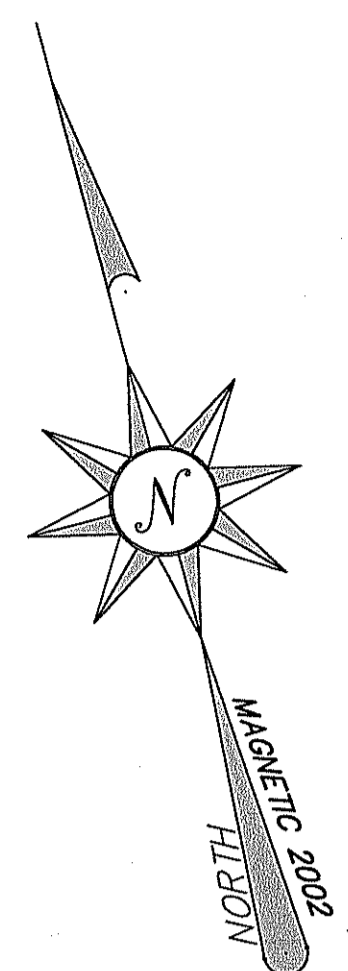
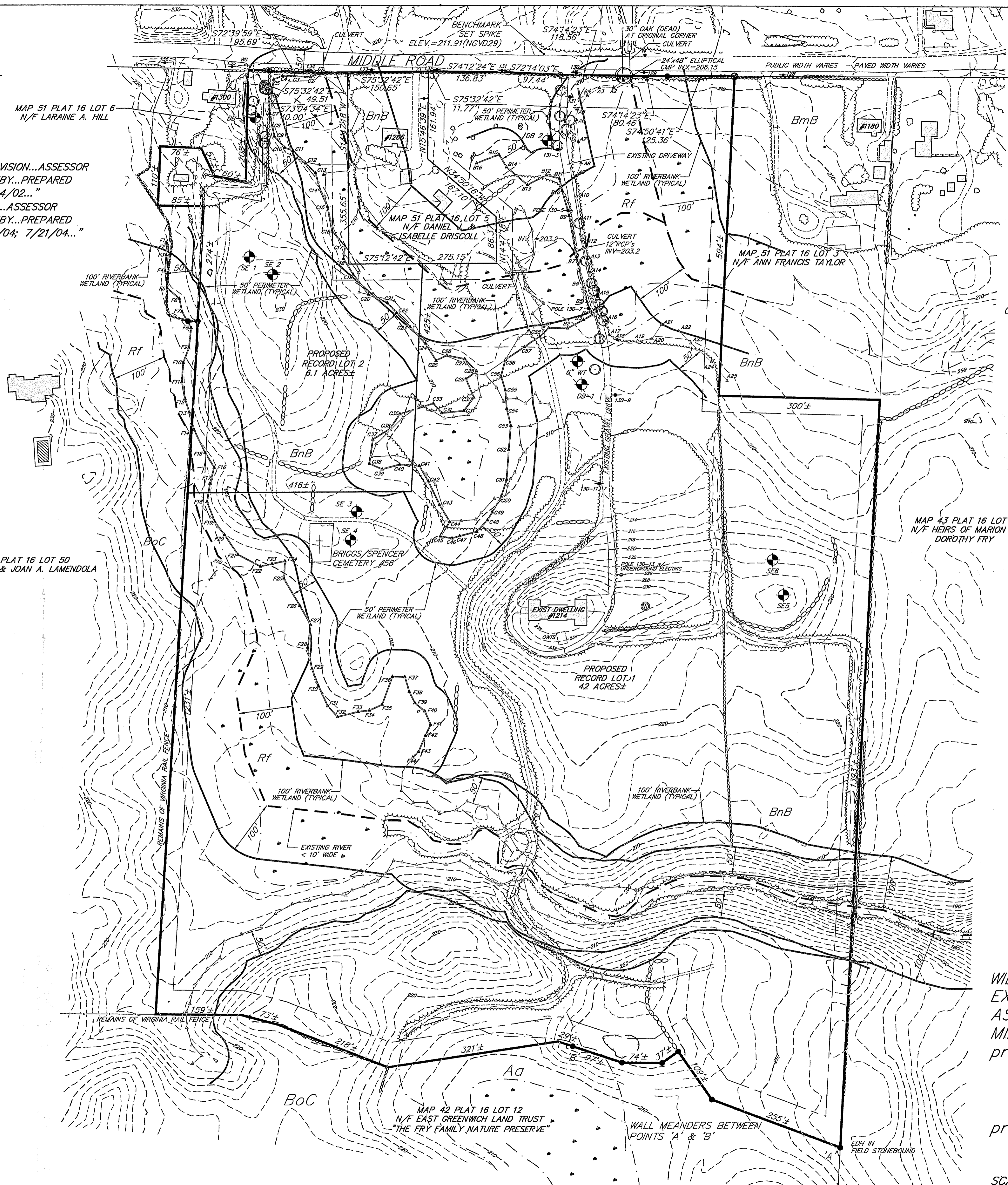


**EASEMENT NOTE:**  
 EXISTING LOT 5 IS SUBJECT TO A RIGHT OF WAY (SEE REFERENCE 3) TO LOT 50 AS FOLLOWS: "...TO JOHN S. SHIPPEE AND HIS HEIRS & ASSIGNS FOREVER, THE RIGHT TO PASS AND REPASS ACROSS LAND HEREBY CONVEYED BY THE CART PATH WHICH RUNS PAST THE HOUSE ON SAID PREMISES". PROPOSED LOT 4 SHALL BE SUBJECT TO THIS RIGHT OF WAY.

- REFERENCES:**
1. L.E. 112, Pg. 825; LOT 4
  2. L.E. 133, Pg. 652; LOT 5
  3. L.E. 21, Pg. 505; RIGHT OF WAY
  4. RECORD PLAT 707, "WILLOUGHBY PLAT No. 2 ADMINISTRATIVE SUBDIVISION...ASSESSOR PLAT 16A, LOTS 4 & 5...PREPARED FOR ALAN & JANE W. WILLOUGHBY...PREPARED ALPHA ASSOCIATES...SCALE 1" = 100... MARCH, 2002; REVISED 5/14/02..."
  5. RECORD PLAT 751, "WILLOUGHBY PLAT ADMINISTRATIVE SUBDIVISION...ASSESSOR PLAT 16A, LOTS 4 & 5...PREPARED FOR ALAN & JANE W. WILLOUGHBY...PREPARED ALPHA ASSOCIATES...SCALE 1" = 100... JUNE, 2004; REVISED 7/14/04; 7/21/04..."

**DEM NOTE:**  
 REFER WETLAND APPLICATION No. 16-0234



**LEGEND**

	EXISTING STONE WALL
	EXISTING DRILL HOLE
	SET DRILL HOLE
	EXISTING IRON ROD
	EXISTING TREE
	EXISTING TEST HOLE
	EXISTING WELL
	EXISTING UTILITY POLE
	EXISTING WATER GATE
	EXISTING SWAMP
	PREVIOUSLY FLAGGED WETLAND EDGE
	2016 WETLAND EDGE BY NRS
	50' PERIMETER WETLAND
	100' RIVERBANK WETLAND
	RIVER/STREAM LOCATION
	ZONING SETBACK
	EXISTING SOILS BOUNDARY
	EXISTING EDGE ASPHALT
	EXISTING TRAIL-GRAVEL DRIVE
	EXISTING EDGE OF WOODS

**PARCEL OWNER / APPLICANT**  
 JANE W. WILLOUGHBY  
 1214 MIDDLE ROAD  
 EAST GREENWICH, RI 02818  
 P.401.884.3070

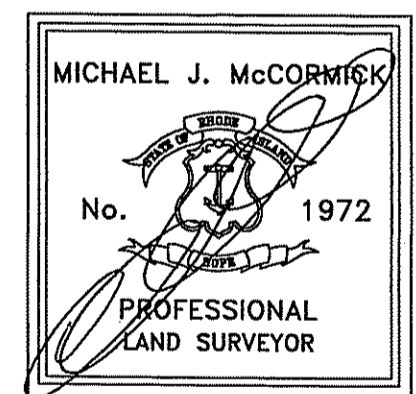
**PARCEL AREA**  
 48.1± ACRES

**PROJECT SURVEYOR**  
 MICHAEL J. McCORMICK, PLS  
 ALPHA ASSOCIATES, LTD.  
 35 ROCKY HOLLOW ROAD  
 EXETER, RI 02822  
 P.401.884.8506

**PROJECT BIOLOGIST**  
 KEVIN FETZER  
 ECOTONES, INC.  
 50 SYLVAN DRIVE  
 EAST GREENWICH, RI 02818  
 P.401.884.0851

**PARCEL ZONING**  
 ZONE 'F1'  
 MINIMUM LOT SIZE 1 Acre  
 MINIMUM FRONTAGE 150'  
 FRONT YARD 60'  
 SIDE YARD 30'  
 REAR YARD 45'

**FLOOD NOTE**  
 ENTIRE PARCEL FALLS IN ZONES 'A' AND 'X' PER FEMA FIRM PANEL 119 OF 251, KENT COUNTY, RHODE ISLAND, MAP NUMBER 44003C0119G, EFFECTIVE DATE DECEMBER 3, 2010



THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

TYPE OF SURVEY:	MEASUREMENT SPECIFICATION:
COMPREHENSIVE BOUNDARY SURVEY	CLASS IV
DATA ACCURACY SURVEY	CLASS III
TOPOGRAPHY SURVEY ACCURACY	CLASS I-4

THE PURPOSE FOR THE CONDUCT OF THE SURVEY IS TO SUBDIVIDE THE EXISTING PARCEL INTO FOUR LOTS AND CREATE A DRIVEWAY AND UTILITY EASEMENT FOR THE PROPOSED LOTS.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 By: MICHAEL J. McCORMICK, PLS  
 RI CDA License No. 1972  
 APPROVED IN THE LETTER OF APPROVAL  
 DATED NOV 22 2016 FILE # 16-0234  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

WILLOUGHBY PLAT No. 3  
 EXISTING CONDITIONS PLAN  
 ASSESSORS PLAT MAP 51 PLAT 16 LOT 4  
 MIDDLE ROAD, EAST GREENWICH  
 prepared for: THE ESTATE OF JANE W. WILLOUGHBY  
 c/o EVE A. CALISE (POA)  
 15 LIBERTY CHURCH ROAD  
 EXETER, RI 02822  
 401.884.3070

prepared by: ALPHA ASSOCIATES, LTD.  
 35 ROCKY HOLLOW ROAD  
 EAST GREENWICH, RI 02818  
 P.401.884.8506 F.401.884.7747  
 SCALE: 1"=100' OCTOBER 18, 2016 SHEET 1 OF 3

Environmental Management  
 NOV 09 2016  
 Office of Water Resources

NO.	DATE	DESCRIPTION	BY

THIS PLAN SHALL BE INDEXED UNDER ADJUTING STREETS:  
 MIDDLE ROAD

**GENERAL NOTE:**  
 THESE PLANS MAY NOT BE MODIFIED FROM THEIR ORIGINAL FORMAT. THESE PLANS MAY NOT BE DISSEMINATED FOR ANY PURPOSE WITHOUT THE CONSENT OF ALPHA ASSOCIATES, LTD. BY ACCEPTING THESE PLANS, THE PROPERTY OWNER / CONTRACTOR AGREES TO ALL ABOVE TERMS

**COPYRIGHT**  
 THESE DRAWINGS ARE THE PROPERTY OF THE SURVEYOR AND HAVE BEEN PREPARED FOR THIS OWNER, FOR THIS PROJECT AT THIS SITE AND ARE NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION OR OWNER WITHOUT WRITTEN CONSENT OF THIS OWNER OR ONE OF ITS DIRECTORS

ALPHA ASSOCIATES, LTD.  
 PROFESSIONAL LAND SURVEYORS  
 35 ROCKY HOLLOW ROAD  
 EAST GREENWICH, RI 02818

Utility connection if necessary  
(see condition No.18 of the Permit)

**GENERAL NOTES**

- PROPERTY LINE AND TOPOGRAPHIC INFORMATION FROM PLANS PREPARED BY ALPHA ASSOCIATES, LTD. ELEVATION DATUM IS NGVD29.
- WETLANDS DELINEATION PERFORMED BY NATURAL RESOURCE SERVICES, INC. WETLAND AND STREAM BANK LOCATION BY ALPHA ASSOCIATES, LTD.
- THERE IS A 100 YEAR FLOOD HAZARD ZONE AS ASSOCIATED WITH THE INTERMITTENT STREAM PER FEMA FLOOD INSURANCE RATE MAP 4403C0119G, DATED DEC. 3, 2010 WITH NO FLOOD ELEVATION ESTABLISHED. AREAS OUTSIDE THIS FLOOD ZONE ARE IN FLOOD HAZARD ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE.
- STRAW BALE, SILT SOCK OR SILT FENCE EROSION CHECKS SHALL BE INSTALLED AT ALL DOWNGRADIENT LIMITS OF DISTURBANCE FOR DRIVEWAY AND SITE DEVELOPMENT PRIOR TO CONSTRUCTION. THE PROPOSED AREA OF DISTURBANCE ON LOT 2 IS 1.5± ACRES. NO SITE DISTURBANCE IS PROPOSED ON LOT 1.
- NEW HOME TO BE SERVICED WITH OVERHEAD ELECTRIC, TELEPHONE & CABLE SERVICES FROM MIDDLE ROAD MOUNTED ON NEW POLES.
- PROPOSED HOME TO BE 4 BEDROOM, TWO STORY WITH TWO CAR GARAGE, SERVICED BY PRIVATE WELL AND O.W.T.S.
- PROPOSED DRIVEWAYS SHALL BE PRIVATE. NEW DRIVEWAY SHALL BE 12' WIDE WIDE CRUSHED STONE. EXISTING DRIVEWAY SHALL NOT BE MODIFIED.
- ALL NEW ROOF RUNOFF SHALL BE PIPED TO BIO-RETENTION AREAS. RUNOFF FROM PAVED DRIVEWAY AREA AT NEW HOME SHALL BE DIRECTED TO BIO-RETENTION AREA.
- A DEM FRESHWATER WETLANDS PERMIT WILL BE REQUIRED FOR LOT 2. ALL SITE WORK SHALL COMPLY WITH THE REQUIREMENTS OF THIS PERMIT.
- A DEM O.W.T.S PERMIT WILL BE REQUIRED FOR LOT 2.
- NO DISTURBANCE IS ALLOWED WITHIN JURISDICTIONAL WETLANDS EXCEPT THAT SPECIFICALLY SHOWN ON THE PLANS FOR THE DRIVEWAY ENTRANCE.

**EXISTING ZONING DATA**

ZONE: RESIDENTIAL F1  
 MIN. LOT AREA: 43,560 S.F.  
 MIN. FRONTAGE/WIDTH: 150'  
 MIN. YARDS: FRONT 30'  
 SIDE 30'  
 REAR 45'  
 MAX. STRUCTURE HEIGHT: 35'  
 MAX. COVERAGE, STRUCTURE: 25%  
 MAX. COVERAGE, PAVEMENT: 60%  
 MIN. BUILDABLE AREA: 16,886 S.F.

Environmental Management  
 NOV 09 2016  
 Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED NOV 22 2016 FILE # 11-0231  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PARCEL AREA  
 48.1± ACRES

PARCEL OWNER / APPLICANT  
 ESTATE OF JANE W. WILLOUGHBY  
 1214 MIDDLE ROAD  
 EAST GREENWICH, RI 02818  
 P.401.884.3070  
 EVE W. CALISE (POA)  
 15 LIBERTY CHURCH ROAD  
 EXETER, RI 02822  
 P.401.295.5801

**LEGEND**

- EXIST. STONE WALL
- EXIST. UTILITY POLE
- PROP. UTILITY POLE
- 210--- EXIST. CONTOUR
- 220--- PROP. CONTOUR
- W --- WATER LINE
- EXIST. TREE LINE
- SE 3 --- SOIL EVALUATION TH
- EDGE OF RIVER
- FLAGGED WETLAND EDGE
- 100--- LIMIT OF FLOODWAY
- PW--- 50' PERIMETER WETLAND
- RBW--- 100' RIVERBANK WETLAND
- LOD --- LIMIT OF DISTURBANCE
- RD --- PROP. ROOF DRAIN
- PROP. RET. WALL

REVISION	DATE	DESCRIPTION
	10-18-16	DRIVEWAY, LIMIT OF DISTURBANCE & OVERHEAD UTILITIES

SCOTT F. MOOREHEAD  
 REGISTERED PROFESSIONAL ENGINEER

APPLICANT & OWNER:  
 ESTATE OF JANE W. WILLOUGHBY  
 C/O EVE A. CALISE  
 1214 MIDDLE ROAD  
 EAST GREENWICH, RI 02818  
 401-884-3070

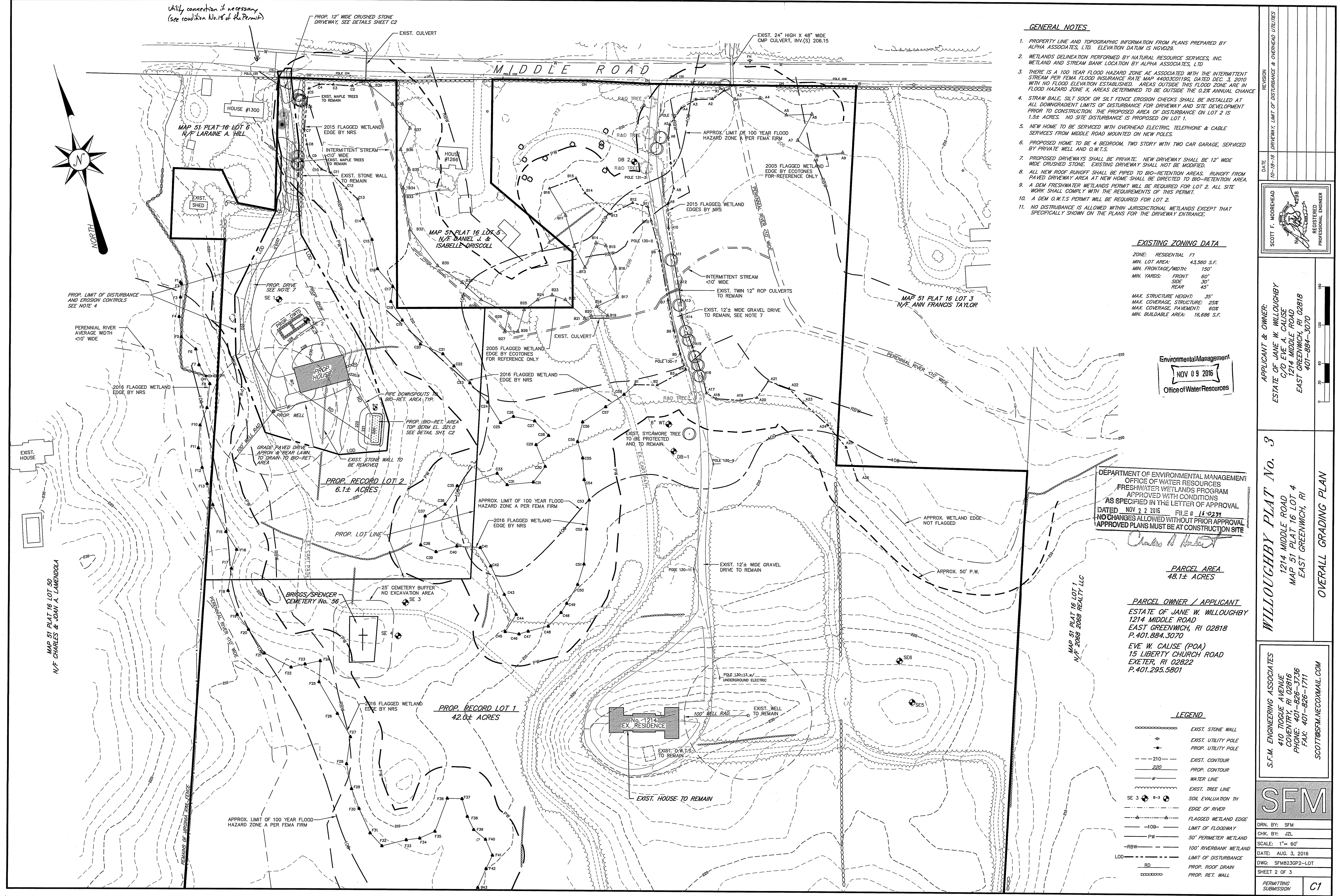
WILLOUGHBY PLAT No. 3  
 1214 MIDDLE ROAD  
 MAP 51 PLAT 16 LOT 4  
 EAST GREENWICH, RI

OVERALL GRADING PLAN

S.F.M. ENGINEERING ASSOCIATES  
 410 TIGOE AVENUE  
 COVENTRY, RI 02816  
 PHONE: 401-826-3736  
 FAX: 401-826-1771  
 SCOTT@SFM.NECOMAIL.COM

DRN. BY: SFM  
 CHK. BY: JZL  
 SCALE: 1" = 60'  
 DATE: AUG. 3, 2016  
 DWG: SFMB23GP2-LOT  
 SHEET 2 OF 3

PERMITTING SUBMISSION



MAP 51 PLAT 16 LOT 50  
 N/F CHARLES & JOAN A. LAMENDOLA

MAP 51 PLAT 16 LOT 1  
 N/F 2068 2068 REALTY LLC

MAP 51 PLAT 16 LOT 6  
 N/F LARAINA A. HILL

MAP 51 PLAT 16 LOT 5  
 N/F DANIEL L. &  
 ISABELLE DRISCOLL

MAP 51 PLAT 16 LOT 3  
 N/F ANN FRANCIS TAYLOR

PROP. RECORD LOT 2  
 6.1± ACRES

PROP. RECORD LOT 1  
 42.0± ACRES

No. 1214  
 EX. RESIDENCE

BRIGGS/SPENCER  
 CEMETERY No. 56

EXIST. SHED

HOUSE #1266

HOUSE #1300

EXIST. HOUSE TO REMAIN

EXIST. WELL TO REMAIN

EXIST. 12'± WIDE GRAVEL DRIVE TO REMAIN

2016 FLAGGED WETLAND EDGE BY NRS

2016 FLAGGED WETLAND EDGE BY NRS

2015 FLAGGED WETLAND EDGES BY NRS

2005 FLAGGED WETLAND EDGE BY ECOTONES FOR REFERENCE ONLY

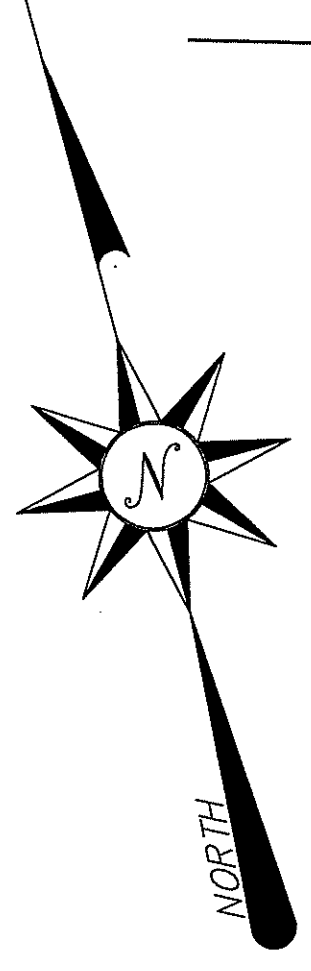
APPROX. LIMIT OF 100 YEAR FLOOD HAZARD ZONE A PER FEMA FIRM

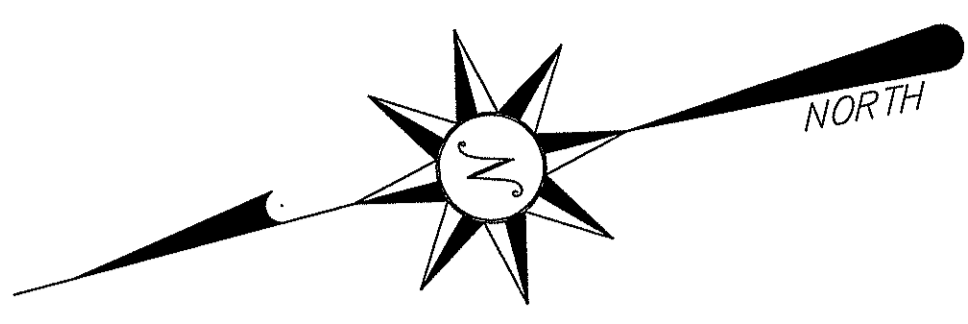
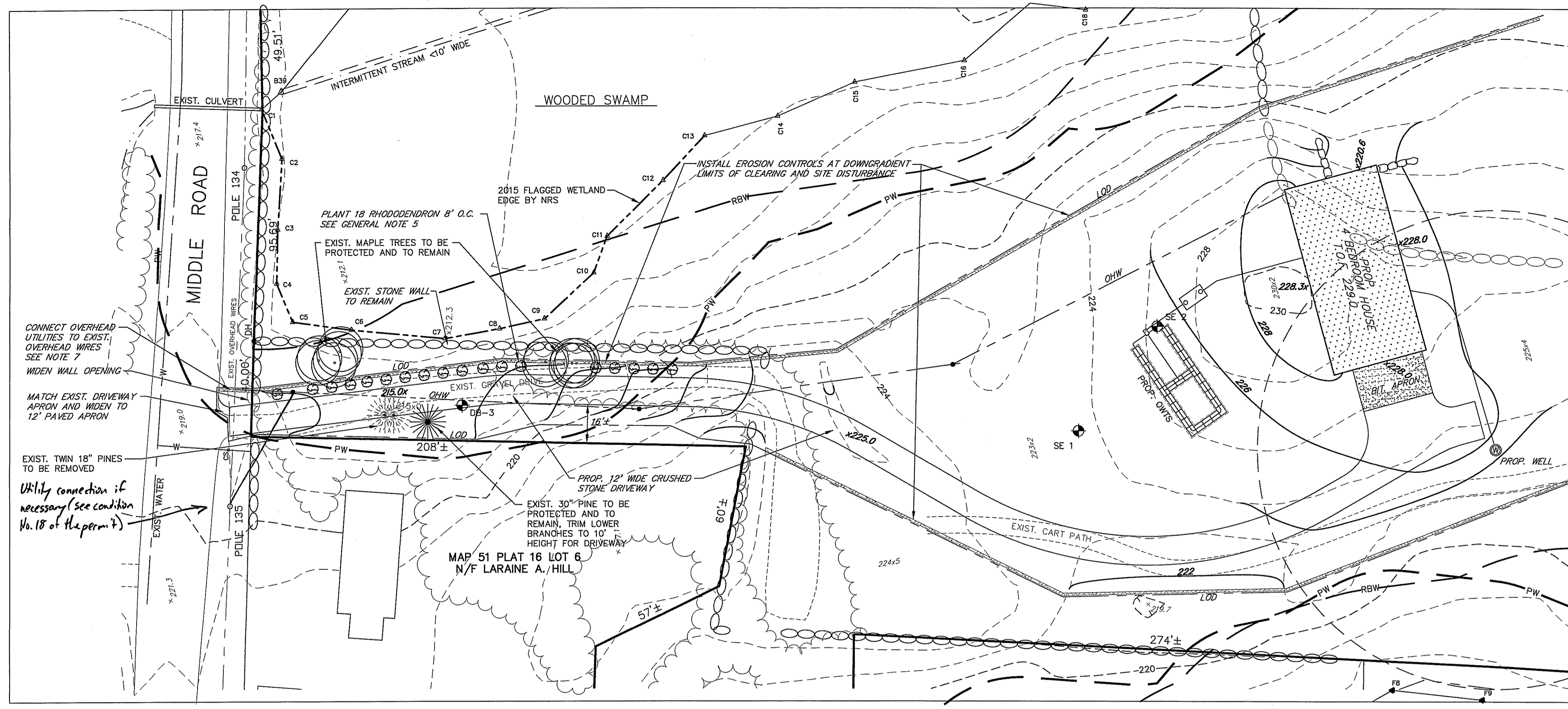
EXIST. 24" HIGH X 48" WIDE CMP CULVERT, INV.(S) 206.15

EXIST. CULVERT

PROP. 12' WIDE CRUSHED STONE DRIVEWAY, SEE DETAILS SHEET C2

Utility connection if necessary (see condition No.18 of the Permit)





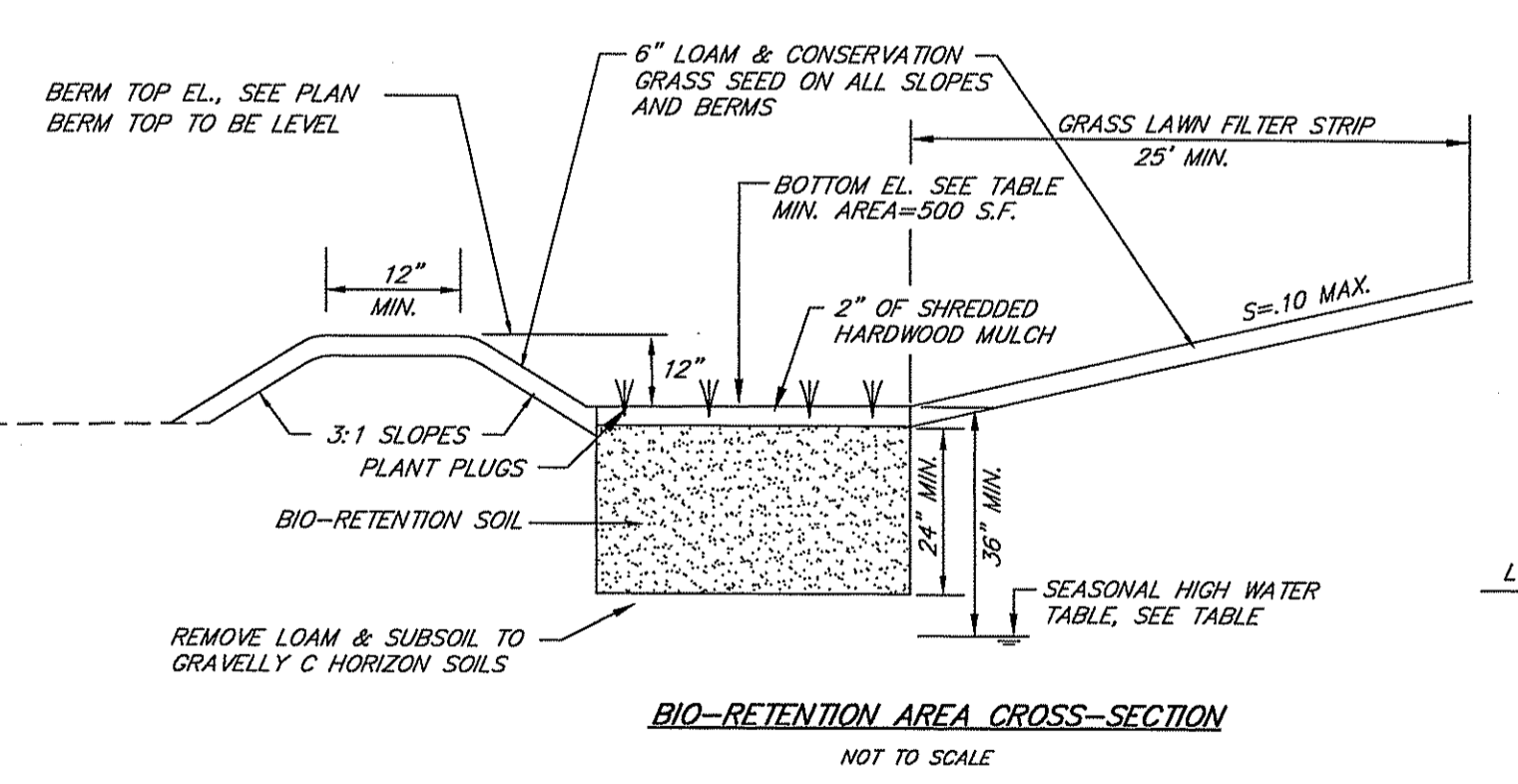
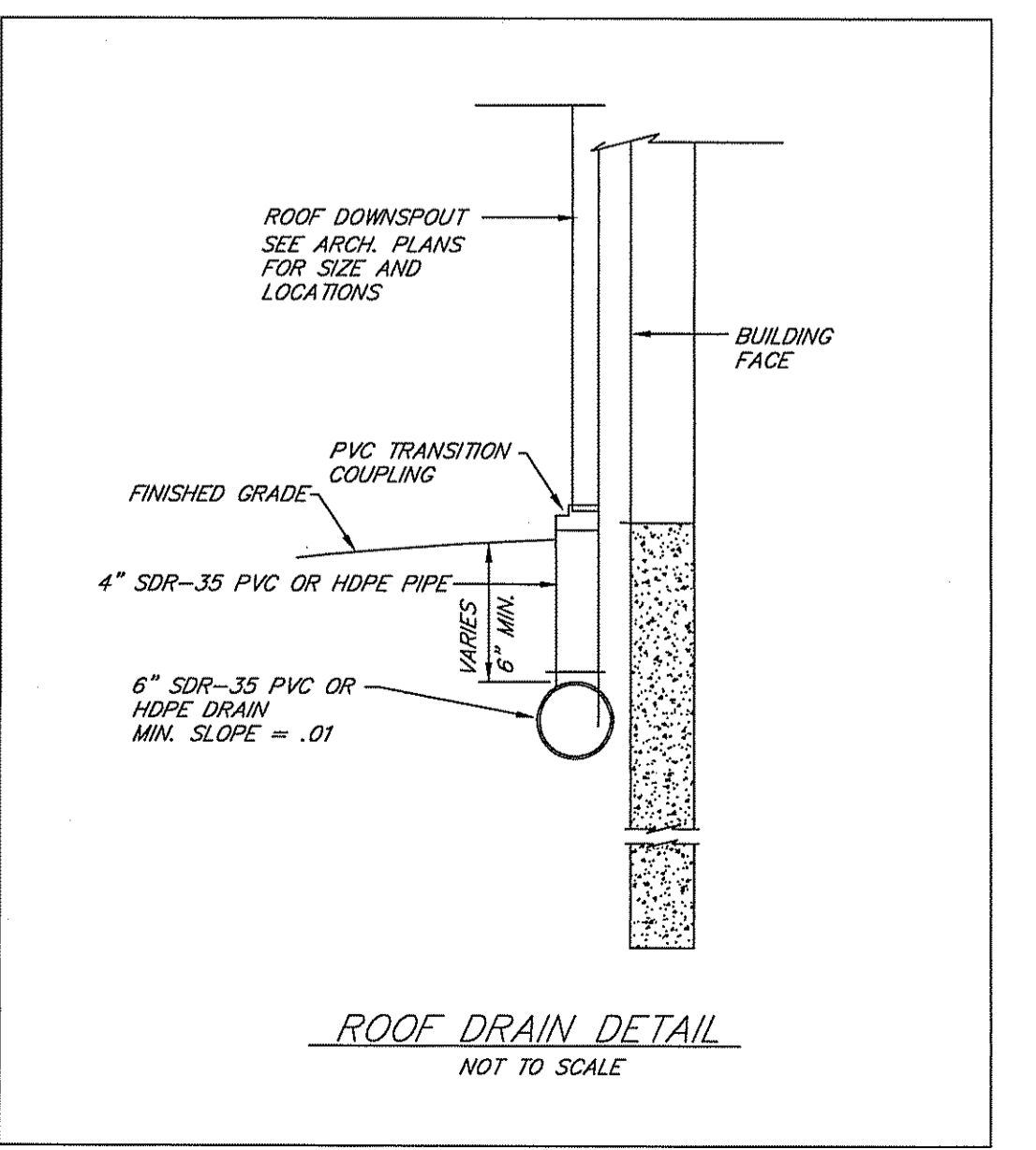
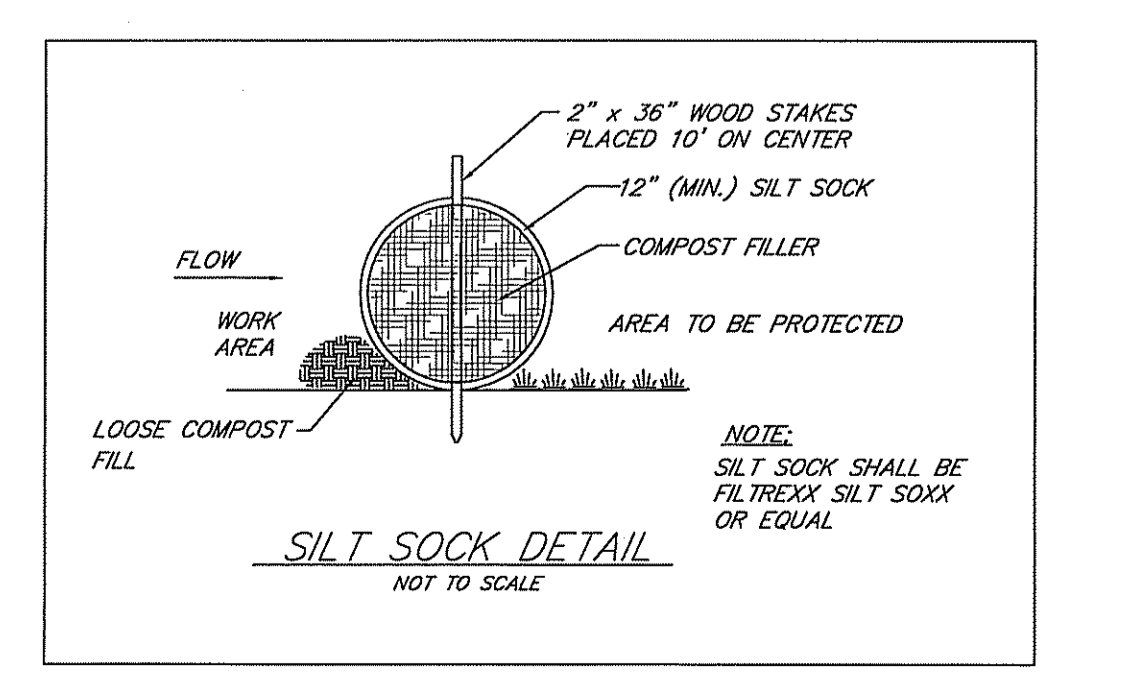
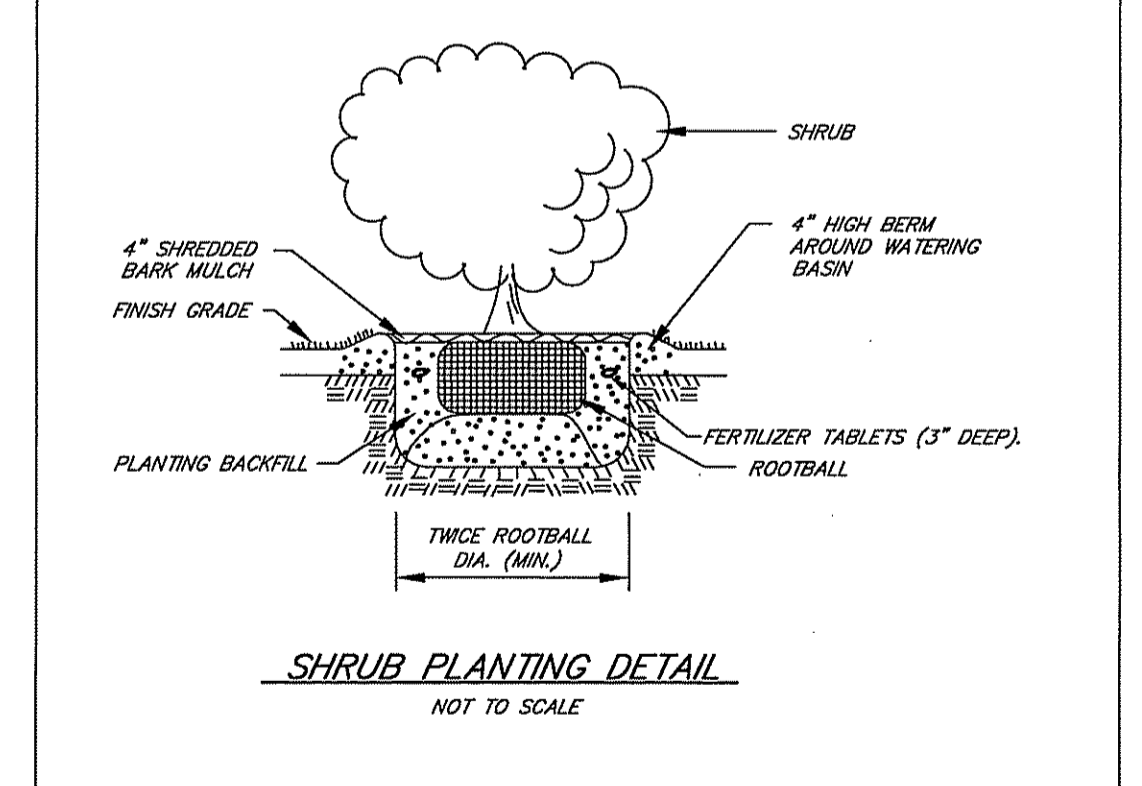
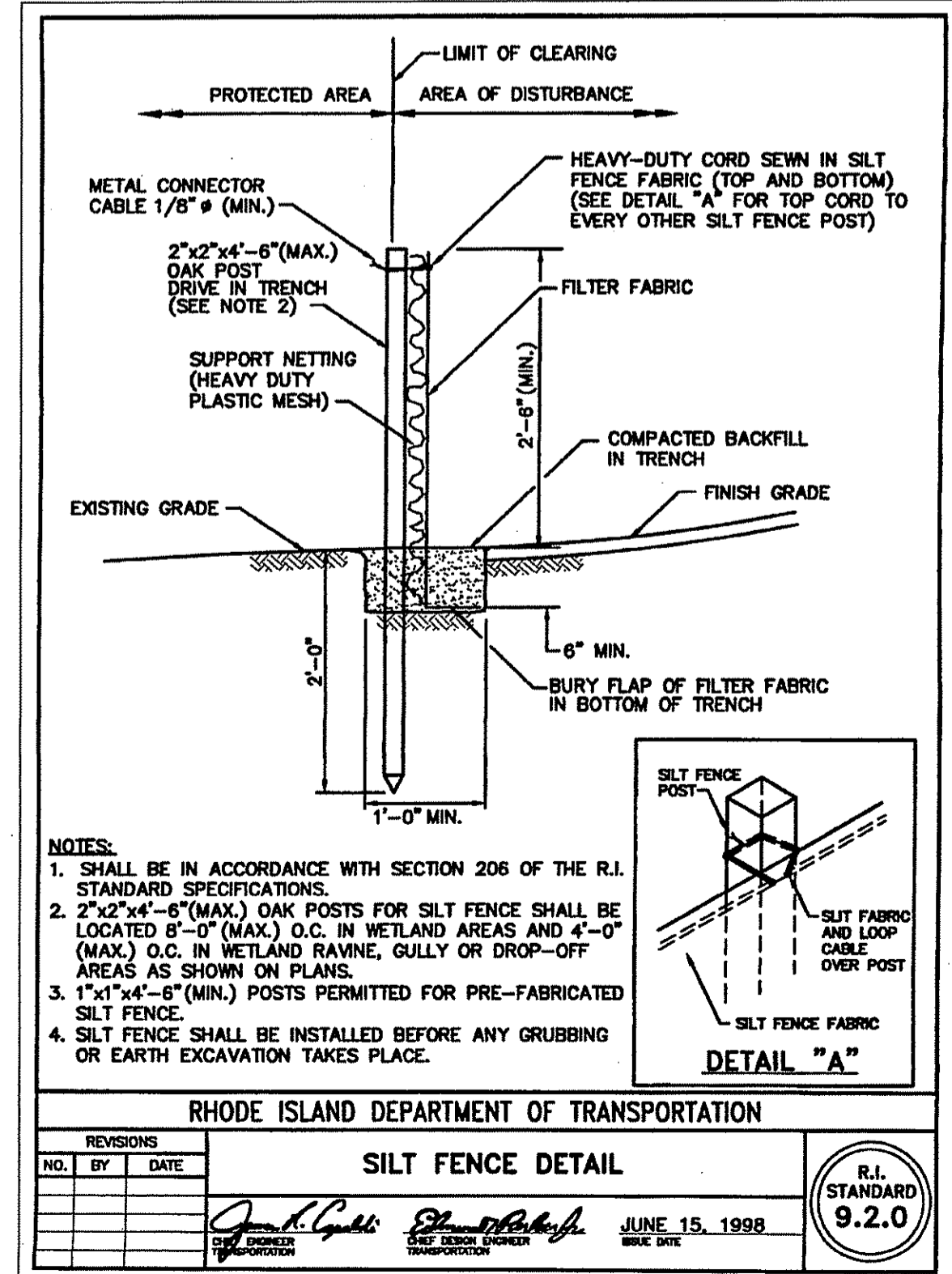
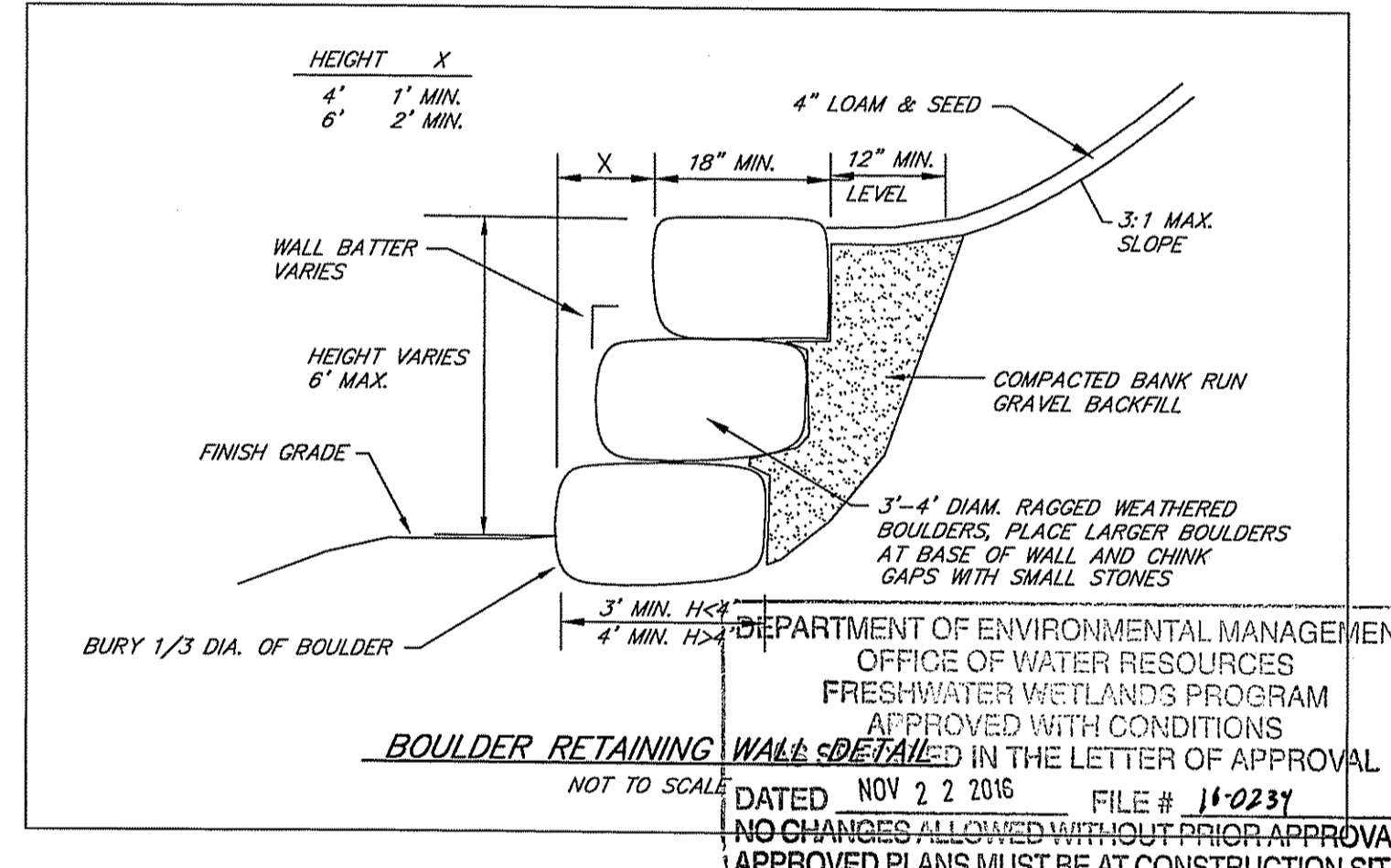
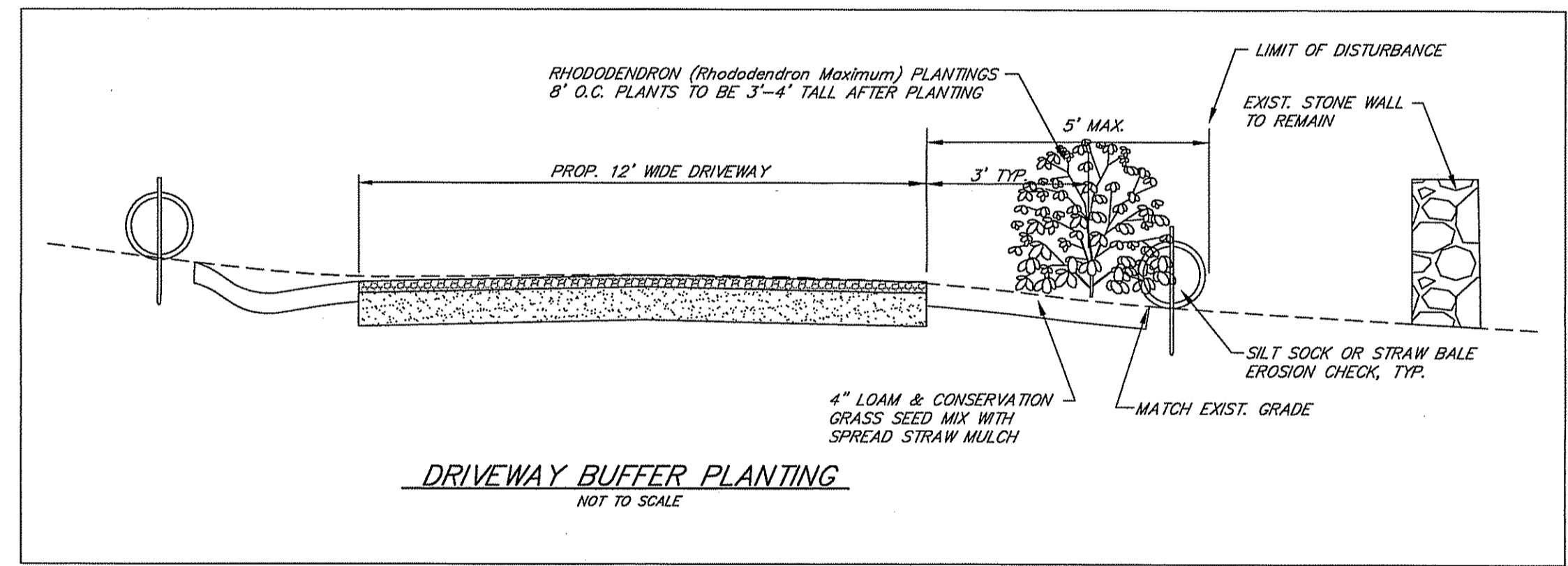
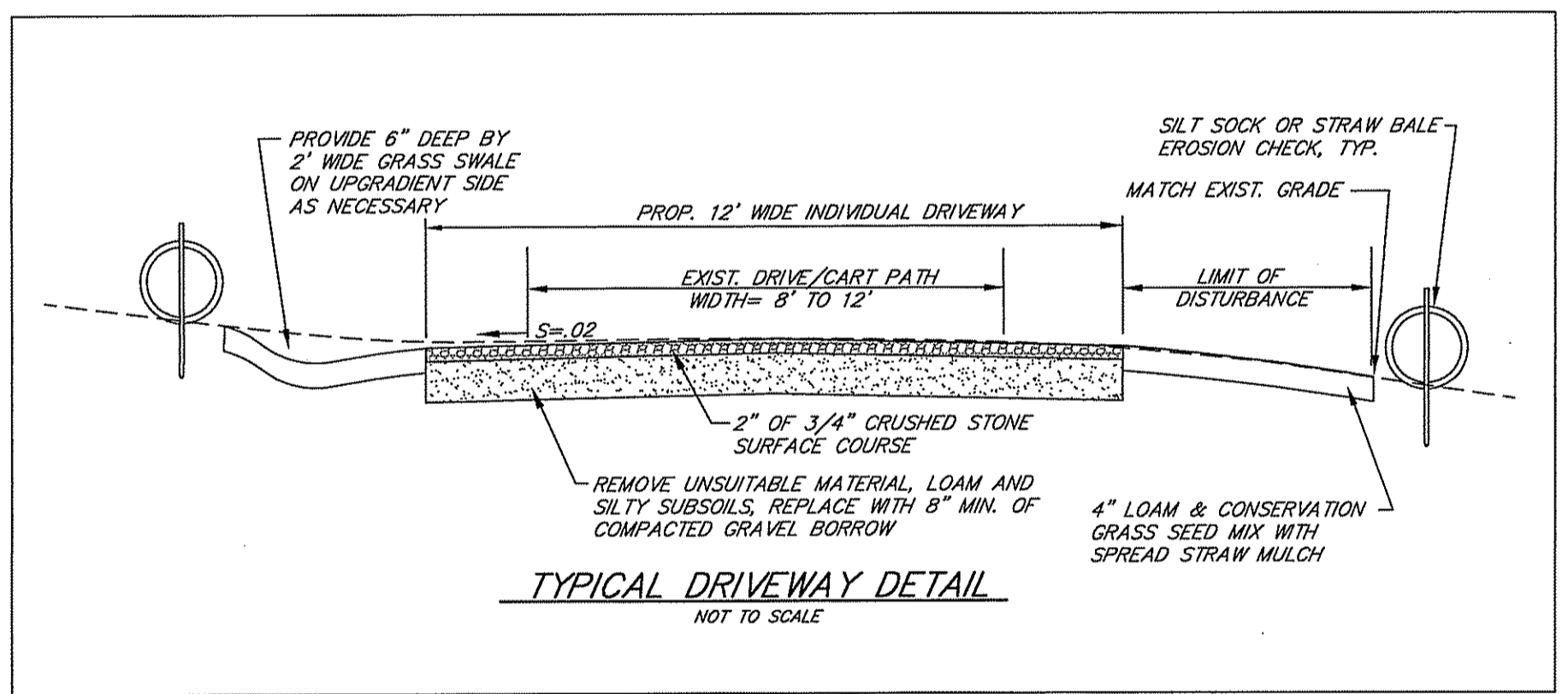
**DRIVEWAY NOTES:**

- NO WORK IS ALLOWED WITHIN JURISDICTIONAL WETLANDS EXCEPT AS SPECIFICALLY SHOWN. ALL WORK SHALL BE ACCURATELY LOCATED AND CONSTRUCTION SHALL BE COMMENCED PRIOR TO COMMENCEMENT OF WORK.
- EROSION CONTROLS SHALL BE INSTALLED PRIOR TO ANY EXCAVATION AND SHALL BE MAINTAINED UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED AT WHICH TIME THEY SHALL BE REMOVED.
- ALL DISTURBED AREAS SHALL BE RESTORED WITH 4" LOAM, CONSERVATION GRASS SEED AND SPREAD STRAW MULCH.
- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE R.I.D.E.M. WETLAND PERMIT AND REGULATIONS.
- THE PROPOSED BUFFER PLANTINGS SHALL BE A CONTINUOUS ROW OF RHODODENDRON (*Rhododendron maximum*), 3" TO 4" TALL AFTER PLANTING, BALLED AND BURLEAPPED AND PLANTED 8' O.C. ADJUST LOCATION OF NEW PLANTINGS TO AVOID DISTURBANCE OR DAMAGE TO EXISTING MATURE NATIVE TREES AND VEGETATION.
- ANY PLANTING WHICH FAILS TO SURVIVE FOR ONE FULL GROWING SEASON SHALL BE REPLACED AT NO COST TO THE OWNER OR DEVELOPER. REPLACEMENT PLANTINGS SHALL BE SIMILARLY GUARANTEED FOR ONE FULL YEAR.
- UTILITY POLES AND WIRES SHALL BE LOCATED TO DISTURB THE MINIMAL AMOUNT OF TREES AND OVERSTORY BRANCHES.

**LEGEND**

- EXIST. STONE WALL
- EXIST. UTILITY POLE
- PROP. UTILITY POLE
- EXIST. CONTOUR
- 220 PROP. CONTOUR
- W WATER LINE
- SE 3 EXIST. TREE LINE
- SOIL EVALUATION TH
- EDGE OF RIVER
- FLAGGED WETLAND EDGE
- PW 50' PERIMETER WETLAND
- RBW 100' RIVERBANK WETLAND
- LOD PROP. EROSION CONTROLS
- RD PROP. ROOF DRAIN
- OHW PROP. OVERHEAD UTILITIES
- 225.4 EXIST. SPOT ELEVATION
- 215.0x PROP. SPOT ELEVATION

Environmental Management  
 NOV 9 2016  
 Office of Water Resources



**GRASS FILTER STRIP MAINTENANCE NOTES:**

- ENSURE THAT GRASS HAS ESTABLISHED. IF NOT REPLACE WITH AN ALTERNATIVE SPECIES.
- FILTER STRIPS SHALL BE INSPECTED AT LEAST QUARTERLY DURING THE FIRST YEAR OF OPERATION AND SEMIANNUALLY THEREAFTER. EVIDENCE OF EROSION AND CONCENTRATED FLOWS WITHIN THE FILTER STRIP MUST BE CORRECTED IMMEDIATELY. ERODED SPOTS MUST BE RESEDED AND MULCHED TO ENHANCE VIGOROUS GROWTH AND PREVENT FUTURE EROSION PROBLEMS.
- THE BULK OF ACCUMULATED SEDIMENTS WILL BE TRAPPED AT THE INITIAL ENTRY POINT OF THE FILTER STRIP. THESE SEDIMENTS SHALL BE REMOVED MANUALLY AT LEAST ONCE PER YEAR OR WHEN ACCUMULATING SEDIMENTS CAUSE A CHANGE IN THE GRADE ELEVATION. RESEEDING MAY BE NECESSARY TO REPAIR AREAS DAMAGED DURING THE SEDIMENT REMOVAL PROCESS.
- FILTER STRIPS MUST BE PROTECTED BY PROPER SOIL EROSION AND SEDIMENT CONTROL TECHNIQUES (e.g., HAY BALES AND SILT FENCES) DURING ALL PHASES OF CONSTRUCTION. THESE MEASURES MUST BE PROPERLY MAINTAINED UNTIL FINAL SITE STABILIZATION AND SUBSEQUENT REMOVAL OF ALL TRAPPED SEDIMENTS HAS OCCURRED.

**BIO-RETENTION AREA SIZING**

- BIO-RETENTION AREAS SHALL BE 500 S.F. MINIMUM BASED ON A 3,740 S.F. IMPERVIOUS HOUSE AND DRIVE AREA. AREAS SHALL BE PROPORTIONATELY SIZED IF THE HOME AREA IS DIFFERENT.
- EACH HOME SITE MAY HAVE MORE THAN ONE BIO-RETENTION AREA, EACH SERVING A PROPORTIONATE IMPERVIOUS AREA.
- BIO-RETENTION AREA LENGTH SHALL BE TWICE THE WIDTH (MIN.) WITH THE LENGTH ORIENTED PARALLEL TO SURFACE CONTOURS AND SHAPED TO CONFORM WITH EXISTING SLOPES.
- BIO-RETENTION AREAS SHALL BE LOCATED AT LEAST 25' FROM CWT'S AND 15' FROM HOUSE.

**BIO-RETENTION ELEVATIONS**

LOT #	S.H.W.T.	TOP MULCH EL.*	BERM TOP EL.*
2	217.0	220.0	221.0

\* MIN. REQUIRED ELEVATION TO MAINTAIN 5" SEPARATION TO SHUT. AREAS MAY BE BUILT HIGHER WITH GREATER SEPARATION

**BIO-RETENTION AREA NOTES**

- BIO-RETENTION AREAS SHALL BE PROTECTED FROM COMPACTION PRIOR TO AND DURING CONSTRUCTION.
- ALL LOAM & SUBSOIL SHALL BE STRIPPED AND THE AREA EXCAVATED TO DESIGN BOTTOM GRADE. BIO-RETENTION SOIL SHALL BE PLACED TO A DEPTH OF 24" AND COVERED WITH 2" OF MULCH.
- MULCH SHALL BE SHREDDED HARDWOOD MULCH.
- BOTTOM OF BIO-RETENTION AREA SHALL BE PLANTED WITH AN EQUAL MIXTURE OF BLUEGRASS, IRIS, WOOD PUCKER, WILD FLORNS, AND PICKEREL WEED PLUGS AT 18" ON CENTER. PLANTINGS SHALL COMPLY WITH APPENDIX B.1.1 OF THE R.I. STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL (DECEMBER 2010).
- BIO-RETENTION AREA PLANTINGS SHALL BE INSTALLED BY A LANDSCAPE CONTRACTOR. SURVIVAL SHALL BE GUARANTEED FOR ONE YEAR.
- BIO-RETENTION SOIL SHALL HAVE A LOAMY SAND TEXTURE AND CONFORM TO THE FOLLOWING GRADATION:  
 SAND 85 - 88%  
 SILT 8 - 12%  
 CLAY 0 - 2%  
 ADD ORGANIC MATTER (LEAF COMPOST) TO LOAMY SAND, 3% - 5% BY VOLUME

REVISION  
 DATE 10-18-16  
 DRIVEWAY, LIMIT OF DISTURBANCE & OVERHEAD UTILITIES

SCOTT T. WOODHEAD  
 REGISTERED PROFESSIONAL ENGINEER

APPLICANT & OWNER:  
 ESTATE OF JANE W. WILLOUGHBY  
 C/O EVE A. CALISE  
 1214 MIDDLE ROAD  
 EAST GREENWICH, RI 02818  
 401-884-3070

WILLOUGHBY PLAT No. 3  
 1214 MIDDLE ROAD  
 MAP 51 PLAT 16 LOT 4  
 EAST GREENWICH, RI

DRIVEWAY CROSSING PLAN - 2

S.F.M. ENGINEERING ASSOCIATES  
 410 TIGOLE AVENUE  
 COVENTRY, RI 02816  
 PHONE: 401-826-3736  
 FAX: 401-826-1711  
 SCOTT@SFM.NECCOMAIL.COM

DRN. BY: SFM  
 CHK. BY: JZL  
 SCALE: 1" = 30'  
 DATE: AUG 1, 2016  
 DWS: SFM823D2-LOT  
 SHEET 3 OF 3

PERMITTING SUBMISSION