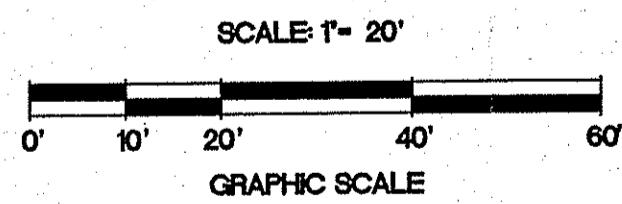
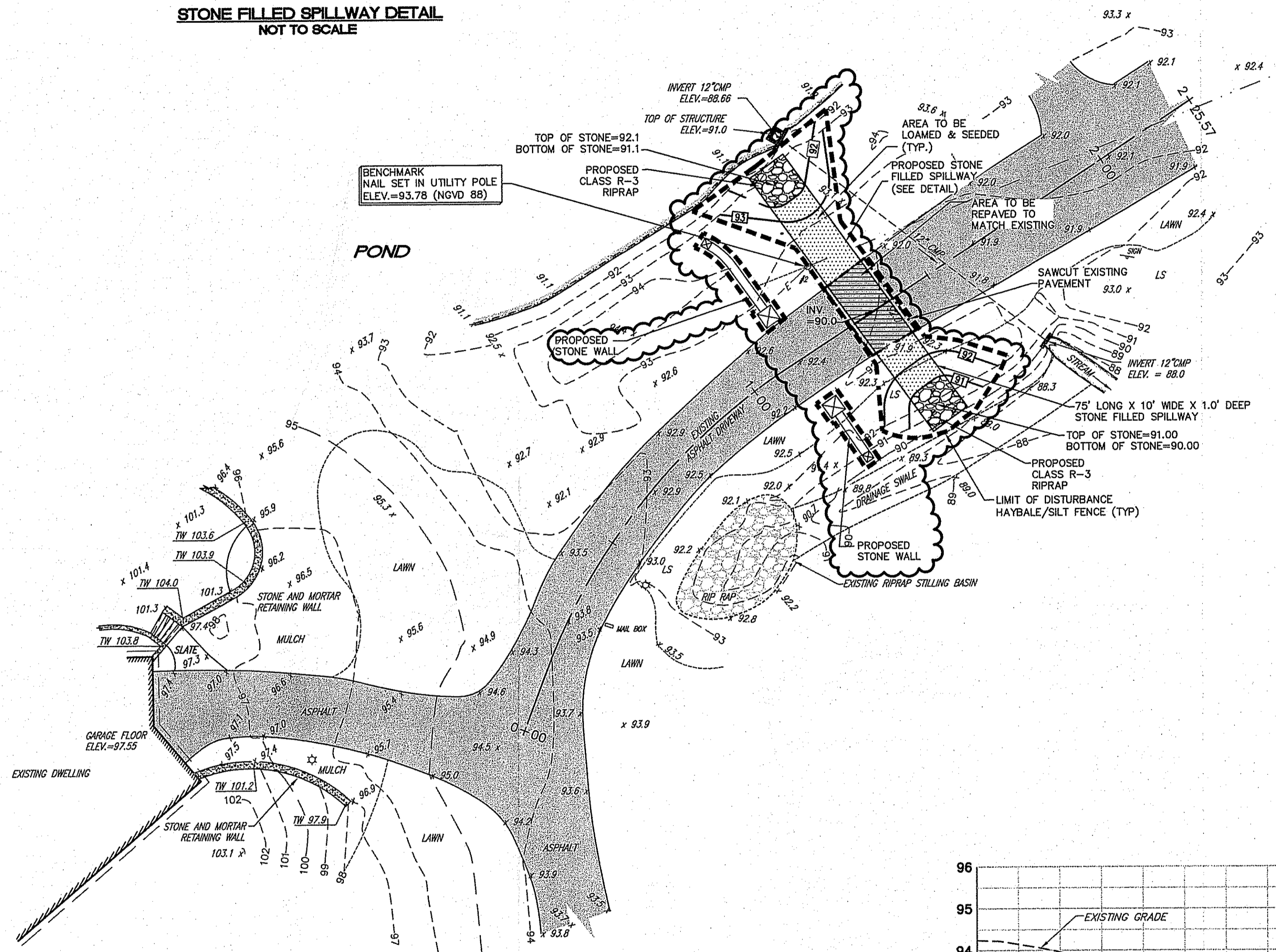


L:\Projects\312-044\352.1660 - 04 Greenwch Dr - East Greenwich\1000 Drive Way\352.1660 WATERSHED PLAN PL_05-12-09.dwg (DISK: Z-1044)

© 2009 JOHN P. CATO CORPORATION



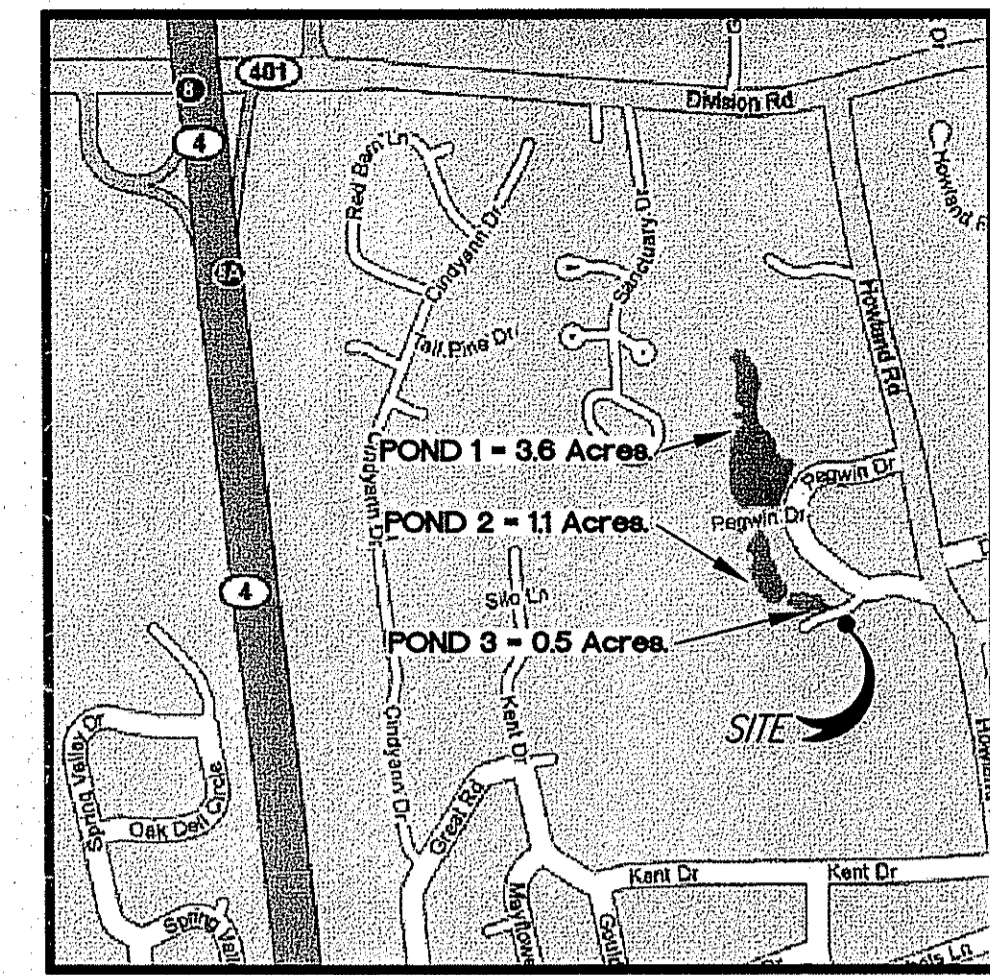
STONE FILLED SPILLWAY DETAIL
NOT TO SCALE



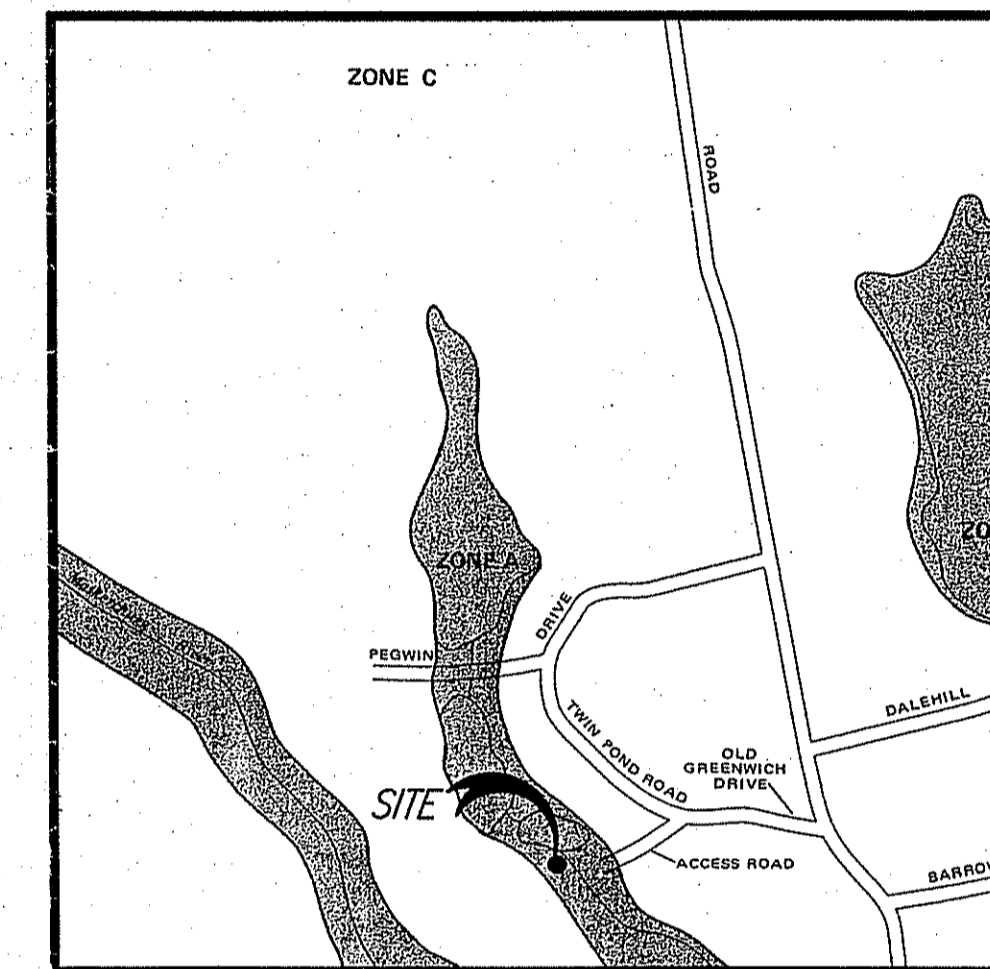
CENTERLINE OF EXISTING DRIVEWAY PROFILE
SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=2'

NOTES:

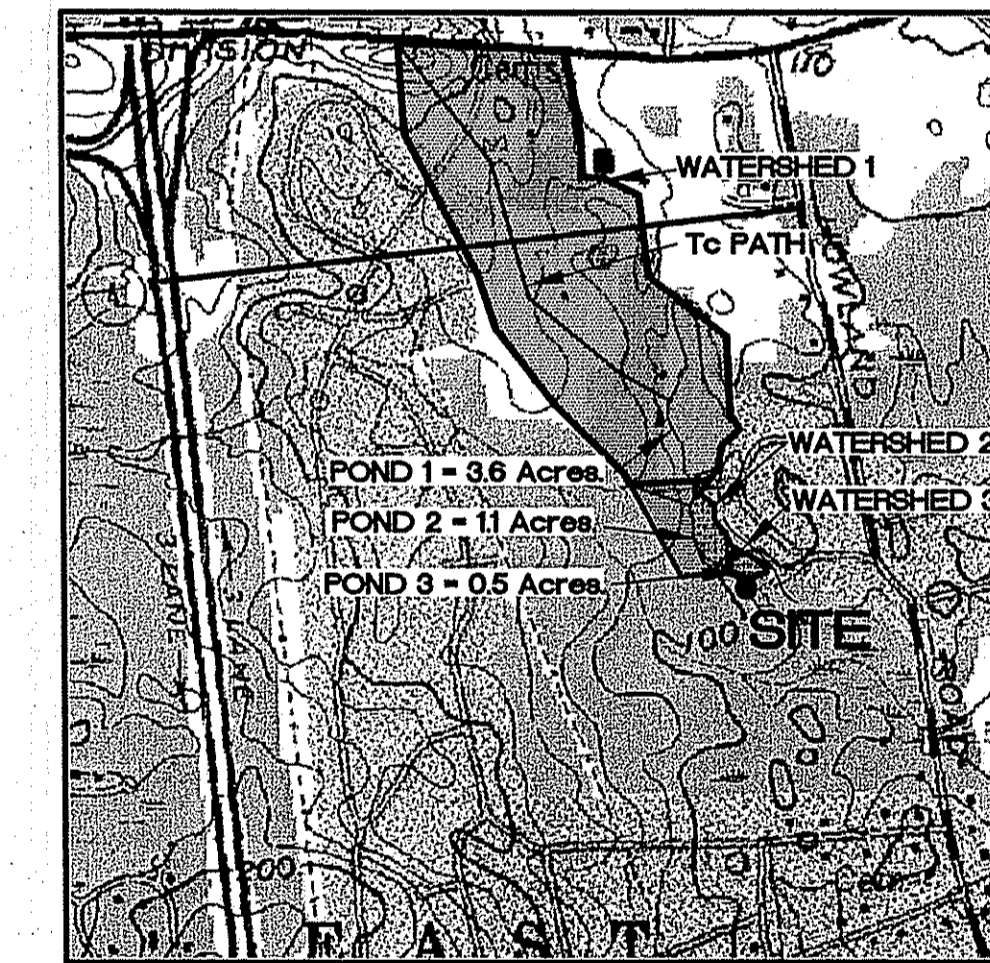
- ALL ELEVATIONS SHOWN HEREON REFER TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1988.
- FEATURES SHOWN REFLECT ACTUAL SITE CONDITIONS AT THE TIME OF SURVEY: NOVEMBER 18, 2008.
- A PORTION OF THE DRIVEWAY IS LOCATED WITHIN ZONE "A" DEFINED BY FEMA AS "AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATION AND FLOOD HAZARD FACTORS NOT DETERMINED"
- SEE SHEET 2 OF 2 FOR WETLAND PLANTINGS.



LOCATION MAP
1"=1000'

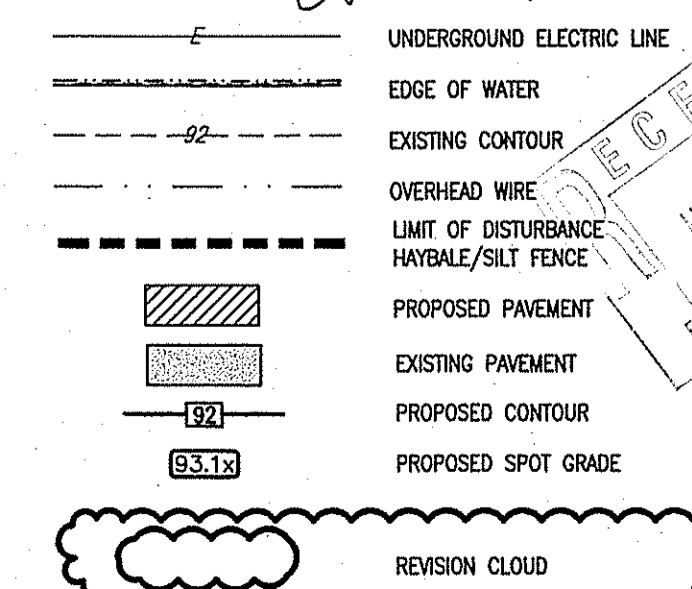


FEMA MAP
SCALE 1"=500'



USGS MAP
SCALE 1"=1000'

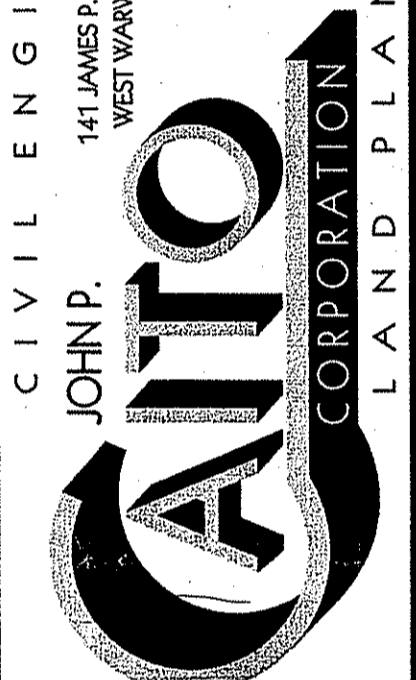
LEGEND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS & NUMBER
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUN 24 2009 FILE # 04-2010
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT ALL TIMES IN ACCORDANCE WITH THE DATE



NO.	DATE	REVISION
1.	05-12-09	ISSUE FOR PERMIT COMMENTS

JOHN P. CATO
No. 498
PROFESSIONAL ENGINEER

CIVIL ENGINEERS
141 JAMES P. MURPHY HIGHWAY
WEST WARWICK, RHODE ISLAND
08893-2888
401-615-9090
FAX: 401-615-8666



PROJECT NO: 352.1660
DATE: MARCH 2009
SCALE: AS NOTED
DESIGNED BY: J.P.C.
DRAWN BY: F.T.
CHECKED BY: J.P.C.

DRIVEWAY IMPROVEMENT PLAN
1000 OLD GREENWICH DRIVE
ASSESSORS PLAT 10 LOT 123
EAST GREENWICH
RHODE ISLAND
PREPARED FOR
THE JAN COMPANIES

DRAWING NUMBER
1
SHEET 1 OF 2

GENERAL NOTES:

- 1. THE STATE OF RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION, AND THE RHODE ISLAND STANDARD DETAILS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO. THE 2004 REVISION OF THE STANDARD SPECIFICATIONS MAY BE OBTAINED AT THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION, DIVISION OF PUBLIC WORKS. IN ADDITION, THE TOWN OF EAST GREENWICH STANDARD SPECIFICATIONS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO.
2. LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CHECK AND VERIFY LOCATIONS OF ALL EXISTING UTILITIES BOTH UNDERGROUND AND OVERHEAD. ANY DAMAGE TO EXISTING UTILITIES AS SHOWN OR NOT SHOWN ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE BORNE BY THE CONTRACTOR. NO EXCAVATION SHALL BE DONE UNTIL ALL INVOLVED UTILITY COMPANIES ARE NOTIFIED 48-HOURS IN ADVANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY DIG-SAFE (1-888-344-7233) A MINIMUM OF 48 WORKING HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF ANY EXCAVATION AND/OR BLASTING WORK. THE NAME OF THE COMPANY PERFORMING THE EXCAVATION AND/OR BLASTING WORK MUST BE SUPPLIED TO DIG-SAFE, IF IT IS DIFFERENT FROM THE CALLER.
3. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE STATE OF RHODE ISLAND, FEDERAL GOVERNMENT, AND THE TOWN OF EAST GREENWICH PRIOR TO COMMENCING ANY WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROLS.
5. STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS, WETLAND, OR ADJACENT TO DRAINAGE STRUCTURES.
6. ALL MATERIAL FOR FILL SHALL BE CLEAN AND FREE OF MATTER WHICH COULD POLLUTE ANY DOWN STREAM WATERCOURSE.
7. FILL MATERIAL SHALL BE COMPACTED IN ONE FOOT (MAXIMUM) LIFTS TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D-1557 (MODIFIED PROCTOR TEST).
8. CONTRACTOR SHALL PROVIDE OWNER WITH A COMPLETE SET OF AS-BUILT DRAWINGS OF ALL INFRASTRUCTURE. AS-BUILT DRAWINGS SHALL BE CERTIFIED BY A RHODE ISLAND LICENSED PROFESSIONAL LAND SURVEYOR OR PROFESSIONAL ENGINEER.
9. WORK SHOWN ON THE PLANS FOR WHICH THERE ARE NO PARTICULAR DETAILS OR SPECIFICATIONS DOES NOT RELIEVE THE CONTRACTOR FROM FINISHING AND INSTALLING THE WORK. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS AND INSPECT THE SITE, AND THE BID PRICE SHALL INCLUDE ALL SERVICES AND MATERIALS AS NECESSARY TO COMPLETE THE PROJECT. ANY CHANGES TO THE PROJECT OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR DETAIL OR SPECIFICATION WAS PROVIDED MUST BE REVIEWED BY AND ACCEPTABLE TO THE ENGINEER.
10. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES 2003 INCLUDING ALL REVISIONS.
11. VERTICAL DATUM: MEAN SEA LEVEL (NGVD 1988).

EROSION CONTROL and SOIL STABILIZATION PROGRAM:

- 1. DENUDED SLOPES SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME.
2. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15, SHALL BE SEEDED OR PROTECTED BY THAT DATE FOR ANY WORK COMPLETED DURING EACH CONSTRUCTION YEAR.
3. 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, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
4. HAY OR STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 2000 LBS/ACRE.
5. ALL HAYBALES OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
6. 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 RHODE ISLAND STANDARD SPECIFICATION M.18.02.
7. THE SEED MIX SHALL BE INOCULATED WITHIN TWENTY FOUR (24) HOURS, BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
8. THE DESIGN MIX FOR TEMPORARY EROSION CONTROL AND SOIL STABILIZATION SHALL BE COMPRISED OF THE FOLLOWING:
TYPE % BY WEIGHT
CREEPING RED FESCUE 70
ASTORIA BENTGRASS 5
BIRDSFOOT TREEFOIL 15
PERENNIAL RYEGRASS 10
APPLICATION RATE 100 LBS/ACRE
LIMING AND FERTILIZING AS REQUIRED TO COMPLIMENT OR UPGRADE EXISTING CONDITIONS.

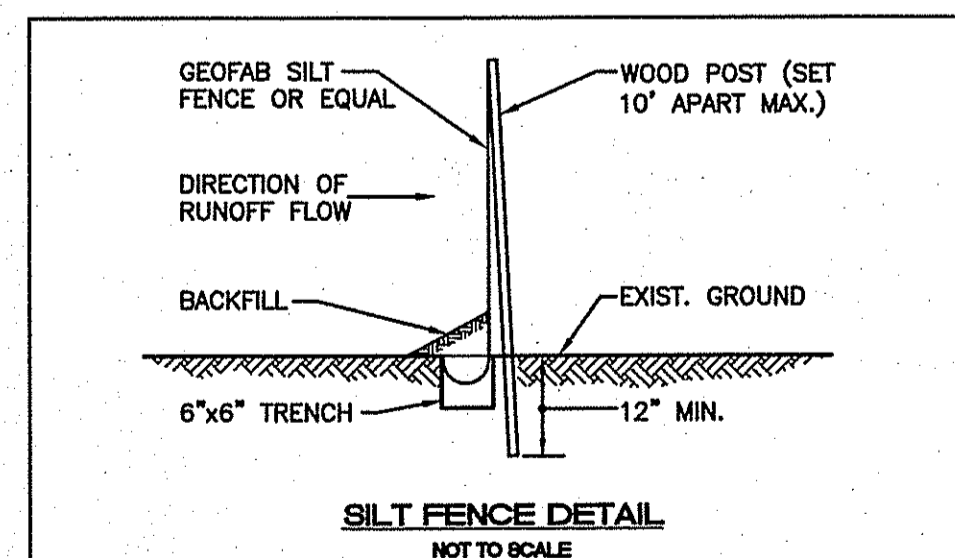
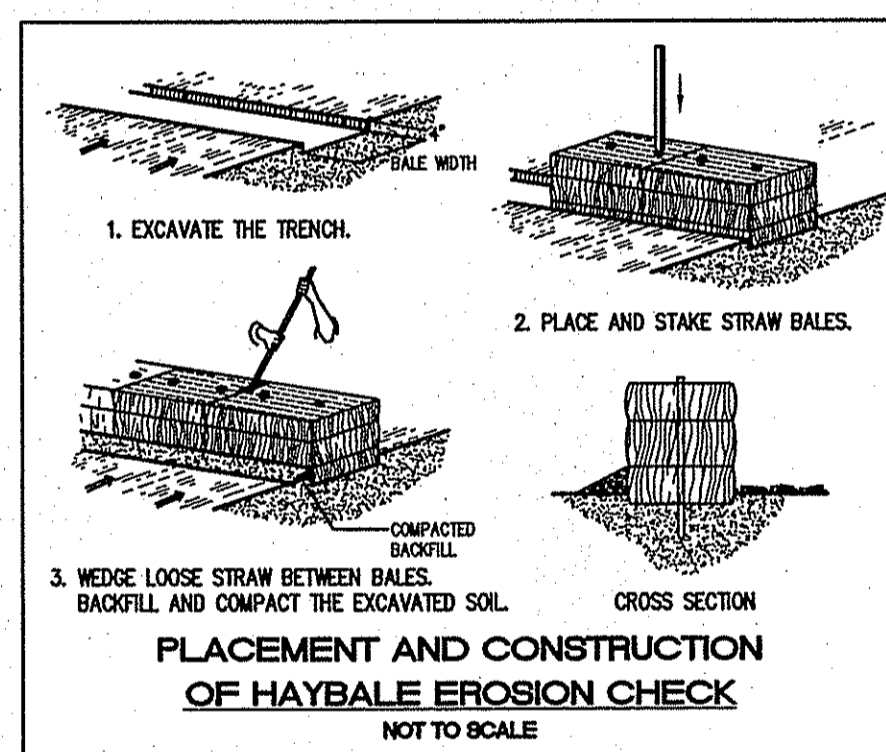
- 9. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE (1) YEAR, AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE.
10. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH.
11. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
12. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS OR FLOOD PLAINS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN THIRTY PERCENT (30%) AND STOCKPILES SHALL ALSO BE SEEDED AND/OR STABILIZED AND COMPLETELY ENCLOSED WITH A CONTINUOUS LINE OF STAKED HAYBALES AND/OR SILTFENCE. (SEE DETAIL)
13. ON BOTH STEEP AND LONG SLOPES, CONSIDERATION SHOULD BE GIVEN TO "CRIMPING" OR "TRACKING" TO TACK DOWN MULCH APPLICATIONS.
14. REFERENCE THE "R.I. STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, SEPTEMBER 1, 1993", PREPARED BY RIDEM & GRMC.

SEDIMENTATION CONTROL PROGRAM:

- 1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY SEDIMENTS FROM ENTERING PROPERTIES.
2. BANKS OR SLOPES OVER 5% SHALL BE SEEDED AS SOON AS POSSIBLE AND SHALL BE PROTECTED WITH A HAY, STRAW OR FIBER MULCH.
3. DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL.
4. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL.
5. CARE SHALL 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 SUBJECTED TO STORM WATER FLOW.
6. ADDITIONAL HAYBALES, SILT FENCE OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
7. REFERENCE THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1989, AS A GUIDE.

MAINTENANCE AND REPAIR NOTES FOR STONE FILLED SPILLWAY

- 1. THE TRENCH-FILLED SPILLWAY AND THE EXISTING 12-INCH CULVERT SHALL BE KEPT FREE OF DEBRIS AT ALL TIMES. NO TOPSOIL OR MATERIAL OTHER THAN SPECIFIED SHALL BE PLACED ON THE EXPOSED ENDS OF THE STONE-FILLED SPILLWAY.
2. THE STONE-FILLED SPILLWAY SHALL BE INSPECTED FOR DAMAGES ON AN ANNUAL BASIS. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
3. THE DRIVEWAY SHALL BE INSPECTED ANNUALLY TO DETERMINE IF IT IS SETTLING AS A RESULT OF THE INSTALLED STONE-FILLED SPILLWAY.
4. FOLLOWING COMPLETION OF CONSTRUCTION/SITE STABILIZATION AND ACCEPTANCE BY THE ENGINEER AND THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, THE OWNER OF A.P. 10 LOT 123 SHALL ASSUME LONG-TERM RESPONSIBILITY FOR THE DRAINAGE STRUCTURES AND ASSOCIATED APPURTENANCES SHOWN ON THESE PLANS.



- INSTALLATION SEQUENCING:
1. DIG TRENCH 6" DEEP.
2. SET FENCE POST 10' APART MAX. AT SLIGHT ANGLE TOWARD RUNOFF DIRECTION.
3. ATTACH GEOFAB TO POST.
4. LOWER 6" OF GEOFAB IN TRENCH CURLED TOWARD RUNOFF DIRECTION & BACKFILL.
5. FENCE TO BE INSTALLED AS INDICATED ON THE SITE PLAN OR AS DIRECTED BY THE ENGINEER.

NOTE: SILT FENCE IS AN ACCEPTABLE ALTERNATE TO THE PLACEMENT OF STAKED HAYBALES AS SHOWN ON THE SITE PLANS.

LANDSCAPE NOTES:

- 1. THE CONTRACTOR SHALL INSTALL ALL PLANT MATERIAL IN CONFORMANCE WITH THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
2. ALL PLANT MATERIAL SHALL MEET THE AMERICAN OF NURSERYMEN STANDARDS FOR NURSERY STOCK, LATEST EDITION, AND ITS AMENDMENTS. PLANT ONLY DURING SEASONS NORMAL TO THE PARTICULAR VARIETY. NO SUBSTITUTIONS SHALL BE ACCEPTED WITHOUT PRIOR APPROVAL BY THE LANDSCAPE ARCHITECT.
3. ALL PLANT MATERIAL FURNISHED BY THE CONTRACTOR SHALL BE INSTALLED AS SHOWN IN DETAILS AND SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR. IF THE FIRST YEAR ENDS DURING THE DORMANT PERIOD, THE GUARANTEE SHALL EXTEND TO THE START OF THE NEXT LEAFING. DURING THE ONE-YEAR GUARANTEE PERIOD THE CONTRACTOR SHALL EMPLOY ACCEPTED HORTICULTURAL PRACTICES TO KEEP THE PLANTS INSTALLED IN LIVING, HEALTHY CONDITION. FOLLOWING THE ONE-YEAR GUARANTEE PERIOD THE OWNER/OWNERS SHALL INSPECT ALL PLANT MATERIAL FOR HEALTHY ORNAMENTAL QUALITY. AT THAT TIME SHOULD ANY PLANT MATERIAL BE FOUND IN INADEQUATE HEALTH THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE THE PLANT IN KIND AND PROVIDE A ONE-YEAR GUARANTEE FOR THE REPLACEMENT PLANT.
4. STAKE ALL TREES OVER 5' AS SHOWN ON DETAILS. REMOVE STAKES AT THE END OF THE GUARANTEE PERIOD.
5. PRUNING: THE CONTRACTOR SHALL CAREFULLY PRUNE BRANCHES IN THE WAY OF CONSTRUCTION BY USING ONLY APPROVED METHODS AND TOOLS. THE USE OF AXES FOR TRIMMING OR SPURS FOR CLIMBING WILL NOT BE PERMITTED.
6. TYPE AND QUANTITY OF WETLAND PLANTINGS AS RECOMMENDED BY NATURAL RESOURCE SERVICES, INC.

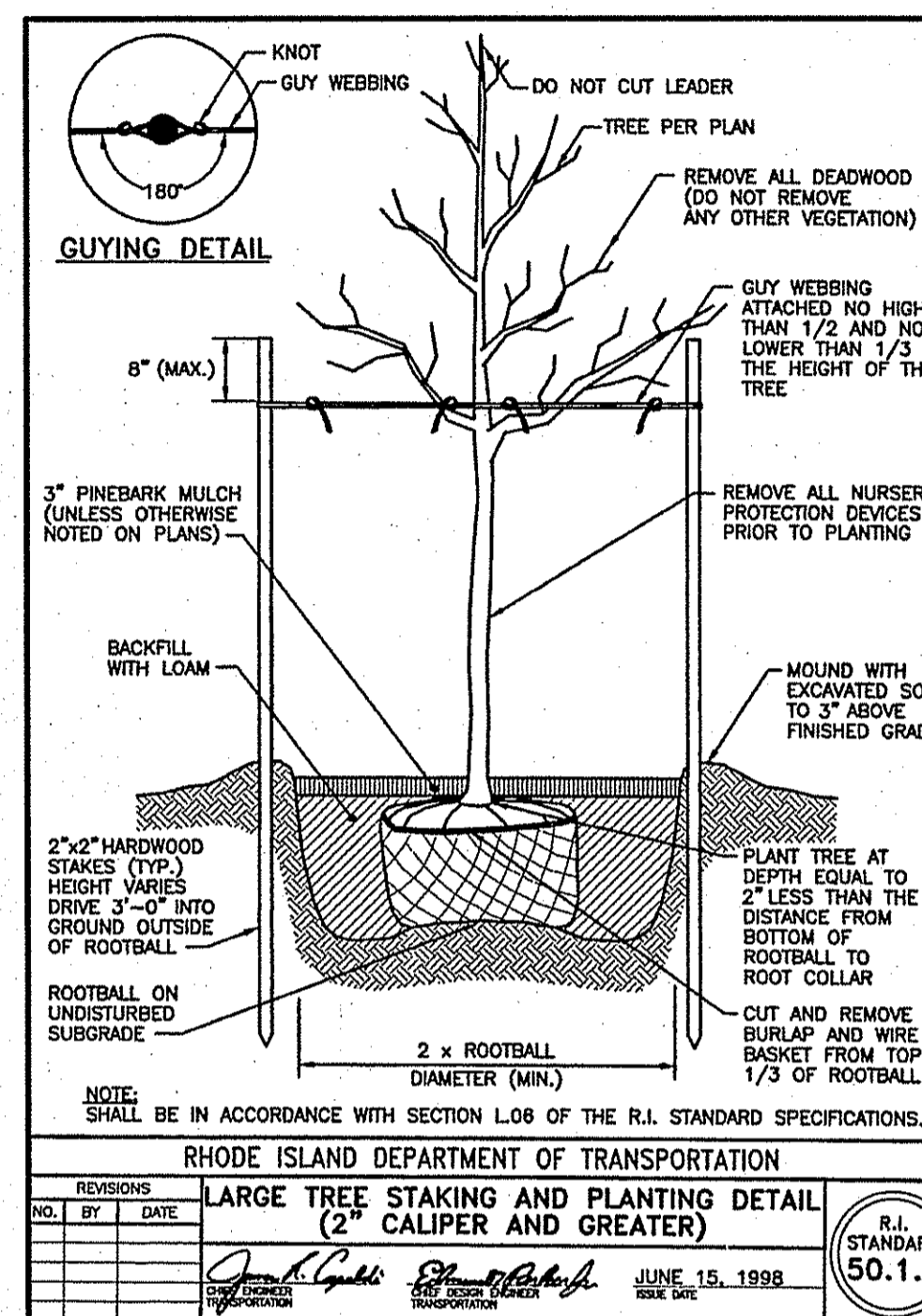
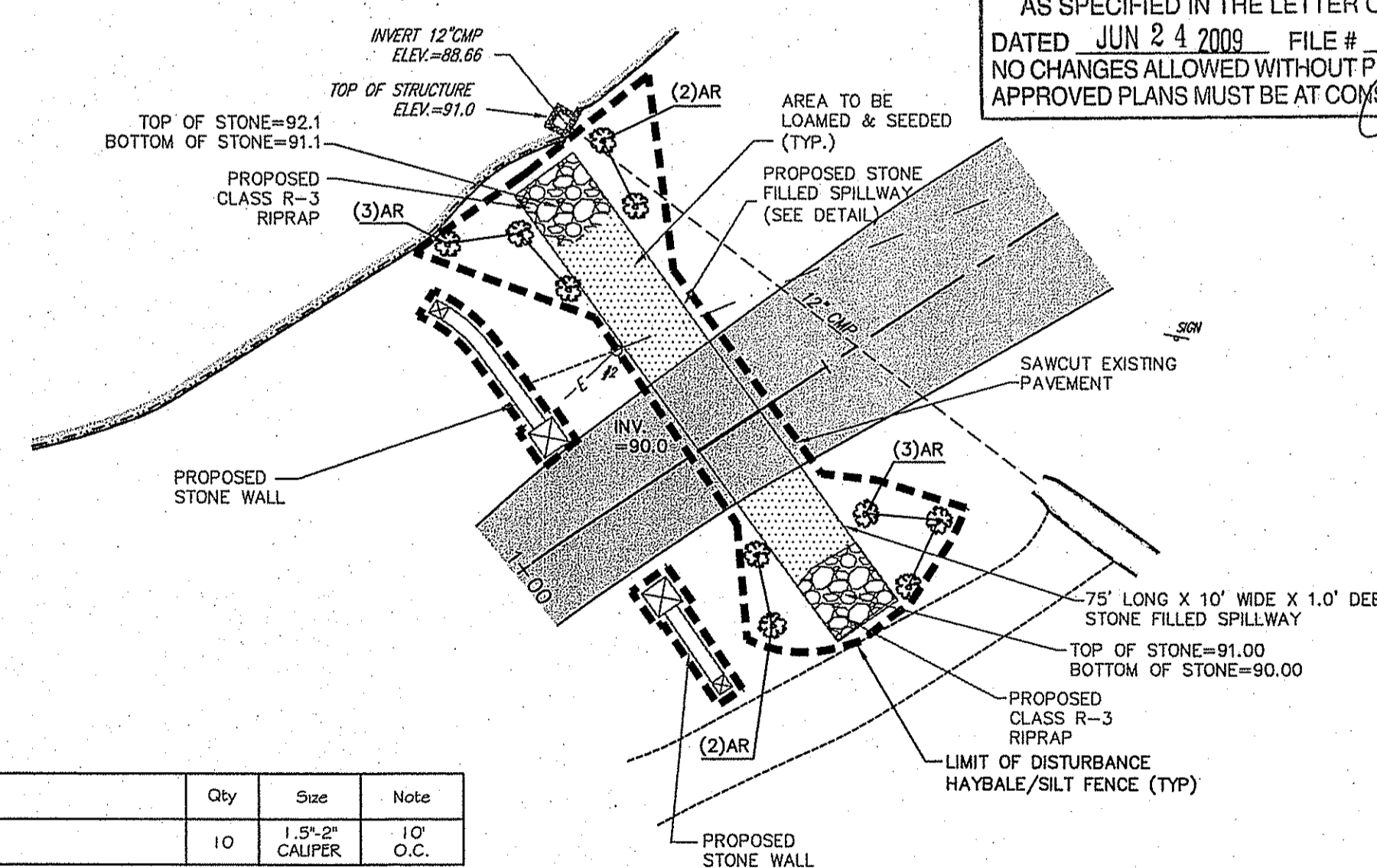
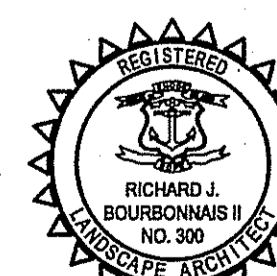


Table with columns for Revisions (No., By, Date) and a title block for 'LARGE TREE STAKING AND PLANTING DETAIL (2" CALIPER AND GREATER)' dated June 15, 1998, by Richard J. Bourbonnais II, RLA, PE. It also includes a reference to R.I. Standard 50.1.0.



PLANT LIST:

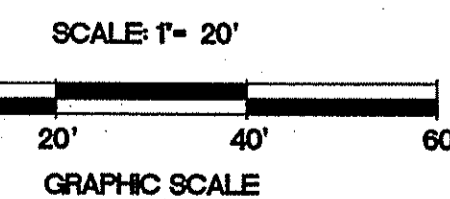
Table with columns: Key, Botanical Name, Common Name, Qty, Spac, Note. It lists Acer rubrum (Red Maple) with a quantity of 10 and spacing of 1.5x2' CAUPEP.



LANDSCAPE SPECIFICATION PLAN PREPARED BY: RICHARD J. BOURBONNAIS, II, RLA, PE LICENSE NUMBER: 300 COA NUMBER: LA20, 133

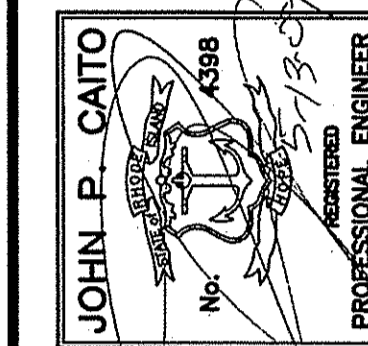
RICHARD J. BOURBONNAIS, II, RLA, PE

LANDSCAPE SPECIFICATION PLAN



Legend table with symbols for Revision Cloud and Proposed Wetland Planting.

Revision table with columns for No., Date, and Description. It shows one revision dated 05-12-09.



CIVIL ENGINEERS JOHN P. CAITO CORPORATION LAND PLANNERS 141 JAMES P. MURPHY HIGHWAY WEST WARWICK, RHODE ISLAND 02893-8388 401-515-8600 401-515-8606

PROJECT NO: 3521660 DATE: MARCH 2009 SCALE: AS SHOWN DESIGNED BY: J.P.C. DRAWN BY: F.T. CHECKED BY: J.P.C.

GENERAL NOTES and DETAILS 1000 OLD GREENWICH DRIVE ASSESSORS PLAT 10 LOT 123 EAST GREENWICH RHODE ISLAND PREPARED FOR JAN COMPANIES

DRAWING NUMBER SHEET 2 OF 2