SADDLE RIDGE SUBDIVISION

SPORT HILL ROAD, SILVER HILL ROAD, CEDAR HILL ROAD & WESTPORT ROAD

EASTON CONNECTICUT

AUGUST 18, 2008

REV. OCTOBER 22, 2008

REV. NOVEMBER 18, 2008 REV. DECEMBER 8, 2008 REV. JANUARY 5, 2009

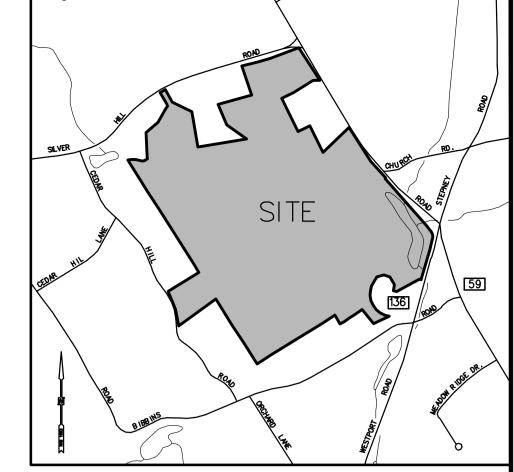
PARCEL A PARCEL A OPEN SPACE OPEN SPACE

OWNER

SILVER SPORT ASSOCIATIES 895 SPORT HILL ROAD EASTON, CONNECTICUT, 06612

• APPLICANT

SADDLE RIDGE DEVELOPERS 68 SOUNDVIEW DRIVE EASTON, CONNECTICUT, 06612



LOCATION MA

EXISTING	LEGEND	PROPOSED		
	STREET LINE			
	PROPERTY LINE			
	WETLAND BUFFER LINE			
	SETBACK LINE			
70	MAJOR CONTOUR	70		
68	MINOR CONTOUR	68		
+70.5	SPOT GRADE	+70.5		
	WETLANDS			
~~~~~~~~~~	TREE LINE	$\sim$		
* 3	TREE/SHRUB			
000000000000	STONEWALL			
xxx	CHAIN LINK FENCE	xxx		
\$	SITE LIGHT	lacktriangle		
77	HYDRANT	**		
	PRIVATE WELL			
	STORM DRAIN W/CATCH BASIN			
0	STORM MANHOLE/YARD DRAIN	•		
570	SUBSUFRACE DISPOSAL SYSTEM ELECTRIC, TELEPHONE, CABLE			
ETC —	UTILITY POLE	ETC		
	TRAFFIC SIGN	<u>.</u> .		
0	IRON PIN	•		
•	MONUMENT	•		
	EDGE OF PAVEMENT W/CURB			
	FIRST FLOOR	FF		
	GARAGE FLOOR	GF		
	BASEMENT/WALKOUT FLOOR	BF/WO		
	•	•		

LECEND

# PROJECT SITE VICINITY MAP:

0 1/2" 1" SCALE: 1"=500'

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Landscape Architecture and Environmental Science

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Cheshire, Connecticut 06410

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# ZONE DATA ZONE: DISTRICT B TOTAL LAND: 5,432,123 SF (124.704 AC) REQ'D/PERMITTED DIMENSIONAL CRITERIA MIN. LOT AREA 3 ACRES 2 ACRES MIN. BUILDABLE LOT AREA (NON-WETLAND) 150' x 175' MIN. BUILDING SQUARE/RECTANGLE MIN. FRONT YARD SETBACK FROM CENTERLINE OF ROAD 75' MIN. FRONT YARD SETBACK FROM PROPERTY LINE MIN. REAR YARD SETBACK FROM PROPERTY LINE MIN. SIDE YARD SETBACK FROM PROPERTY LINE MIN. LOT FRONTAGE 200 15% OF TOTAL LAND MIN. TOTAL OPEN SPACE AREA

TOTAL # OF LOTS:	21
TOTAL AREA OF SUBDIVISION	±124.7 AC
TOTAL AREA OF WETLANDS - (% TOTAL)	±28.2 AC (22.6%)
OPEN SPACE - REQUIRED (% OF TOTAL)	±18.7 AC (15%)
TOTAL OPEN SPACE - PROVIDED (% TOTAL)	±18.7 AC (15.0%)
VETLAND IN OPEN SPACE (% OPEN SPACE)	±4.2 AC (22.6%)
EVELOPED AREA (% TOTAL)	±106.0 AC (85.0%)
WETLAND IN DEVELOPED AREA (% DEVELOPED)	±24.0 AC (22.6%)

# LIST OF DRAWINGS:

SITE DETAILS

**PROPERTY SURVEY** 

1-2	SUBDIVISION MAP
EX1	AERIAL PHOTO (2004)
EX2 - EX4	COMPILED EXISTING CONDITIONS
SD1 - SD2	SITE PLAN - LAYOUT, GRADING & UTILITIES
SD3	DRAINAGE PLAN AND PROFILE
LA1	SITE PLAN - LANDSCAPING
RA1	SITE PLAN - REGULATED ACTIVITIES
SE1	SITE PLAN - SEDIMENT AND EROSION CONTROLS
PH1	SITE PLAN - PHASING PLAN
RP1 - RP7	ROADWAY PLAN AND PROFILE
D1	EROSION CONTROL SPECIFICATION AND DETAILS

# GENERAL NOTES

- 1. BOUNDARY INFORMATION IS BASED UPON FIELD SURVEY CONDUCTED BY: MILONE AND MACBROOM INC., TAKEN FROM A MAP ENTITLED "PROPERTY SURVEY" PREPARED FOR CARLSON CONSTRUCTION AT A SCALE OF 1"=100', DATED: APRIL 25, 2008.
- 2. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CALL "CALL BEFORE YOU DIG", 1—800—922—4455. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
- 3. MILONE & MACBROOM INC. ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.
- 4. INLAND WETLAND BOUNDARY WAS FLAGGED BY: SOIL SCIENCE AND ENVIRONMENTAL SERVICES, INC ON MAY 15, 2008 AS SHOWN ON COMPLIED EXISTING CONDITIONS DRAWING AND FIELD LOCATED BY MILONE AND MACBROOM INC. IN MAY 2008.
- 5. ALL UTILITY SERVICES ARE TO BE UNDERGROUND. THE EXACT LOCATION AND SIZE OF ELECTRIC, TELEPHONE, CABLE TELEVISION AND GAS ARE TO BE DETERMINED BY THE RESPECTIVE UTILITY COMPANIES.
- 6. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 7. SEDIMENT AND EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS AND DESCRIBED WITHIN THE SEDIMENT AND EROSION CONTROL NARRATIVE SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER AND STABILIZATION IS ESTABLISHED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL CONFORM TO THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, CONNECTICUT 2002, AND IN ALL CASES BEST MANAGEMENT PRACTICES SHALL PREVAIL.
- 9. ALL STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE INDICATED. ALL PVC PIPE SHALL BE SCHEDULE 40 UNLESS

8. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 6" TOPSOIL, AND BE SEEDED WITH GRASS OR SODDED, AS SHOWN ON THE PLANS.

- OTHERWISE INDICATED.
- 10. ALL ROOF LEADERS AND FOUNDATION DRAINS SHALL BE 6" ASTM D 3034 SDR 35 PVC PIPE UNLESS OTHERWISE INDICATED.

  11. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATE FINISHED GRADE.
- 12. ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE TOWN OF EASTON REQUIREMENTS AND TO THE THE APPLICABLE SECTIONS OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION, FORM 816 AND ADDENDUMS
- 13. THE PLANS REQUIRE A CONTRACTOR'S WORKING KNOWLEDGE OF LOCAL, MUNICIPAL, WATER AUTHORITY, AND STATE CODES FOR UTILITY SYSTEMS. ANY CONFLICTS BETWEEN MATERIALS AND LOCATIONS SHOWN, AND LOCAL REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE EXECUTION OF WORK. THE ENGINEER WILL NOT BE HELD LIABLE FOR COSTS INCURRED TO IMPLEMENT OR CORRECT WORK WHICH DOES NOT CONFORM TO LOCAL CODE.
- 14. ALL FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS SHOULD BE STORED IN A SECONDARY CONTAINER AND REMOVED TO A LOCKED INDOOR AREA WITH AN IMPERVIOUS FLOOR DURING NON-WORK HOURS.
- 15. THE PROPOSED HOUSE ARE TO BE CONNECTED TO SUBSURFACE SEWAGE DISPOSAL SYSTEMS AND PRIVATE WELLS.
- 16. THE PROPOSED HOUSE AND DRIVEWAY LOCATIONS HAVE BEEN SHOWN TO INDICATE HOW THE LOT COULD POSSIBLY BE DEVELOPED, BUT NOT NECESSARILY HOW THE LOT WILL BE DEVELOPED. THE FINAL SIZE, SHAPE AND LOCATION OF HOUSE AND DRIVEWAY, ETC. MAY VARY AS LONG AS ALL REQUIRED SEPARATING CODES AND DISTANCES ARE MAINTAINED.
- 17. DRIVEWAY LOCATIONS SHALL NOT INTERFERE WITH ANY PUBLIC UTILITY, STRUCTURE OR IMPROVEMENT SUCH AS, BUT NOT LIMITED TO,STREET LINE MONUMENTS, STREET LIGHTS, FIRE HYDRANTS, CATCH BASINS AND HANDICAPPED SIDEWALK RAMPS.
- 18. COMPLIANCE WITH THE PERMIT CONDITIONS IS THE RESPONSIBILITY OF BOTH THE CONTRACTOR AND THE PERMITTEE.
- 19. PERIMETER SWALES AND RESPECTIVE SILTATION BASINS SHALL BE COMPLETED AND RESTORED PRIOR TO PROCEEDING WITH OTHER SITE CONSTRUCTION.
- 20. THE PROPERTY OWNER MUST MAINTAIN (REPAIR/REPLACE WHEN NECESSARY) THE SILTATION CONTROL UNTIL ALL DEVELOPMENT ACTIVITY IS COMPLETED AND ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
- 21. THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE ENGINEER ON ALL DRAINAGE STRUCTURES FOR REVIEW AND APPROVAL PRIOR TO MANUFACTURE.

# CONSTRUCTION SEQUENCE

- 1. PRIOR TO COMMENCEMENT OF WORK A PRECONSTRUCTION MEETING SHALL BE HELD WITH TOWN STAFF, AQUARION WATER COMPANY STAFF, AND REPRESENTATIVES OF THE CONTRACTOR AND OWNER. AT THIS MEETING, ONE PERSON WILL BE PLACED IN CHARGE OF SEDIMENT AND EROSION CONTROL FOR THE ENTIRE SITE.
- 2. THE CONTRACTOR IS TO FOLLOW THE PORPOSED PHASING PLAN ON SHEET PH-1 OF THESE PLANS AND NO MORE THAN 5 ACRES ARE TO BE LEFT EXPOSED AT ANY ONE TIME.
- 3. CONTRACTOR TO STAKE OUT LIMIT OF DISTURBANCE AND VEGETATION TO BE RETAINED. NO DISTURBANCE IS TO TAKE PLACE BEYOND THE LIMITS OF WORK SHOWN.
- 4. CONTRACTOR TO INSTALL SEDIMENT AND EROSION CONTROLS ALONG THE PERIMETER, AND STABLILIZED CONSTRUCTION ENTRANCES.
- 5. CLEAR AND GRUB SITE AND STOCKPILE TOPSOIL. PLACE SEDIMENT FILTER FENCE AND HAYBALES AROUND STOCKPILES.
- CONTRACTOR TO INSTALL TEMPORARY DIVERSION BERMS AND SEDIMENT BASINS PER THE SEDIMENT AND EROSION CONTROL PLAN
   INITIATE MASS EARTHWORK OPERATIONS AFTER ALL REQUIRED BASINS, BERMS, SWALES, SILT FENCE & HAYBALES ARE INSTALLED.
- 8. TEMPORARY SEDIMENT BASINS AND DIVERSION BERMS AND SWALES ARE TO BE CONSTRUCTED PRIOR TO EACH PHASE OF GRADING AND MODIFIED AS NECESSARY TO FUNCTION.
- 9. COMMENCE ROAD BUILDING WORK.
- 10. INITIATE HOME CONSTRUCTION.
- 11. SLOPES ARE TO BE ESTABLISHED AS SOON AS PRACTICAL BEFORE UTILITY INSTALLATION. STABILIZE ALL SLOPES IMMEDIATELY AFTER THEIR ESTABLISHMENT.
- 12. INSTALL UTILITIES, CURBS AND ROADS.
- 13. TEMPORARY SEDIMENT BASINS SHALL BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER. CLEAN THE SEDIMENT BASIN WHEN SEDIMENT ACCUMULATION EXCEEDS ONE HALF THE WET STORAGE CAPACITY OF THE BASIN OR WHEN THE DEPTH OF AVAILABLE POOL IS REDUCED TO 18 INCHES, WHICHEVER IS ACHIEVED FIRST.
- 14. SEIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER.
- 15. THE SEDIMENT AND EROSION CONTROL PLAN SHALL BE MODIFIED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER AND THE TOWN'S DESIGNATED REPRESENTATIVE AS NECESSITATED BY CHANGING SITE CONDITIONS.16. INSPECTION OF THE SITE FOR EROSION SHALL CONTINUE FOR A PERIOD OF THREE MONTHS AFTER COMPLETION WHEN RAINFALLS OF ONE INCH OR
- 17. ALL DEWATERING WASTE WATERS SHALL BE DISCHARGED IN A MANNER WHICH MINIMIZES THE DISCOLORATION OF THE RECEIVING WATERS.
- 18. THE SITE SHOULD BE KEPT CLEAN OF LOOSE DEBRIS, LITTER, AND BUILDING MATERIALS SUCH THAT NONE OF THE ABOVE ENTER WATERS OR WETLANDS.

# OPERATION AND MAINTENANCE PLAN (POST-CONSTRUCTION)

19. A COPY OF ALL PLANS AND REVISIONS, AND THE SEDIMENT AND EROSION CONTROL PLAN SHALL BE MAINTAINED ON-SITE AT ALL TIMES DURING

# ROADWAYS:

- . THE ROADWAY SHALL BE SWEPT TWICE ANNUALLY. TYPICALLY, SWEEPING SHOULD OCCUR IN THE SPRING AFTER WINTER SANDING, AND IN THE FALL AFTER THE LEAVES HAVE FALLEN.
- . AT THE TIME OF THE SWEEPING, THE ROADWAY SHOULDERS SHOULD BE CLEANED OF ACCUMULATED SAND AND DEBRIS. ANY AREAS THAT WERE DAMAGED BY PLOWING OR THAT HAVE BEEN ERODED BY STORM WATER SHALL BE REPAIRED WITH TOPSOIL AND SEED.
- 3. ALL SAND AND DEBRIS THAT IS REMOVED SHALL BE DISPOSED OF AT AN APPROVED OFF—SITE LOCATION.

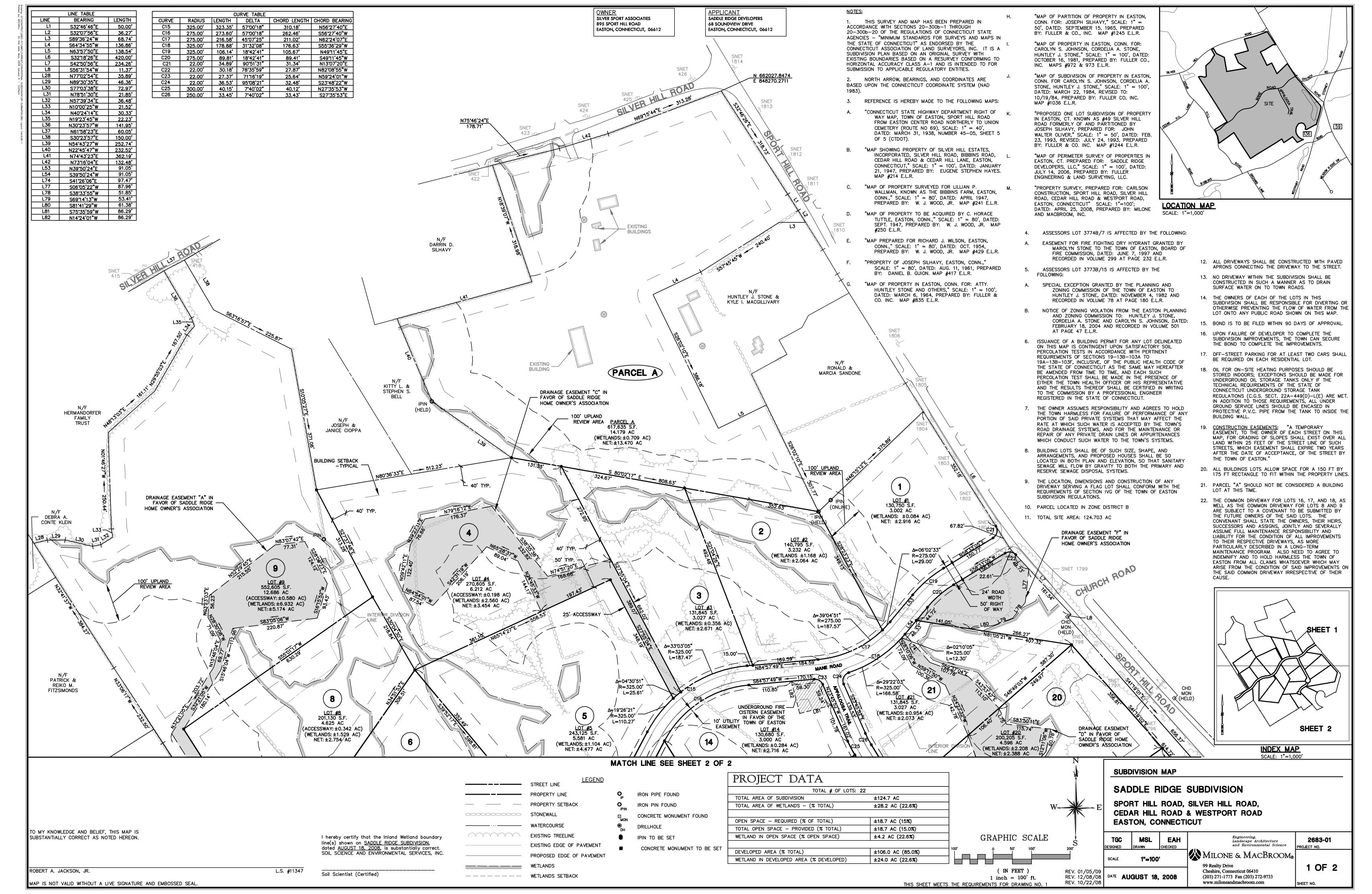
# STORM DRAINAGE STRUCTURES:

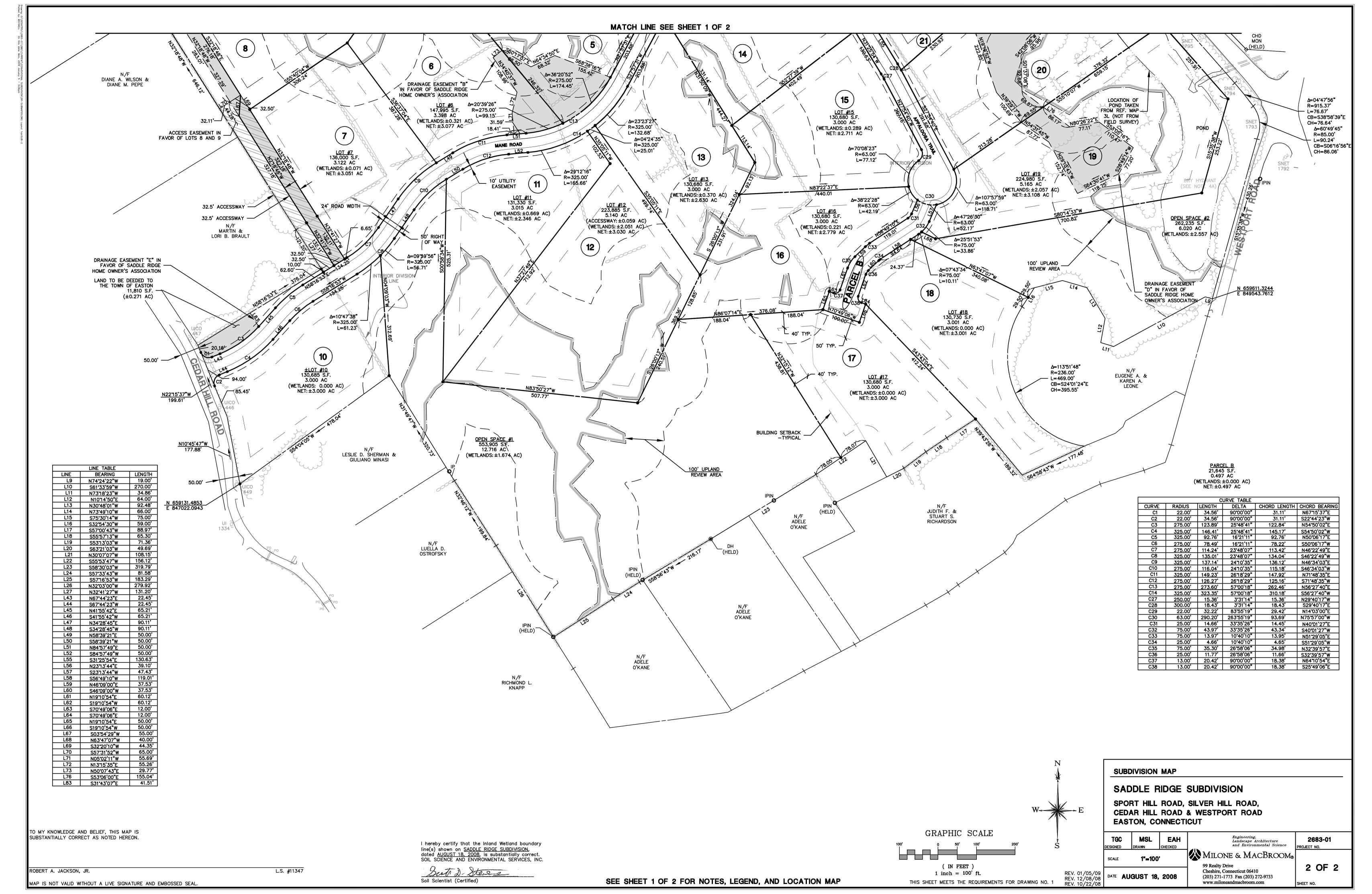
- 1. ALL CATCH BASIN AND YARD DRAIN STRUCTURES SHALL BE INSPECTED TWICE ANNUALLY. SEDIMENT SHALL BE REMOVED WHEN IT EXTENDS TO WITHIN SIX INCHES OF THE OUTLET PIPE INVERT, AND NOT LESS THAN ONCE PER YEAR. IF ANY OF THE STORM DRAINAGE STRUCTURES HAVE ANY STRUCTURAL DAMAGE, THEY SHALL BE REPAIRED AS REQUIRED.
- 2. ALL SEDIMENT, SAND, AND DEBRIS THAT IS REMOVED SHALL BE DISPOSED OF AT AN APPROVED OFF-SITE LOCATION.
- 3. ALL CATCH BASIN AND YARD DRAIN STRUCTURES SHALL BE INSPECTED IMMEDIATELY AFTER ANY SPILLAGE OF OIL, GAS, OR OTHER CONTAMINANT SPILLS. SUBSEQUENT TO CONTAMINANT SPILLS, ALL STORM DRAINAGE STRUCTURES AFFECTED SHALL BE CLEANED IMMEDIATELY AND THE CONTENTS DISPOSED OF AT AN APPROVED OFF—SITE LOCATION.
- 1. THE DETENTION BASINS AND UNDERGROUND INFILTRATION GALLERIES SHALL BE INSPECTED TWICE ANNUALLY, AND IMMEDIATELY AFTER ANY SPILLAGE OF OIL, GAS, OR OTHER CONTAMINANT SPILLS.
  SUBSEQUENT TO CONTAMINANT SPILLS, THE DETENTION BASIN AND INFILTRATION GALLERIES AFFECTED SHALL BE CLEANED IMMEDIATELY AND THE CONTENTS DISPOSED
  OF AT AN APPROVED OFF-SITE LOCATION
- 2. THE OUTLET STRUCTURE CONTROLLING THE WATER EXITING THE DETENTION BASINS SHALL BE MAINTAINED TO ALLOW FOR UNOBSTRUCTED FLOW THROUGH ITS FLOW CONTROL OPENINGS.

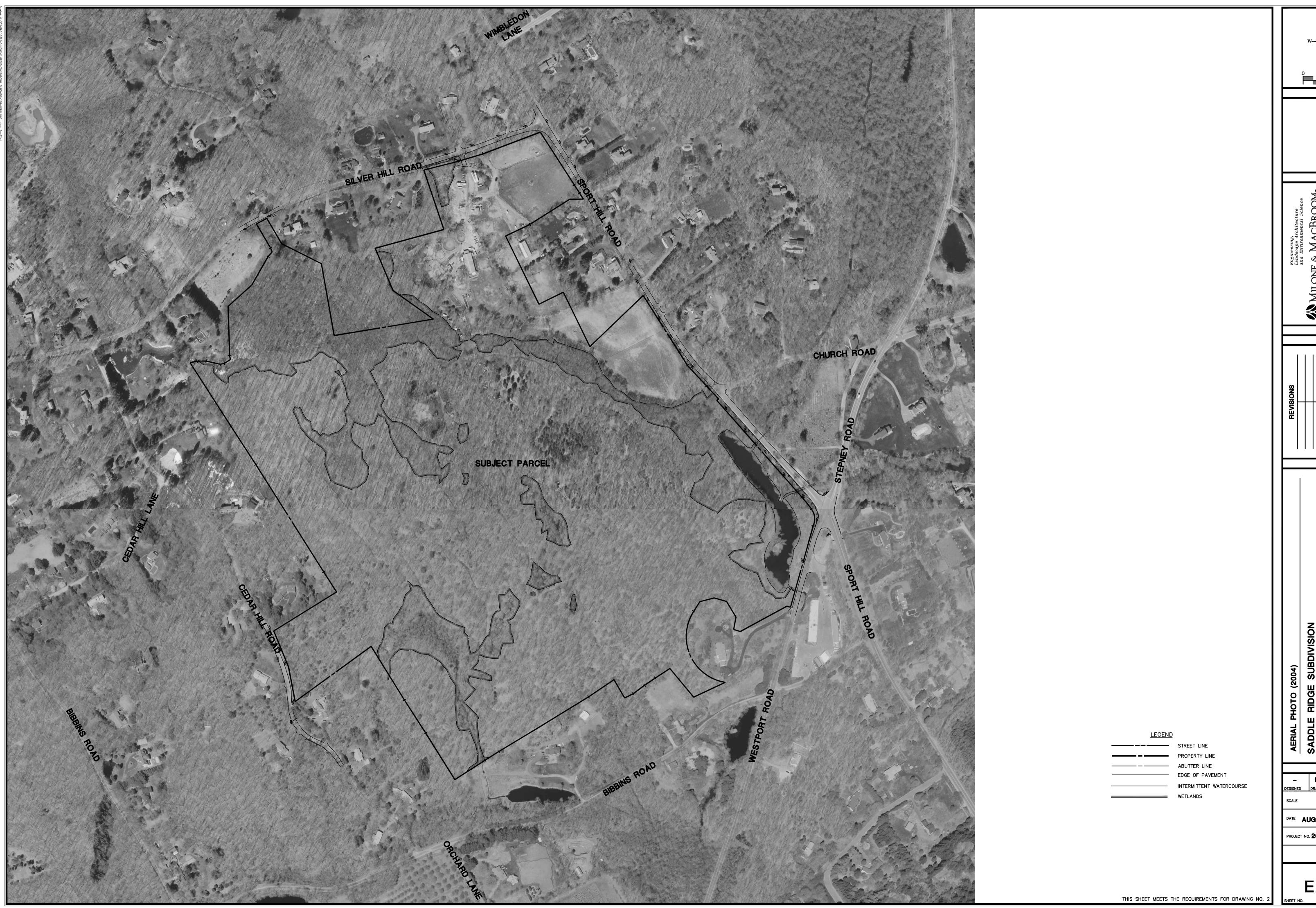
  OBSTRUCTIONS IMPEDING FLOW THROUGH THE LOW-FLOW ORIFICE, V-NOTCH, EMERGENCY OVERFLOW, AND OUTLET PIPE SHALL BE REMOVED. IF THE OUTLET CONTROL STRUCTURES HAVE ANY
  STRUCTURAL DAMAGE THEY SHALL BE REPAIRED AS REQUIRED.
- 3. THE SIDE SLOPES OF THE DETENTION BASINS ARE TO BE MOWED, AT A MINIMUM, TWICE ANNUALLY TO DISCOURAGE GROWTH OF WOODY VEGETATION.
- 4. THE SEDIMENT FOREBAYS SHALL BE INSPECTED TWICE ANNUALLY, AND CLEANED WHEN THE SEDIMENT REACHES ONE FOOT IN DEPTH. THE RIPRAP APRON(S) AT THE END OF THE INLET PIPE SHALL BE INSPECTED FOR ACCUMULATED SEDIMENT AND THE SEDIMENT REMOVED.
- 5. ALL SEDIMENT, SAND, AND DEBRIS THAT IS REMOVED SHALL BE DISPOSED OF AT AN APPROVED OFF-SITE LOCATION.
- 6. NO DUMPING OF ANY DEBRIS, INCLUDING BUT NOT LIMITED TO GRASS CLIPPINGS, LEAVES, BRUSH, AND COMPOST MATERIAL SHALL OCCUR WITHIN THE DETENTION BASINS.
- 7. THE BOTTOM OF THE STORMWATER BASINS SHALL BE MAINTAINED WITH TRACKED EQUIPMENT ONLY. THE SOILS AT THE BASIN BOTTOMS SHALL BE DEEPLY TILLED TO RESTORE INFILTRATIVE FUNCTION WHEN WATER IS NOTED TO BE PRESENT FOR MORE THAN 4 DAYS AFTER A RAINFALL EVENT.

# GENERAL:

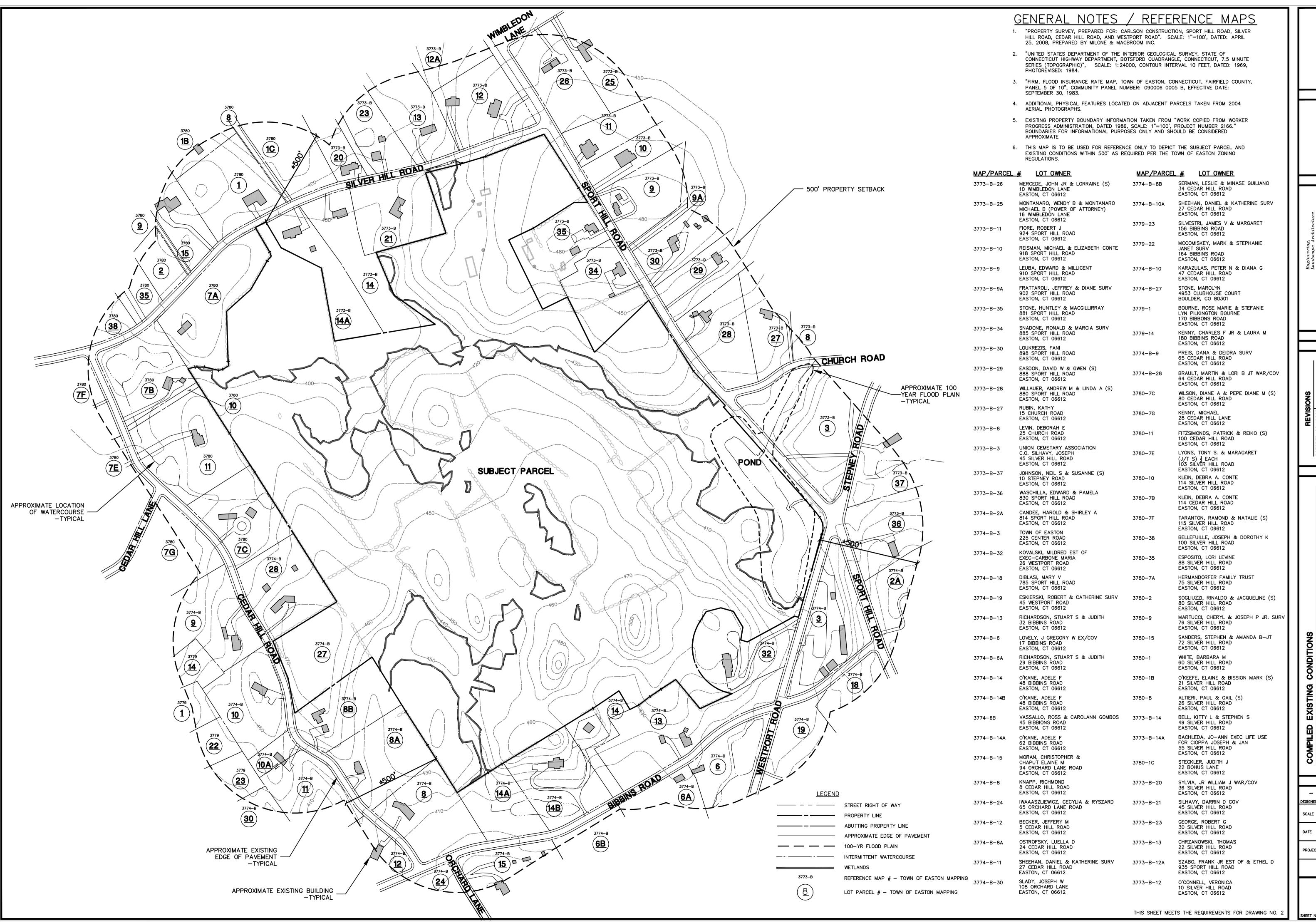
- 1. DURING CONSTRUCTION AND FOR THREE MONTHS AFTER PROJECT COMPLETION, INSPECTION OF SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MADE ON A WEEKLY BASIS AND AFTER RAINFALL EVENTS OF 1-INCH OR GREATER. A LOG OF SUCH INSPECTIONS SHALL BE MAINTAINED AT THE SITE.
- 2. A VEGETATIVE OR IMPROVED COVER SHALL BE MAINTAINED ON ALL EARTH SURFACES TO MINIMIZE SOIL EROSION. USE OF FERTILIZER SHOULD BE MINIMIZED AND SHOULD BE APPLIED USING PRUDENT APPLICATION PROCEDURES. ONLY ORGANIC FERTILIZERS ARE TO BE USED ON THIS SITE.
- 3. A LOG OF ALL INSPECTIONS SHALL BE MAINTAINED BY THE OCCUPANT AND BE AVAILABLE FOR INSPECTION.

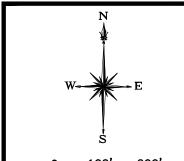






DATE AUGUST 18, 2008 PROJECT NO. **2683-01** EX-1





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OCTOBER 22, 2008
NOVEMBER 18, 2008
DECEMBER 8, 2008

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CEDAR HILL ROAD & WESTPORT ROAD

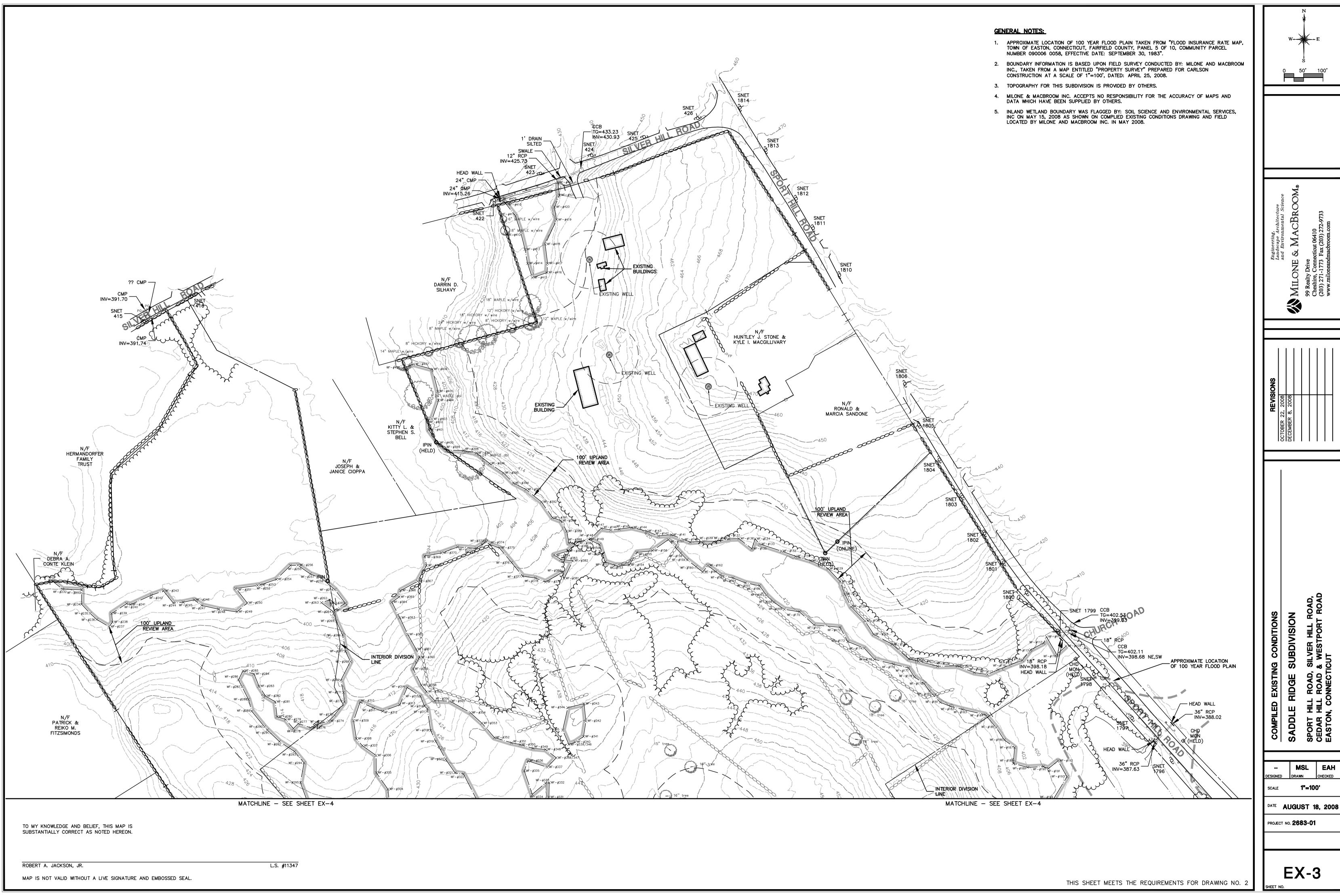
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EX-2



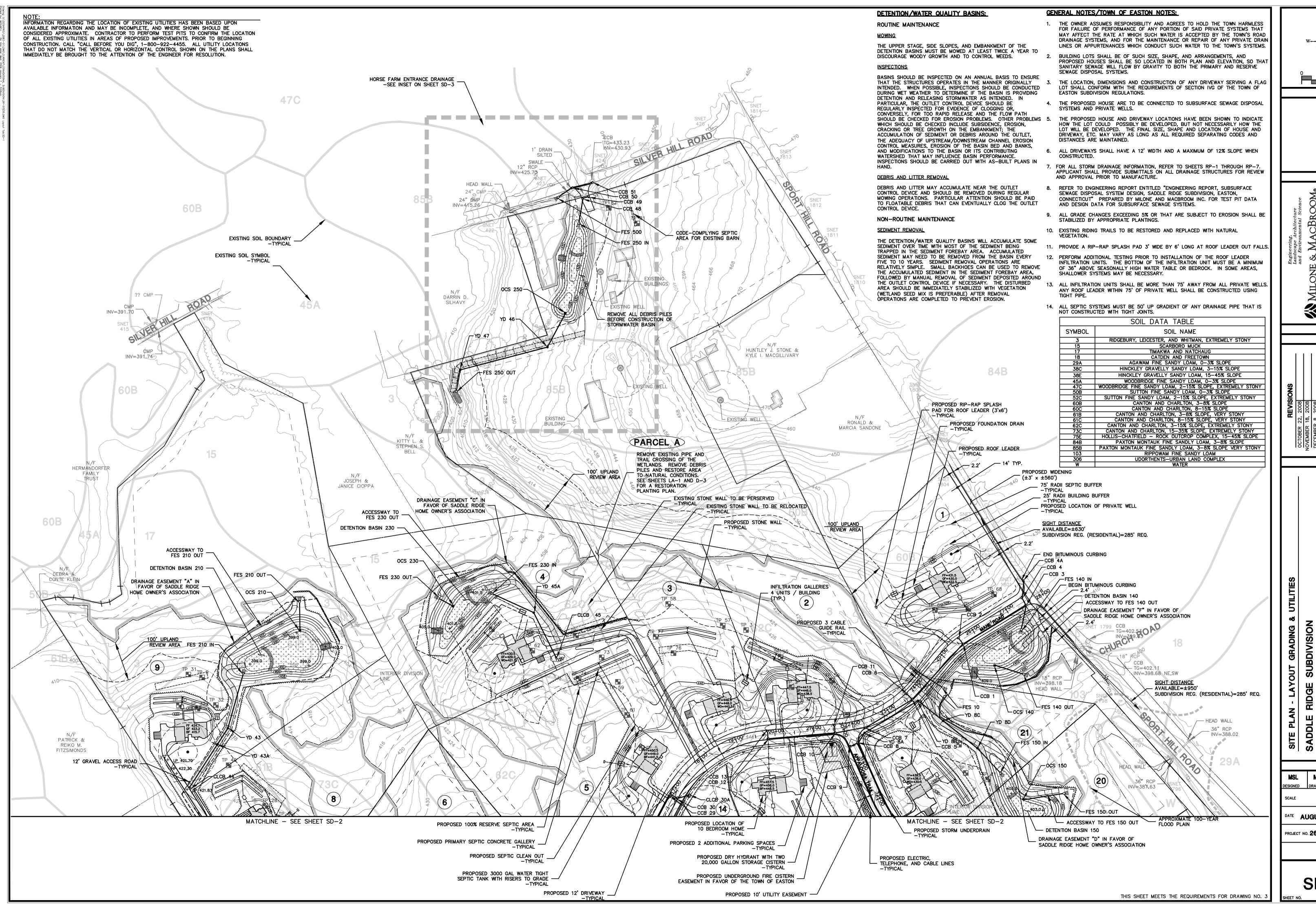
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**EX-3** 





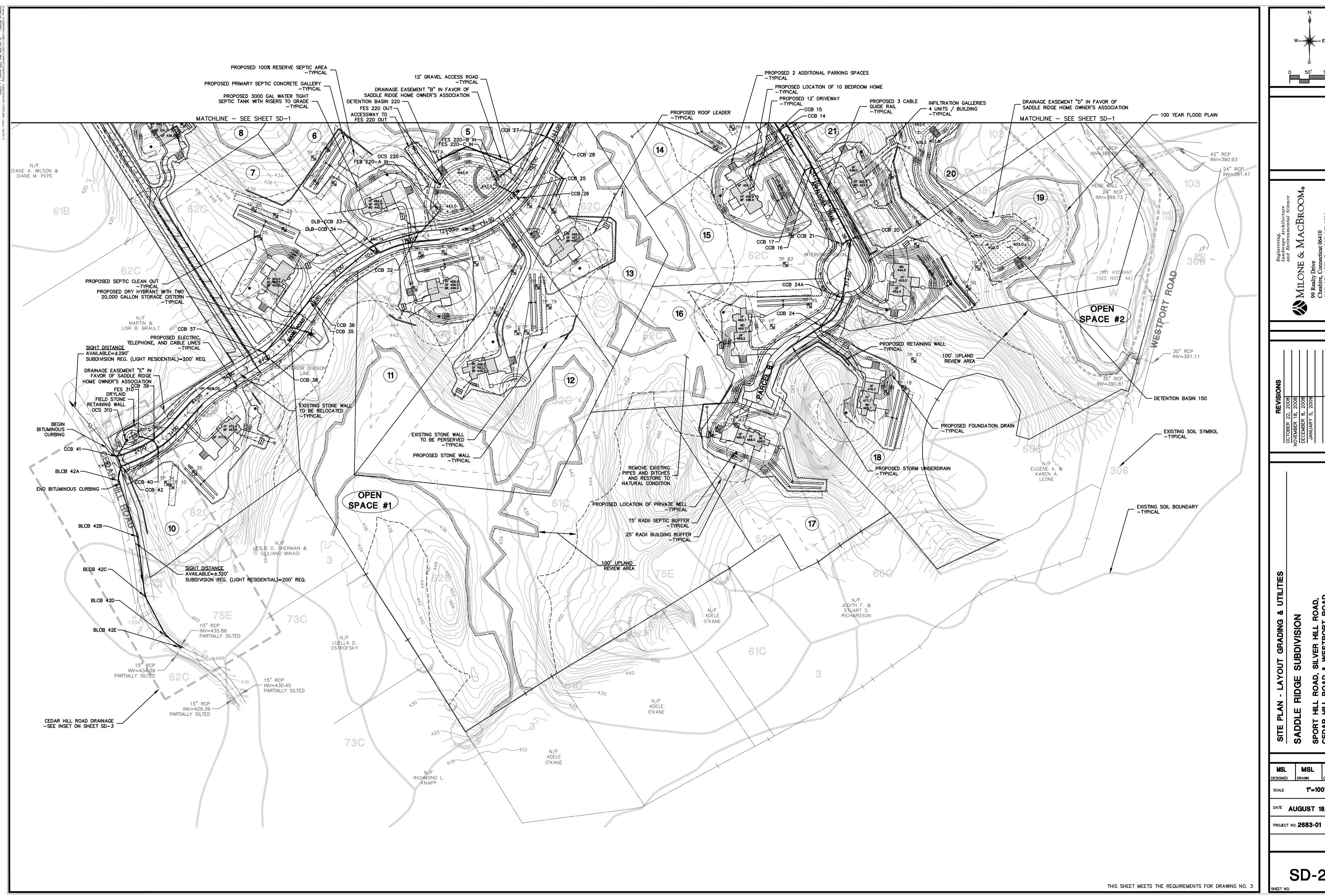
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MSL EAH 1"=100'

**AUGUST 18, 2008** 

PROJECT NO. **2683-01** 

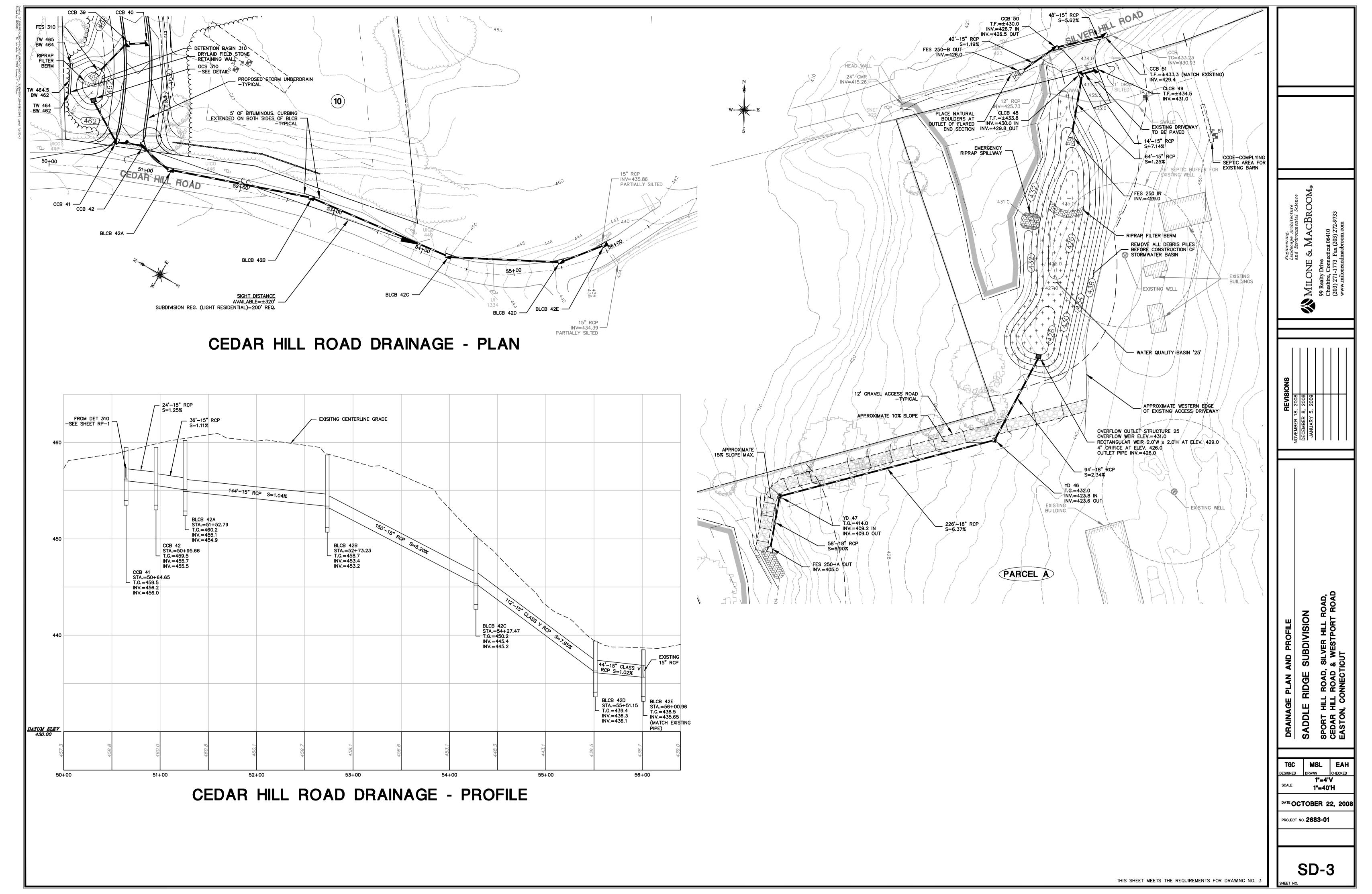
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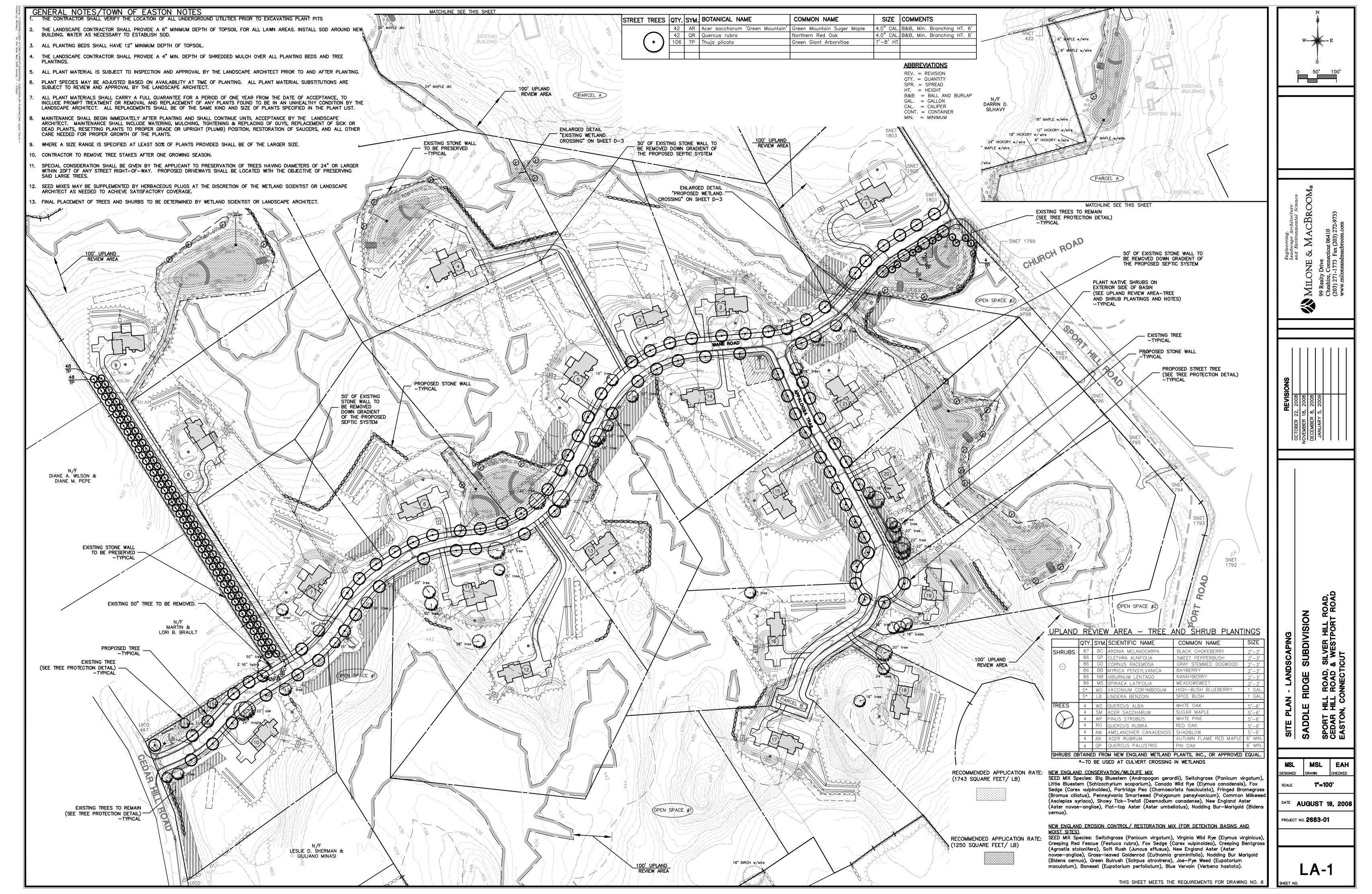


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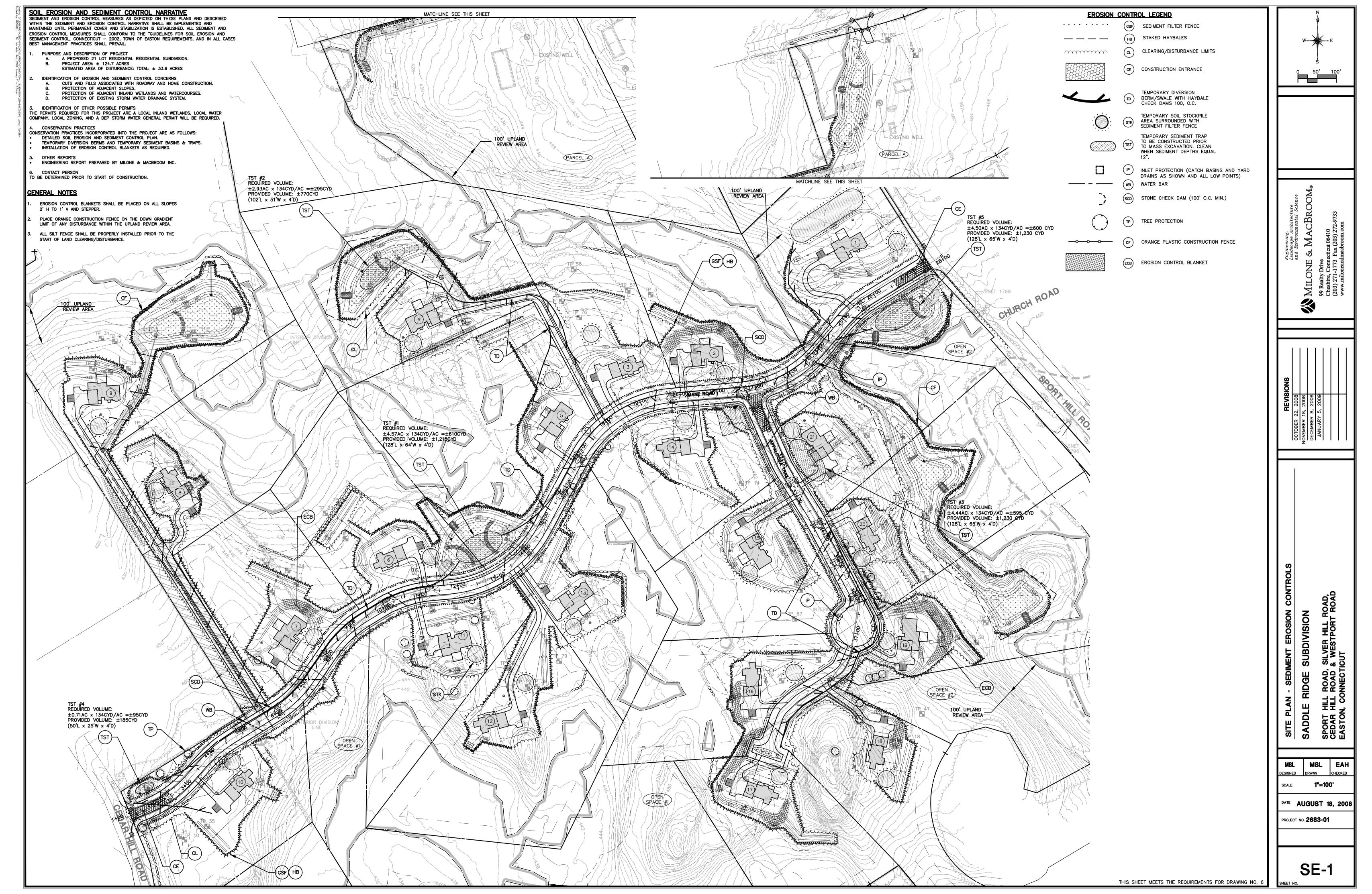
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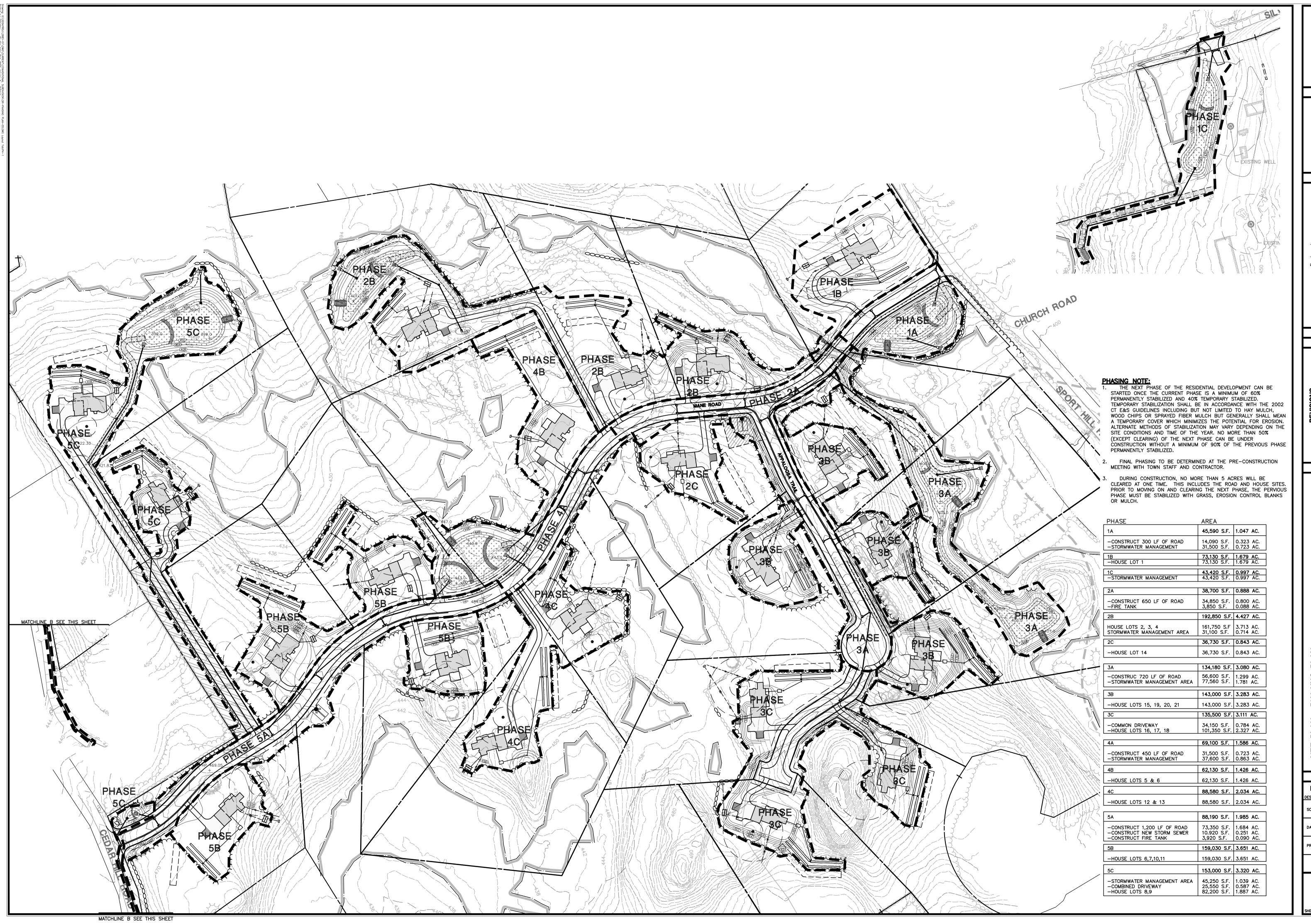
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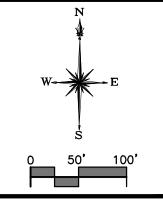












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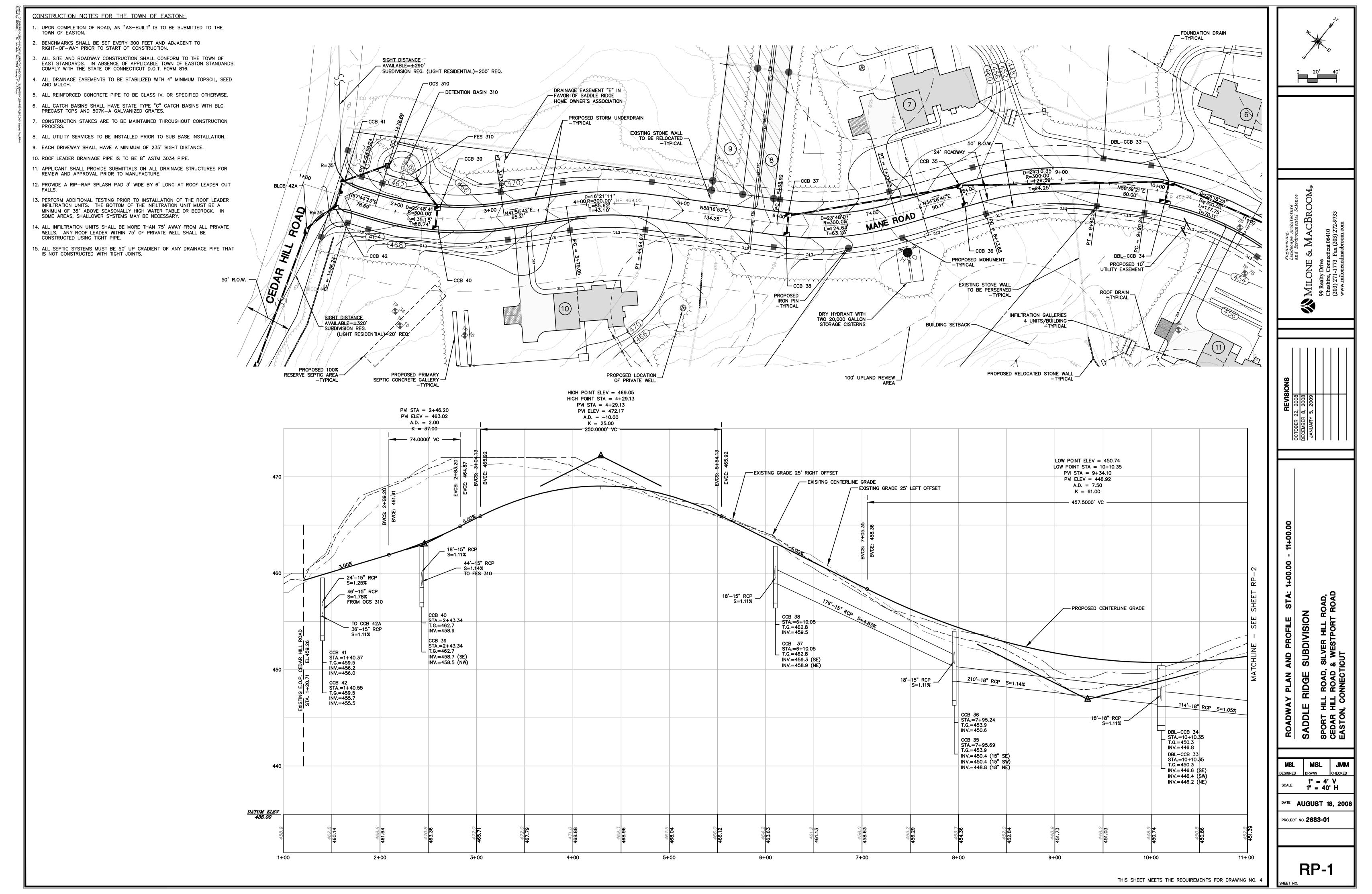
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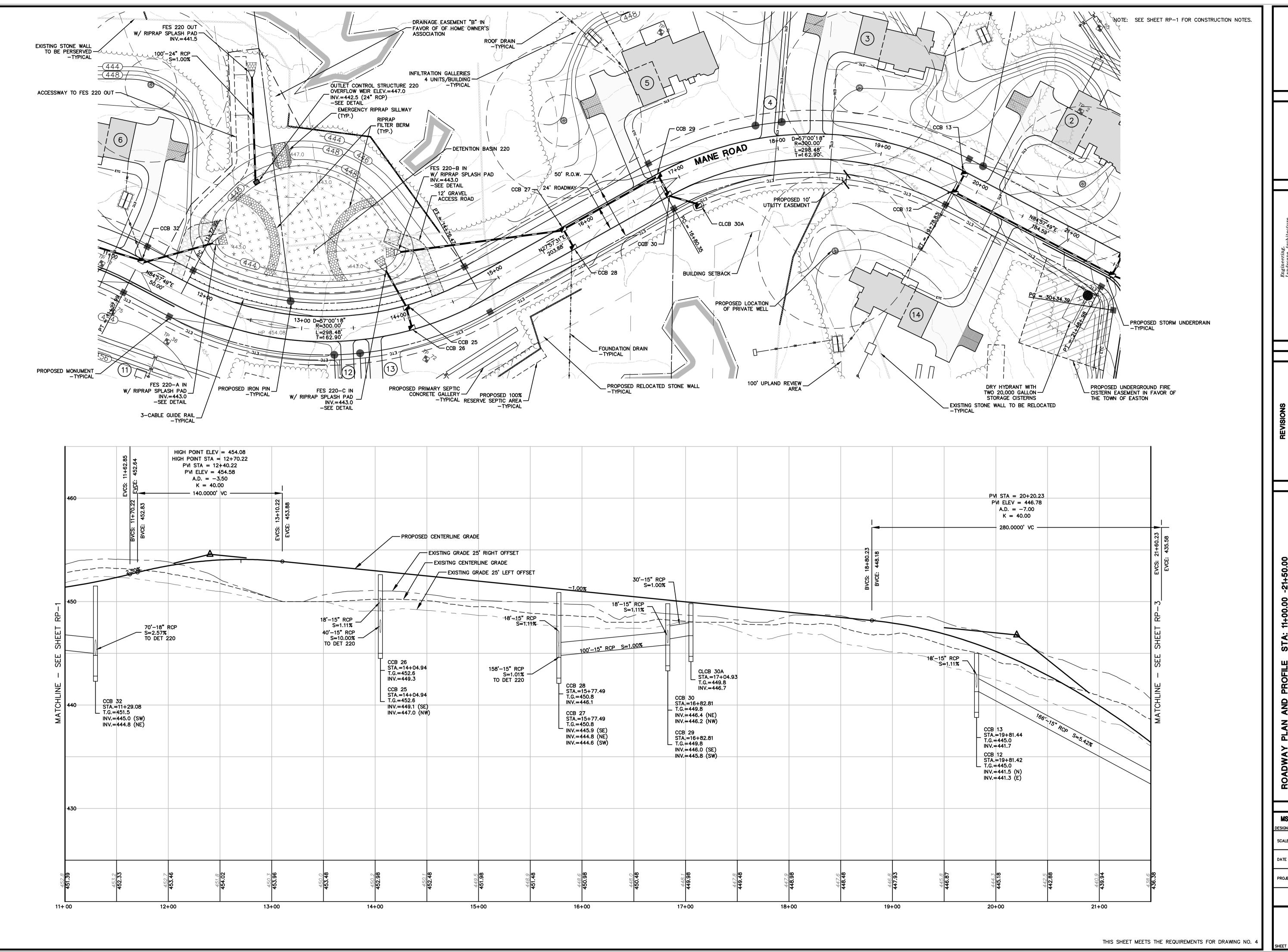
SCALE 1"=100'

DATE DECEMBER 8, 2008

PROJECT NO. **2683-01** 

PH-1





0 20' 40'

SADDLE RIDGE SUBDIVISION
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MSL MSL JMM

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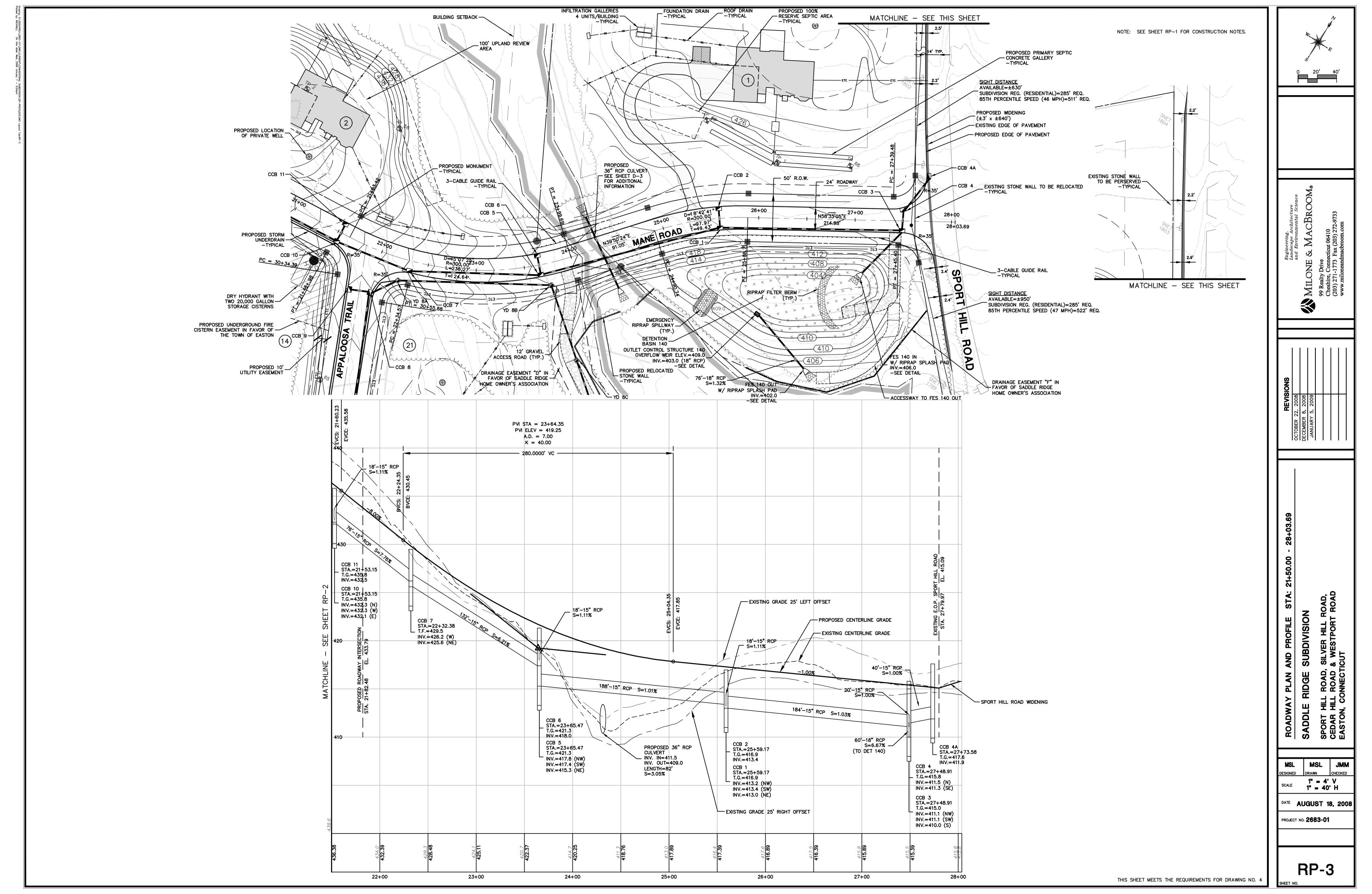
T" = 4' V

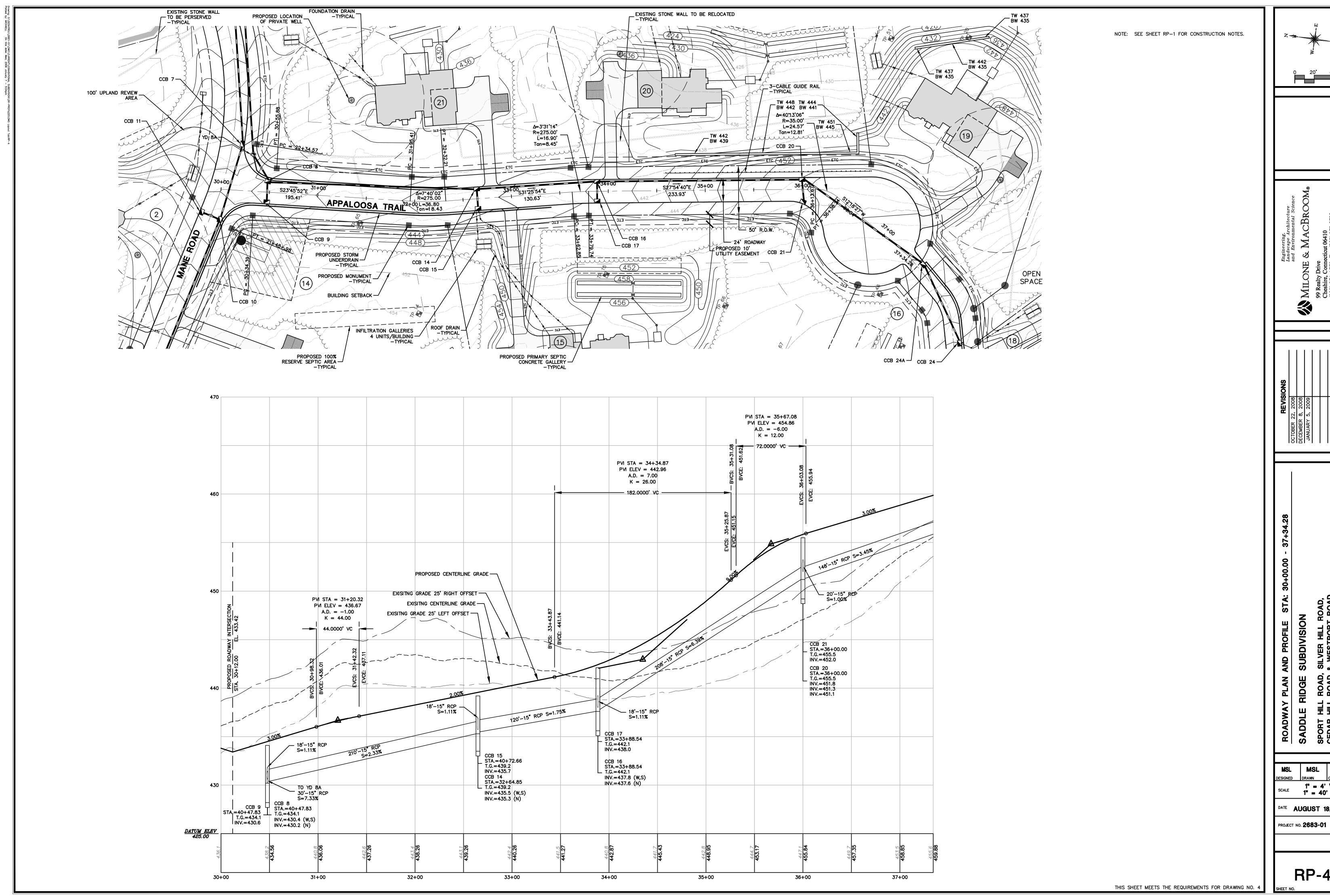
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DATE AUGUST 18, 2008

DATE AUGUST 18, 20
PROJECT NO. 2683-01

RP-2

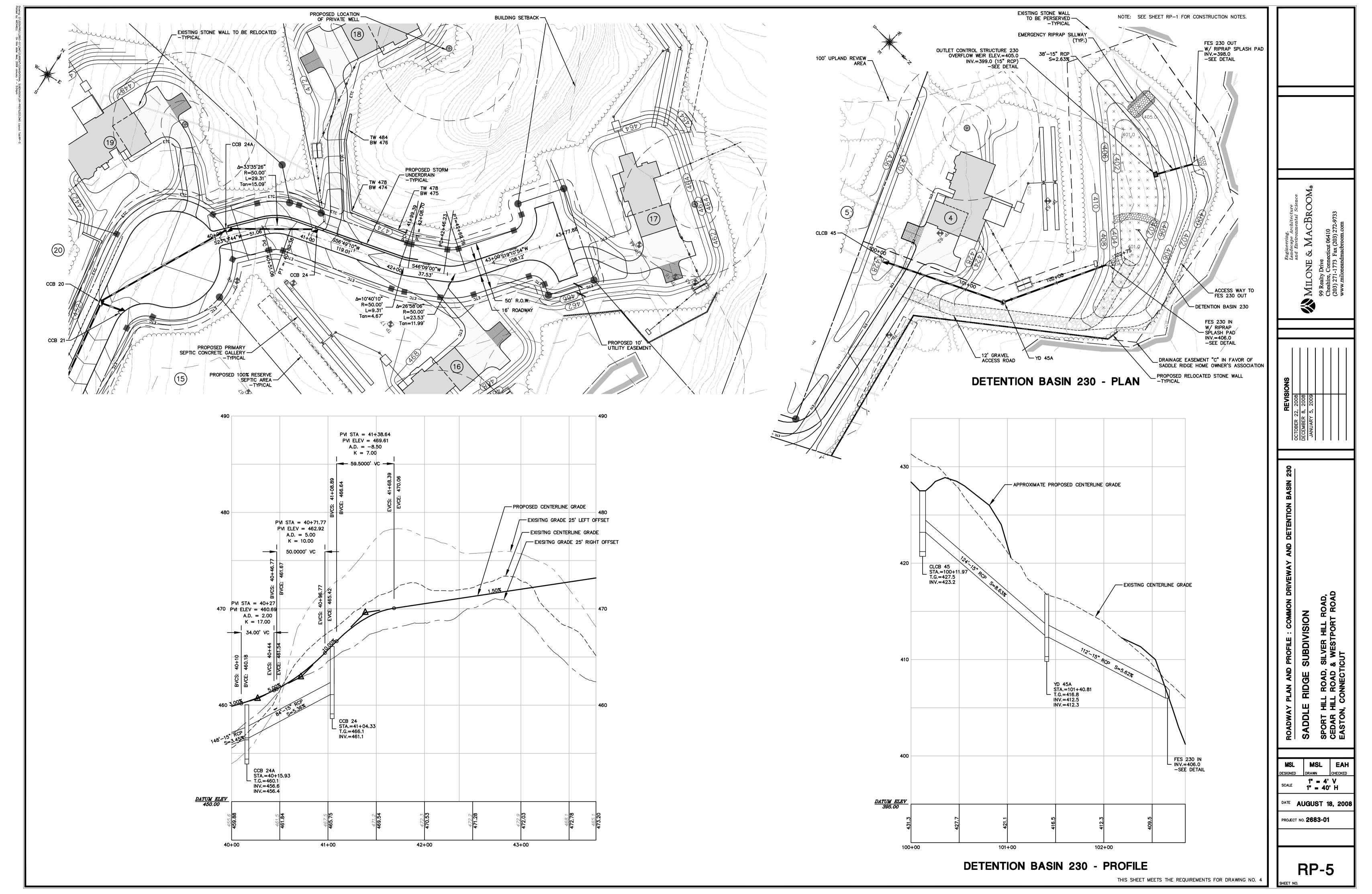


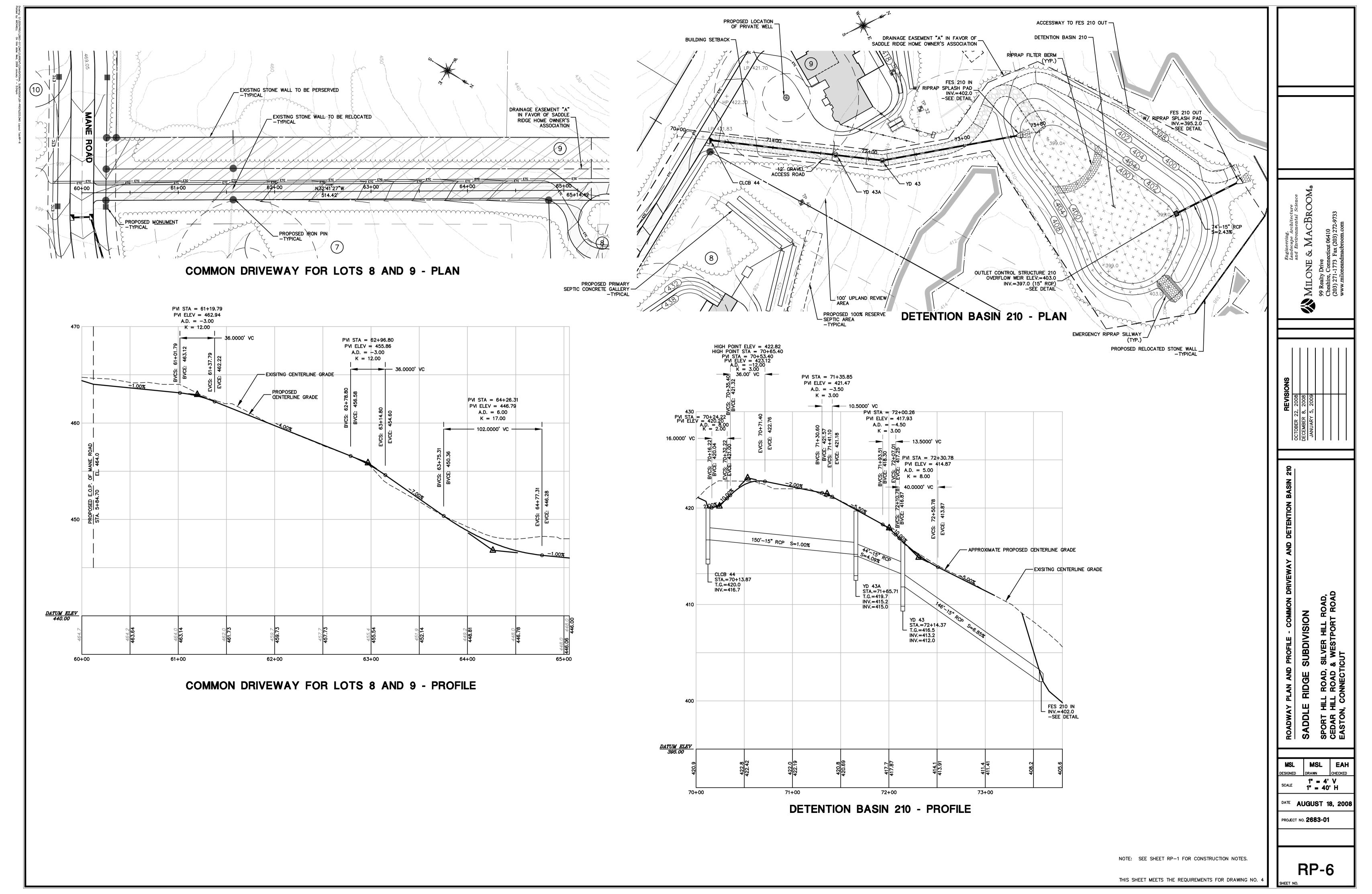


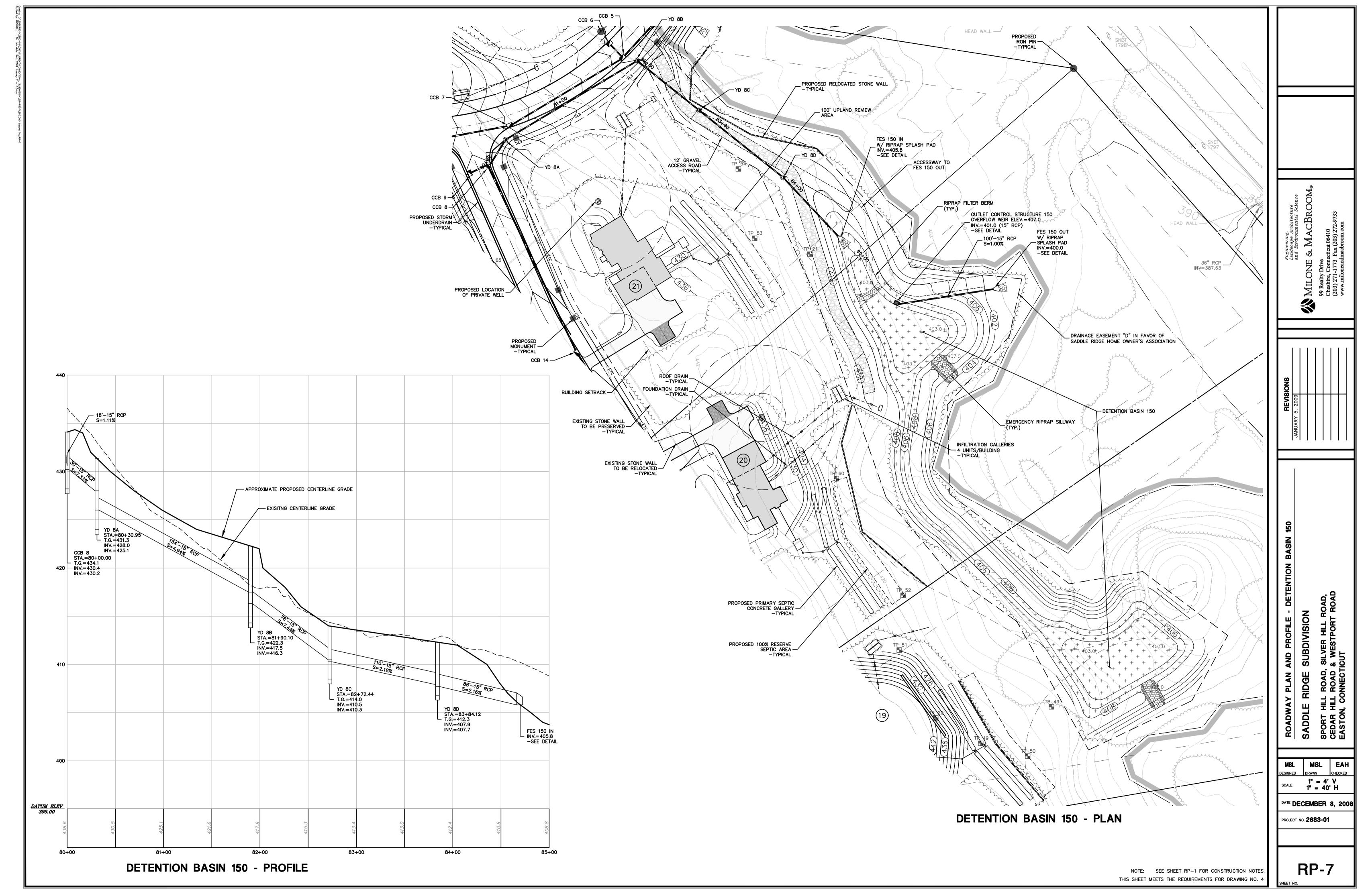
MSL JMM 1" = 4' V 1" = 40' H

DATE AUGUST 18, 2008

RP-4







# SEDIMENT & EROSION CONTROL SPECIFICATIONS

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

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,

ANY ADDITIONAL SPECIFICATIONS AND/OR REQUIREMENTS FOR SEDIMENT AND EROSION CONTROL THAT ARE INCLUDED IN THE REMEDIAL ACTION PLAN (RAP) FOR THE SUBJECT SITE SHALL BE FOLLOWED DURING CONSTRUCTION.

# 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 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.PROVISION SHOULD BE MADE TO CONDUCT SURFACE WATER SAFELY TO STORM DRAINS TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES
- e.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.
- f.NO FILL SHOULD BE PLACED WHERE IT WILL SLIDE OR WASH UPON THE PREMISES OF ANOTHER OWNER OR UPON ADJACENT WETLANDS, WATERCOURSES. OR WATERBODIES.
- g.PRIOR TO ANY REGRADING, A STABILIZED CONSTRUCTION ENTERANCE SHALL BE PLACED AT THE ENTRANCE TO THE WORK AREA IN ORDER TO REDUCE MUD AND OTHER SEDIMENTS FROM LEAVING THE SITE.

# **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. UPON ATTAINING FINAL SUBGRADES, SCARIFY SURFACE TO PROVIDE A GOOD BOND WITH TOPSOIL.
- 3. REMOVE ALL LARGE STONES, TREE LIMBS, ROOTS AND CONSTRUCTION
- 4. APPLY LIME ACCORDING TO SOIL TEST OR AT THE RATE OF TWO (2) TONS

- 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. TOPSOIL SHOULD BE RELATIVELY FREE OF SUBSOIL MATERIAL AND MUST BE FREE OF STONES (OVER 1" IN DIAMETER), LUMPS OF SOIL, ROOTS, TREE LIMBS, TRASH, OR CONSTRUCTION DEBRIS. IT SHOULD BE FREE OF ROOTS OR RHIZOMES SUCH AS THISTLE, NUTGRASS, AND QUACKGRASS.
- 4. AN ORGANIC MATTER CONTENT OF SIX PERCENT (6%) IS REQUIRED. AVOID LIGHT COLORED SUBSOIL MATERIAL
- 5. SOLUBLE SALT CONTENT OF OVER 500 PARTS PER MILLION (PPM) IS LESS SUITABLE. AVOID TIDAL MARSH SOILS BECAUSE OF HIGH SALT CONTENT
- 6. THE pH SHOULD BE MORE THAN 6.0. IF LESS, ADD LIME TO INCREASE pH TO AN ACCEPTABLE LEVEL.

# **APPLICATION:**

- 1. AVOID SPREADING WHEN TOPSOIL IS WET OR FROZEN.
- 2. SPREAD TOPSOIL UNIFORMLY TO A DEPTH OF AT LEAST FOUR INCHES (4"), OR TO THE DEPTH SHOWN ON THE LANDSCAPING PLANS.

# TEMPORARY VEGETATIVE COVER

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. TEMPORARY VEGETATIVE COVER SHALL BE APPLIED IF AREAS WILL NOT BE PERMANENTLY SEEDED BY SEPTEMBER 1.

# 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 SQ. FT.).
- 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 SQ. FT.) AND SECOND APPLICATION OF 200 LBS. OF 10-10-10- (5 LBS. PER 1,000 SQ. FT.) WHEN GRASS IS FOUR INCHES (4") TO SIX INCHES (6") HIGH. APPLY ONLY WHEN GRASS IS DRY.
- 5. UNLESS HYDROSEEDED, 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.

- 1. SELECT APPROPRIATE SPECIES FOR THE SITUATION. NOTE RATES AND SEEDING DATES (SEE VEGETATIVE COVER SELECTION & MULCHING SPECIFICATION BELOW).
- 2. APPLY SEED UNIFORMLY ACCORDING TO THE RATE INDICATED BY BROADCASTING, DRILLING, OR HYDRAULIC APPLICATION.
- 3. UNLESS HYDROSEEDED, COVER RYEGRASS SEEDS WITH NOT MORE THAN 1/4 INCH OF SOIL USING SUITABLE EQUIPMENT.
- 4. MULCH IMMEDIATELY AFTER SEEDING IF REQUIRED. (SEE VEGETATIVE COVER SELECTION & MULCHING SPECIFICATION BELOW.) APPLY STRAW OR HAY MULCH AND ANCHOR TO SLOPES GREATER THAN 3% OR WHERE CONCENTRATED FLOW WILL OCCUR.

# PERMANENT VEGETATIVE COVER

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.

- 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
- 4. APPLY TOPSOIL AS INDICATED ELSEWHERE HEREIN.
- 5. APPLY FERTILIZER ACCORDING TO SOIL TEST OR:
- SPREAD SEEDING: WORK DEEPLY IN SOIL, BEFORE SEEDING, 300 LBS. OF 10-10-10 FERTILIZER PER ACRE (7 LBS. PER 1,000 SQ. FT.); THEN SIX (6) TO EIGHT (8) WEEKS LATER, APPLY ON THE SURFACE AN ADDITIONAL 300
- VEGETATIVE COVER SHALL BE APPLIED. LBS. OF 10-10-10 FERTILIZER PER ACRE. AFTER SEPTEMBER 1, TEMPORARY FALL SEEDING: WORK DEEPLY IN SOIL, BEFORE SEEDING, 600 LBS. OF 10-10-10 FERTILIZER PER ACRE (14 LBS. PER 1,000 SQ. FT.).

# VEGETATIVE COVER SELECTION & MULCHING

TEMPORARY VEGETATIVE COVER:

# PERENNIAL RYEGRASS 3 LBS./1,000 SQ.FT. (IOLUIUM PERENNE)

- * PERMANENT VEGETATIVE COVER:
- BARON KENTUCKY BLUEGRASS JAMESTOWN II CHEWINGS FESCUE 20% PALMER PERENNIAL RYEGRASS
- * LOFTS "TRIPLEX GENERAL" MIX OR APPROVED EQUAL. RECOMMENDED TIME SEEDING. 5 LB./1000 S.F. SEEDING RATE.
- SPRING SEEDING: 4/1 to 5/31
- FALL SEEDING: 8/16 to 10/15

# TEMPORARY MULCHING:

STRAY OR HAY 70-90 LBS./1,000 SQ.FT. (TEMPORARY VEGETATIVE AREAS)

# WOOD FIBER IN HYDROMULCH SLURRY 25-50 LBS./1,000 SQ. FT.

# **ESTABLISHMENT:**

- 1. SMOOTH AND FIRM SEEDBED WITH CULTIPACKER OR OTHER SIMILAR EQUIPMENT PRIOR TO SEEDING (EXCEPT WHEN HYDROSEEDING).
- 2. SELECT ADAPTED SEED MIXTURE FOR THE SPECIFIC SITUATION. NOTE RATES AND THE SEEDING DATES (SEE VEGETATIVE COVER SELECTION &
- 3. APPLY SEED UNIFORMLY ACCORDING TO RATE INDICATED, BY BROADCASTING, DRILLING, OR HYDRAULIC APPLICATION.
- 4. COVER GRASS AND LEGUME SEED WITH NOT MORE THAN 1/4 INCH OF SOIL WITH SUITABLE EQUIPMENT (EXCEPT WHEN HYDROSEEDING).
- 5. MULCH IMMEDIATELY AFTER SEEDING, IF REQUIRED, ACCORDING TO TEMPORARY MULCHING SPECIFICATIONS. (SEE VEGETATIVE COVER SELECTION & MULCHING SPECIFICATION BELOW).
- 6. USE PROPER INOCULANT ON ALL LEGUME SEEDINGS, USE FOUR (4) TIMES NORMAL RATES WHEN HYDROSEEDING.
- 7. USE SOD WHERE THERE IS A HEAVY CONCENTRATION OF WATER AND IN CRITICAL AREAS WHERE IT IS IMPORTANT TO GET A QUICK VEGETATIVE COVER TO PREVENT EROSION.

- 1. TEST FOR SOIL ACIDITY EVERY THREE (3) YEARS AND LIME AS REQUIRED.
- 2. ON SITES WHERE GRASSES PREDOMINATE, BROADCAST ANNUALLY 500 POUNDS OF 10-10-10 FERTILIZER PER ACRE (12 LBS. PER 1,000 SQ. FT.) OR AS NEEDED ACCORDING TO ANNUAL SOIL TESTS.
- 3. ON SITES WHERE LEGUMES PREDOMINATE, BROADCAST EVERY THREE (3) YEARS OR AS INDICATED BY SOIL TEST 300 POUNDS OF 0-20-20 OR EQUIVALENT PER ACRE (8 LBS PER 1,000 SQ. FT.).

# **EROSION CHECKS**

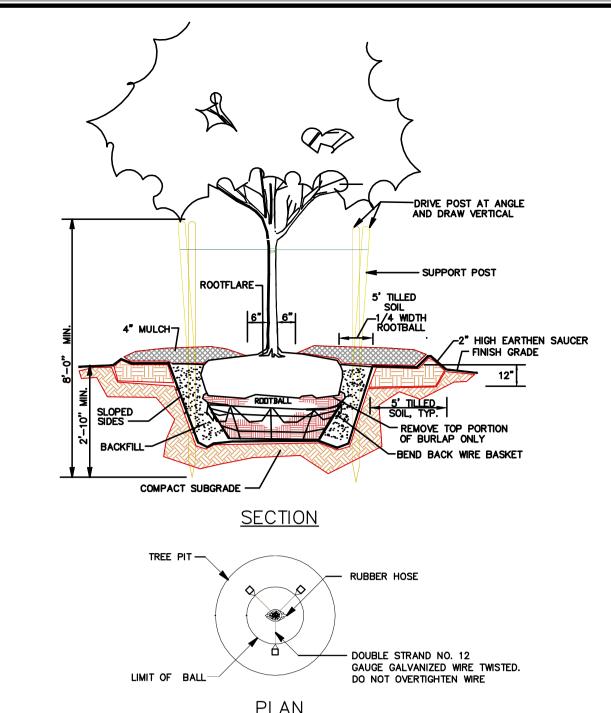
1. TEMPORARY PERVIOUS BARRIERS USING BALES OF HAY OR STRAW, HELD IN PLACE WITH STAKES DRIVEN THROUGH THE BALES AND INTO THE GROUND OR GEOTEXTILE FABRIC FASTENED TO A FENCE POST AND BURIED INTO THE GROUND, SHALL BE INSTALLED AND MAINTAINED AS REQUIRED TO CHECK EROSION AND REDUCE SEDIMENTATION.

- 1. BALES SHOULD 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") 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. GEOTEXTILE FABRIC SHALL BE SECURELY ANCHORED AT THE TOP OF A THREE FOOT (3') HIGH FENCE AND BURIED A MINIMUM OF FOUR INCHES (4") TO

THE SOIL. SEAMS BETWEEN SECTIONS OF FILTER FABRIC SHALL OVERLAP

# INSTALLATION AND MAINTENANCE:

- 1. BALED HAY EROSION BARRIERS SHALL BE INSTALLED AT ALL STORM SEWER
- BALED HAY EROSION BARRIERS AND GEOTEXTILE FENCE SHALL BE INSTALLED AT THE LOCATION INDICATED ON THE PLAN AND IN ADDITIONAL AREAS AS MAY BE DEEMED APPROPRIATE DURING CONSTRUCTION.
- 3. ALL EROSION CHECKS SHALL BE MAINTAINED UNTIL ADJACENT AREAS ARE
- 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



1. SUPPORT STAKES SHALL BE REMOVED BY THE

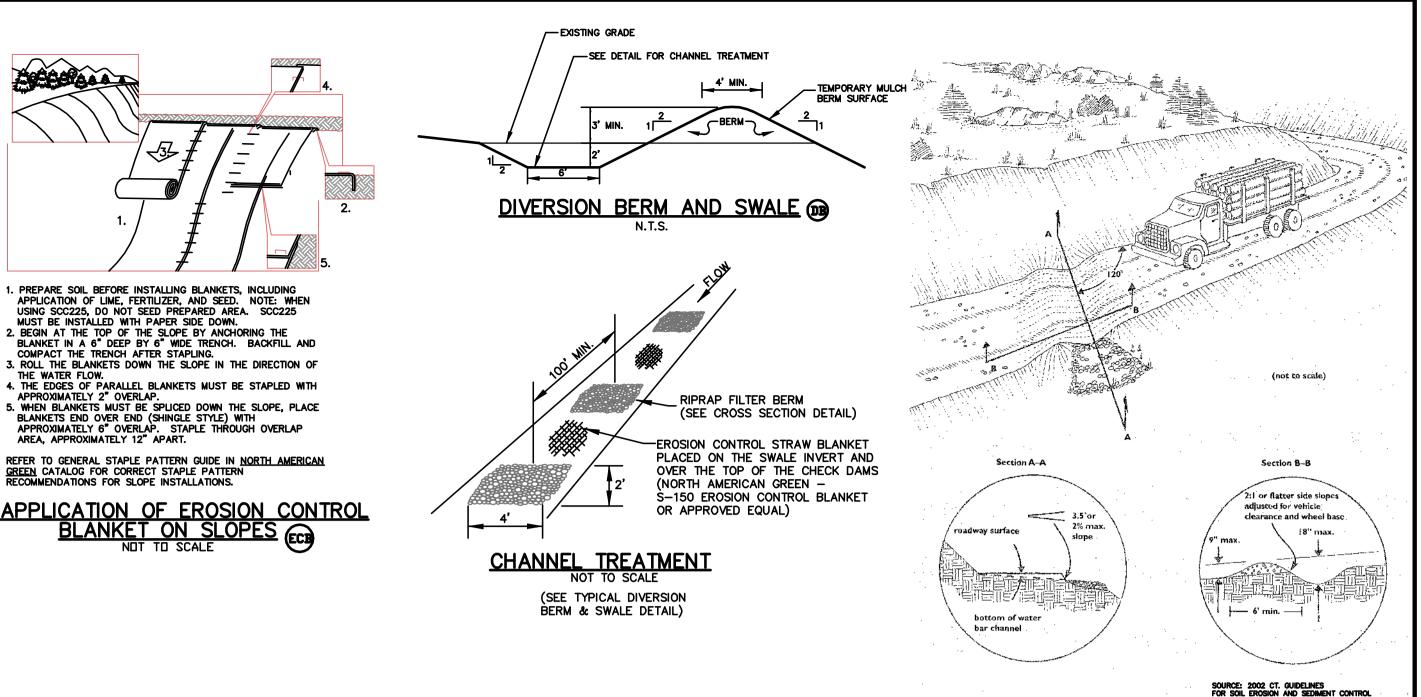
PLAN PACKED STRAW

∠TRENCH=WIDTH OF BALE

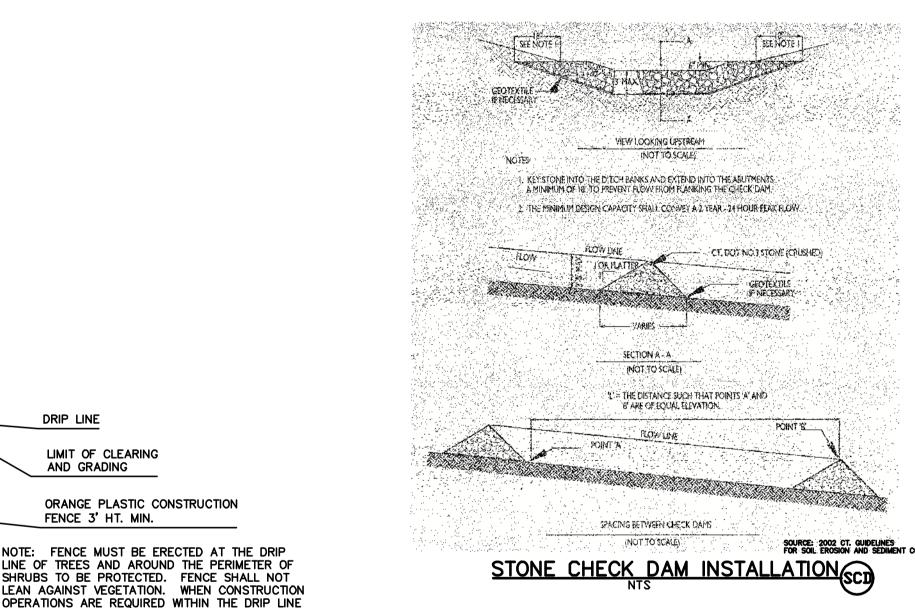
PLACEMENT & CONSTRUCTION OF

A STRAW BALE BARRIER

BOTTOM



CONTRACTOR ONE YEAR AFTER INSTALLATION TREE DETAIL N.T.S.



SEDIMENTATION CONTROL SYSTEM

OF TREES, THE FENCE SHALL BE ERECTED AS FAR

AND SHALL NEVER ENCROUCH CLOSER THAN FIVE

FROM THE TRUNK OF THE TREE AS IS POSSIBLE

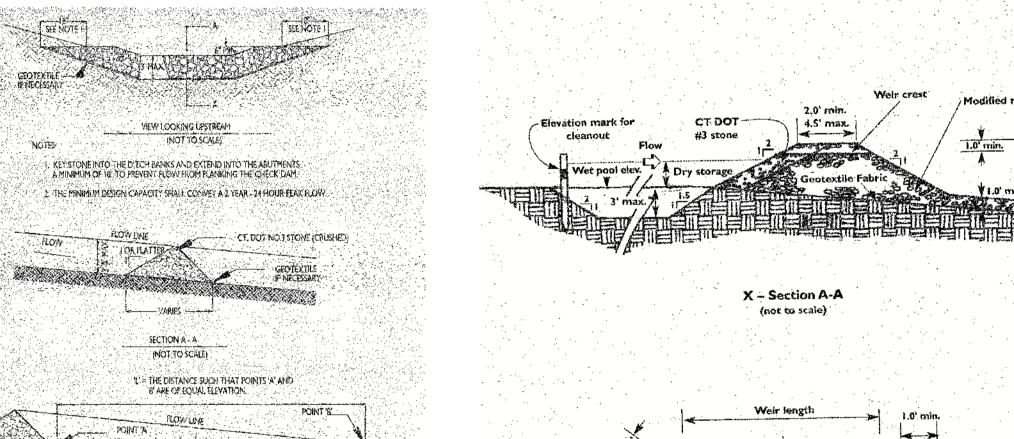
FEET FROM TREE. LIGHT CONSTRUCTION

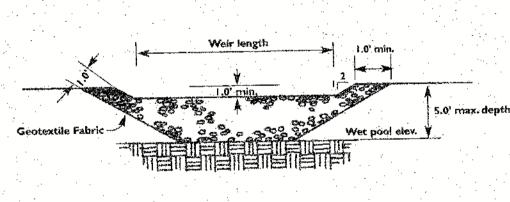
EQUIPMENT SHOULD BE UTILIZED DURING

BARRIER TO PREVENT PIPING

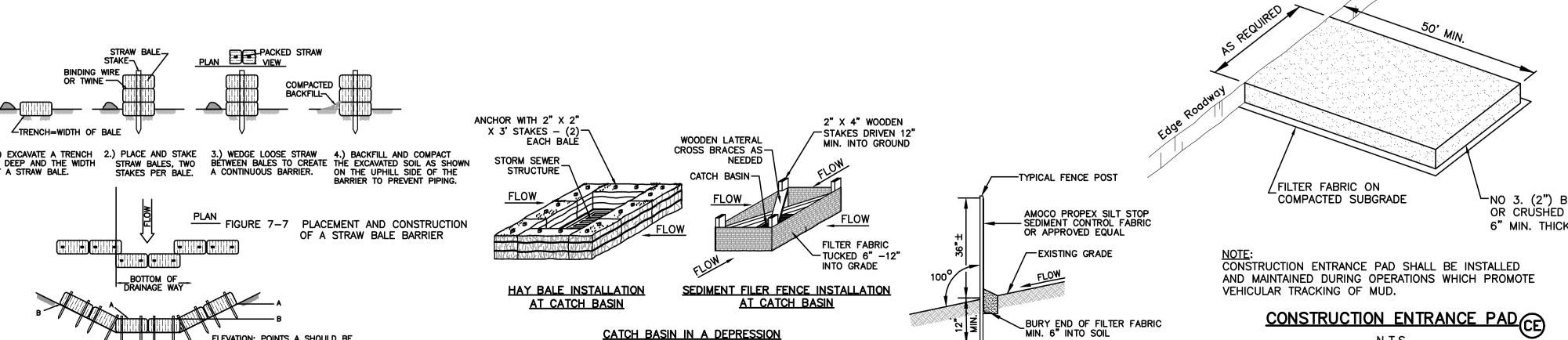
OF A STRAW BALE BARRIER

OPERATIONS WITHIN THE DRIP LINE OF TREES.





TEMPORARY SEDIMENT (15)



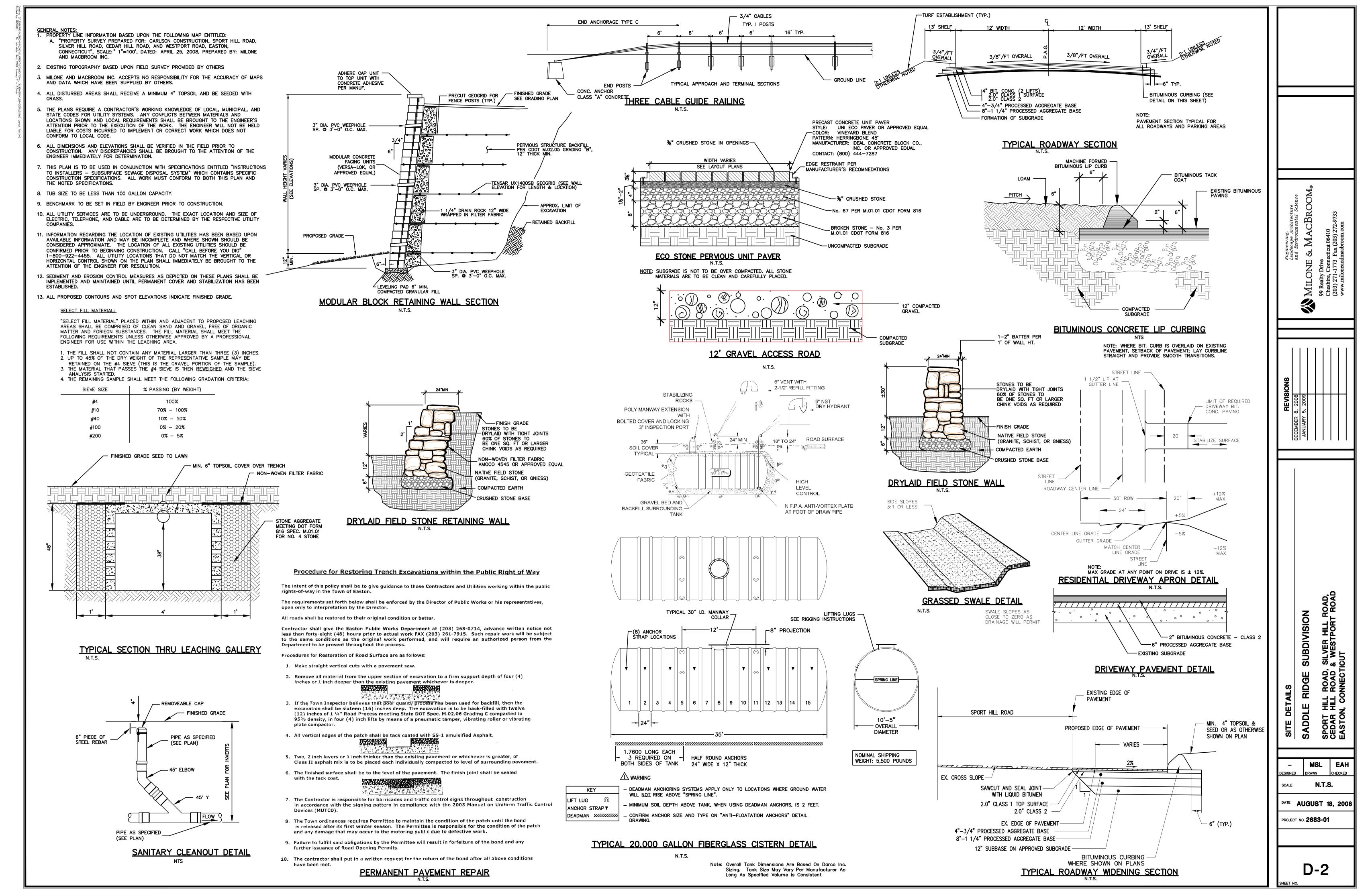
SEDIMENT FILTER FENCE

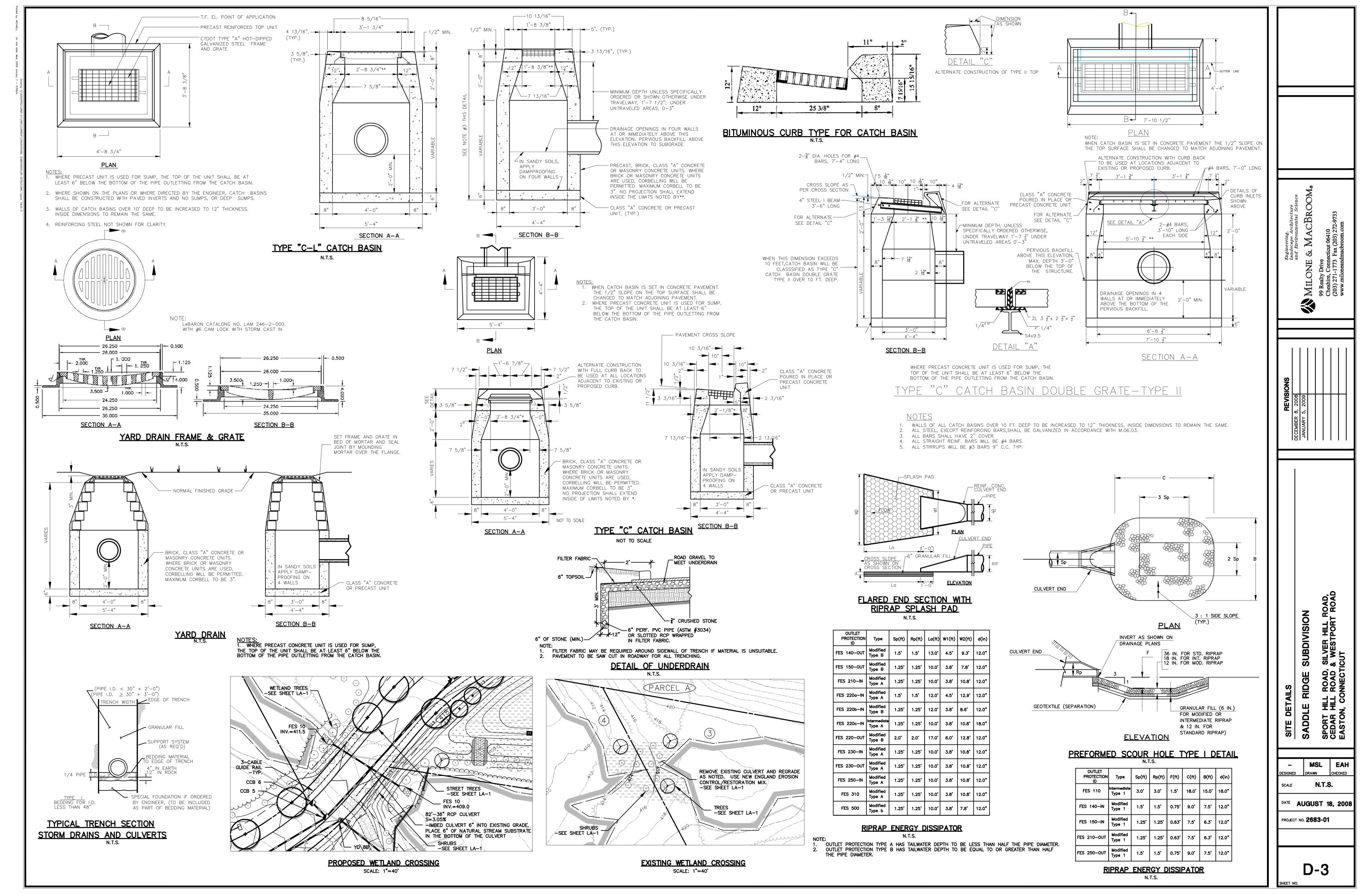
-NO 3. (2") BROKEN OR CRUSHED STONE 6" MIN. THICKNESS

DIVISIO NB RIDGE S

MSL EAH N.T.S.

**AUGUST 18, 2008** ROJECT NO. **2683-01** 





# FORMATION OF EMBANKMENT FOR STORMWATER BASINS

MATERIALS

ALL FILL MATERIALS SHALL BE OBTAINED FROM REQUIRED EXCAVATIONS OR DESIGNATED BORROW AREAS. FILL MATERIAL SHALL CONTAIN NO FROZEN MATERIAL, SOD, BRUSH, ROOTS, OR OTHER ORGANIC MATERIAL. EARTH EMBANKMENTS SHALL CONTAIN NO STONES OR ROCK PARTICLES OVER THREE INCHES IN DIAMETER.

EMBANKMENTS SHALL CONTAIN NO STONES OR ROCK PARTICLES OVER THREE INCHES IN DIAMETER.

THE MATERIAL USED IN THE CENTER PORTION OF THE EMBANKMENT SHALL BE THE MOST IMPERVIOUS MATERIAL OBTAINED FROM THE BORROW AREAS IF REQUIRED. THE MORE PERVIOUS MATERIALS SHALL BE USED IN THE OUTER PORTION OF THE EMBANKMENT AS SHOWN ON THE PLANS.

1. IMPERVIOUS FILL MATERIALS

IMPERVIOUS FILL SHALL BE A GLACIAL TILL, AND TO BE PROVIDED FROM AN OFFSITE SOURCE IN THE QUANTITIES REQUIRED FOR COMPLETION. FILL TO BE APPROVED BY THE ENGINEER. GLACIAL TILL SHALL CONSIST OF HARD AND DURABLE PARTICLES OR FRAGMENTS AND SHALL BE FREE FROM ORGANIC MATTER AND OTHER OBJECTIONABLE MATERIALS. GLACIAL TILL SHALL GENERALLY CONFORM TO THE FOLLOWING GRADATION LIMITS:

U.S. STANDARD PERCENTAGE PASSING SIEVE SIZE BY WEIGHT

3 INCH 100
NO. 4 60-95
NO. 10 50-95
NO. 40 30-75
NO. 100 20-65

2. EMBANKMENT FOUNDATION PREPARATION

AREAS WHERE EMBANKMENTS ARE TO BE FORMED SHALL BE CLEARED AND GRUBBED OF ALL TOPSOIL AND OTHER ORGANIC MATERIALS TO A DEPTH OF AT LEAST 24 INCHES. UNLESS OTHERWISE SPECIFIED ON THE DRAWNIGS, FOUNDATION AREAS SHALL BE SCARIFIED TO A DEPTH OF THREE INCHES PRIOR TO PLACEMENT OF FILL MATERIAL.

3. PLACEMENT
NO FILL SHALL BE PLACED UNTIL THE FOUNDATION PREPARATION AND
EXCAVATIONS IN THE FOUNDATION HAVE BEEN COMPLETED. NO FILL SHALL BE
PLACED ON A FROZEN SURFACE NOR SHALL FROZEN MATERIAL BE INCORPORATED.

4. EMBANKMENT MATERIAL SHALL BE PLACED IN HORIZONTAL LAYERS. THE
THICKNESS OF LAYERS SHALL BE SIX INCHES. DURING CONSTRUCTION, THE
SURFACE OF THE FILL SHALL HAVE A CROWN OR CROSS—SLOPE OF NOT LESS
THAN TWO PERCENT. EACH LAYER OR LIFT SHALL EXTEND OVER THE ENTIRE AREA
OF THE FILL.

THE FILL SHALL BE FREE FROM LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFERING SUBSTANTIALLY IN TEXTURE OR GRADATION FROM THE SURROUNDING MATERIAL. THE MORE PERVIOUS MATERIAL SHALL BE PLACED IN THE OUTSIDE PORTION OF THE EMBANKMENT OR AS INDICATED ON THE DRAWINGS. THE FINISHED FILL SHALL BE SHAPED AND GRADED TO THE LINES AND CRADE SHOWN ON THE DRAWINGS.

B. BACKFILL AT THE PIPE OUTLET BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED THREE INCHES IN THICKNESS AND SHALL BE BROUGHT UP UNIFORMLY AROUND THE OUTLET PIPE AND FLARED END SECTION

THE MOISTURE CONTENT OF MATERIALS IN THE EMBANKMENT SHALL BE CONTROLLED TO MEET THE REQUIREMENTS OF SECTION 5, "COMPACTION OF EMBANKMENT." WHEN NECESSARY, MOISTURE SHALL BE ADDED BY USE OF APPROVED SPRINKLING EQUIPMENT. WATER SHALL BE ADDED UNIFORMLY AND EACH LAYER SHALL BE THOROUGHLY DISKED OR HARROWED TO PROVIDE PROPER MIXING. ANY LAYER FOUND TOO WET FOR PROPER COMPACTION SHALL BE ALLOWED TO DRY BEFORE ROLLING. PLACING OR ROLLING OF MATERIAL ON EARTH FILLS WILL NOT BE PERMITTED DURING OR IMMEDIATELY AFTER RAINFALLS WHICH INCREASE THE MOISTURE CONTENT BEYOND THE LIMIT OF SATISFACTORY COMPACTION. THE EARTH FILL SHALL BE BROUGHT UP UNIFORMLY AND ITS TOP SHALL BE KEPT GRADED AND SLOPED SO THAT A MINIMUM OF RAINWATER WILL BE RETAINED THEREON. COMPACTED EARTH FILL DAMAGED BY WASHING SHALL BE ACCEPTABLY REPLACED BY THE CONTRACTOR.

COMPACTION

A. EMBANKMENT MATERIAL SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY AT NEAR OPTIMUM MOISTURE CONTENT AND BY THE COMPACTION EQUIPMENT SPECIFIED HEREIN. THE COMPACTION EQUIPMENT SHALL TRAVERSE THE ENTIRE SURFACE OF EACH LAYER OF FILL MATERIAL.

APPROVED TAMPING ROLLERS SHALL BE USED FOR COMPACTING ALL PARTS OF THE EMBANKMENTS WHICH THEY CAN EFFECTIVELY REACH. THE CONTRACTOR SHALL DEMONSTRATE THE EFFECTIVENESS OF THE ROLLER BY ACTUAL SOIL COMPACTION RESULTS OF THE SOIL TO BE USED IN THE EMBANKMENT WITH LABORATORY WORK PERFORMED BY AN APPROVED SOIL TESTING LABORATORY.

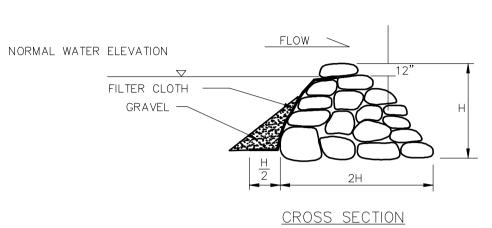
B. BACKFILL AT OUTLET CONDUIT BACKFILL SHALL BE COMPACTED BY HAND TAMPING WITH MECHANICAL TAMPERS. HEAVY EQUIPMENT SHALL NOT BE OPERATED WITHIN TWO FEET OF ANY STRUCTURE. EQUIPMENT SHALL NOT BE ALLOWED TO OPERATE OVER THE OUTLET CONDUITS UNTIL THERE IS 24 INCHES OF FILL OVER THE PIPE CONDUITS.

THE EMBANKMENTS SHALL BE CONSTRUCTED TO THE ELEVATIONS, LINES, GRADES AND CROSS—SECTIONS AS SHOWN ON THE DRAWINGS. THE EMBANKMENTS SHALL BE MAINTAINED IN A MANNER SATISFACTORY TO THE ENGINEER AND SURFACES SHALL BE COMPACT AND ACCURATELY GRADED BEFORE TOPSOIL IS PLACED ON THEM. THE CONTRACTOR SHALL CHECK THE EMBANKMENT SLOPES WITH STRINGLINES TO INSURE THAT THEY CONFORM TO THE SLOPES GIVEN ON THE PLANS AND ARE UNIFORM FOR THE ENTIRE LENGTH OF THE

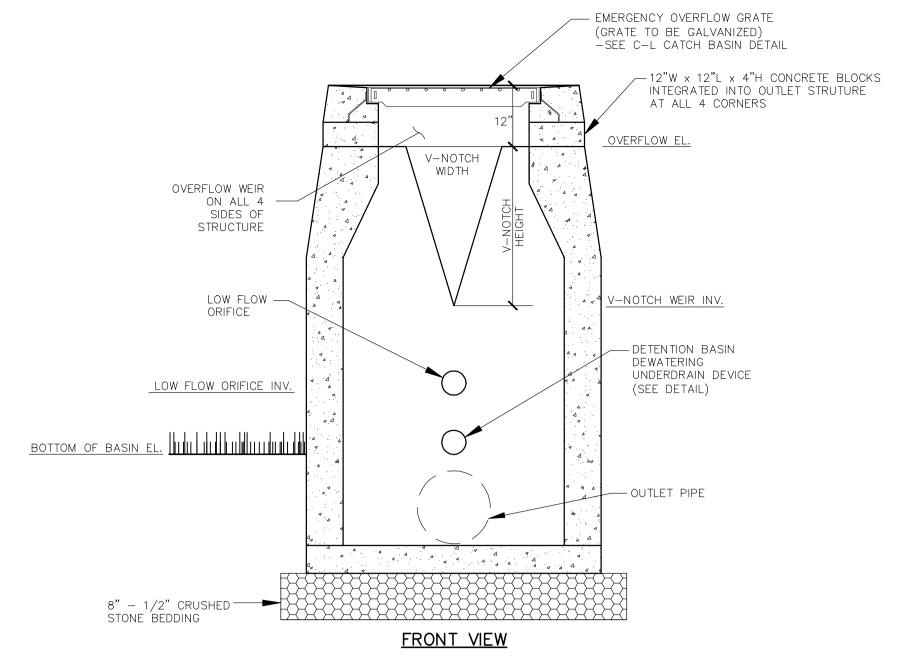
CENTER OF BERM 12" MAX.
ABOVE NORMAL WATER LEVEL
SEE PLAN FOR ELEVATION.

CHOKE STONES TO FILL VOIDS BETWEEN STONES

ELEVATION



RIPRAP FILTER BERM



NOTES: OUTLET STRUCTURE TO BE CONSTRUCTED USING A STANDARD "C-L" TYPE CATCH BASIN.

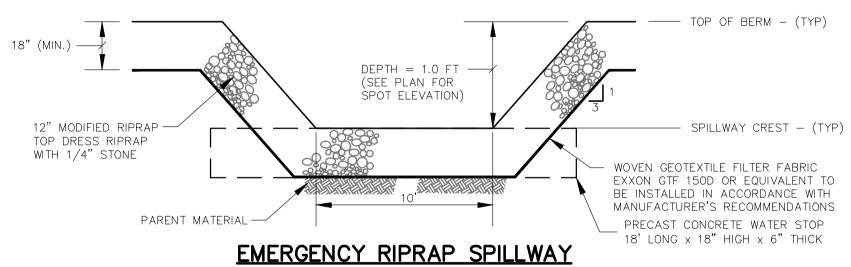
PLEASE REFER TO THE "C-L" TYPE CATCH BASIN DETAIL ON SHEET D-3 FOR DIMENSIONS AND GRATE DETAIL.

	DET 140	DET 150	DET 210	DET 220	DET 230	DET 310
TOP OF BERM ELEVATION	410.0	408.0	404.0	448.0	406.0	462.0
OVERFLOW ELEVATION	409.0	407.0	403.0	447.0	405.0	<b>461.0</b>
100-YR STORM ELEVATION	408.45	406.82	403.0	446.84	404.96	460.66
V-NOTCH WEIR DIMENSIONS (WxH)	1.5 <b>'</b> ×2.5'	1.5 <b>'</b> ×2.0'	1.0'x3.0'	2.0'x3.0'	1.25'x2.0'	0.75'x2.0'
V-NOTCH WEIR INVERT	406.5	405.0	400.0	444.0	403.0	459.0
LOW FLOW ORIFICE DIAMETER	5.0" DIA	n/a	n/a	n/a	5.0" DIA	n/a
LOW FLOW ORIFICE INVERT	405.0	n/a	n/a	n/a	402.0	n/a
BASIN BOTTOM ELEVATION	404.0	403.0	399.0	443.0	401.0	457.0
OUTLET PIPE DIAMETER	18 <b>"</b>	15 <b>"</b>	15 <b>"</b>	24"	15 <b>"</b>	15 <b>"</b>
OUTLET PIPE INVERT	403.0	401.0	397.0	442.5	399.0	457.0

DETENTION BASIN OUTLET CONTROL STRUCTURE

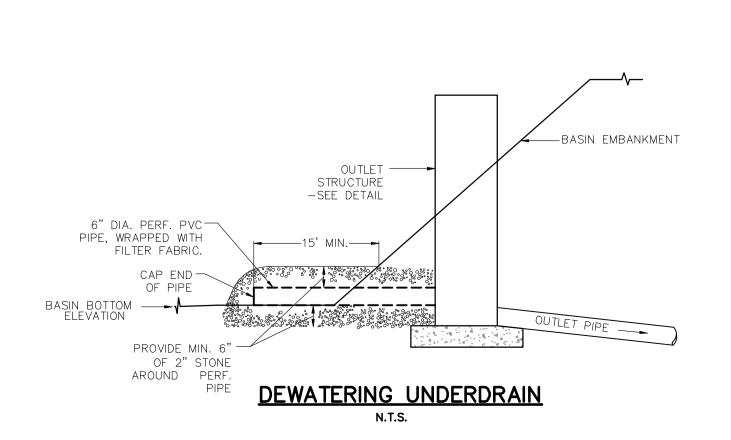
## -EXISTING GRADE IF EXCAVATED BASIN IS USED (TYP.) - RIPRAP ENERGY DISSAPATOR /PLUNGE POOL - SEE DETAIL - IF CONSTRUCTION OF EARTHEN BERM MIN. TOP OF BERM EL IS REQUIRED FOR BASIN -SEE 3 MIN. EMBANKMENT SPECIFICATION OVERFLOW EL. EARTHEN DETENTION BASIN DEWATERING DEVICE -SOLID OUTLET PIPE - - SEE PLAN FOR LENGTH SEE DETAIL AND DIAMETER INLET PIPE INVERT OUTLET PIPE RIPRAP FILTER BERM OUTLET CONTROL -SEE DETAIL -

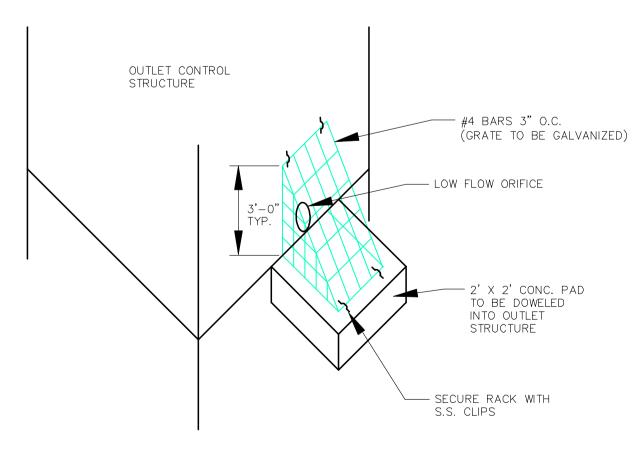
# TYPICAL DETENTION BASIN



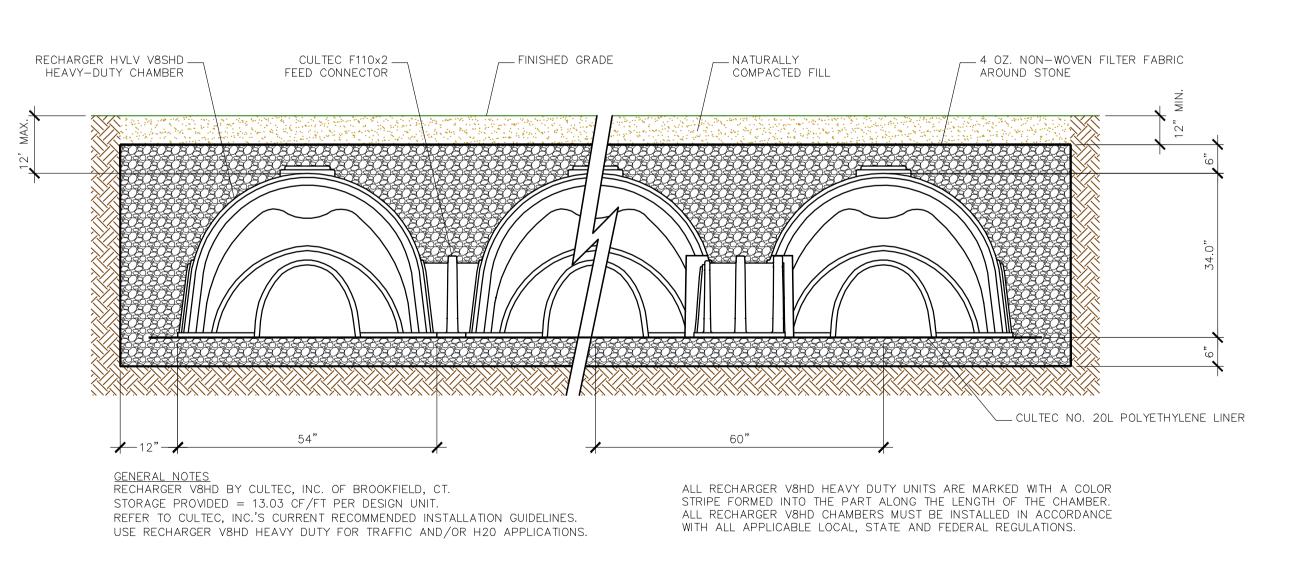
N.T.S.

NOTE: ALL EMERGENCY SPILLWAYS TO BE ACCESSIBLE FOR RUBBER TIRE CONSTRUCTION EQUIPMENT TO CROSS.





OUTLET CONTROL STRUCTURE TRASH GRATE
N.T.S.



CULTEC STORMWATER CHAMBER
RECHARGER MODEL V8

-- FAB EAH
DESIGNED DRAWN CHECKED

SCALE N.T.S.

DATE AUGUST 18, 2008

SUBDIVISION

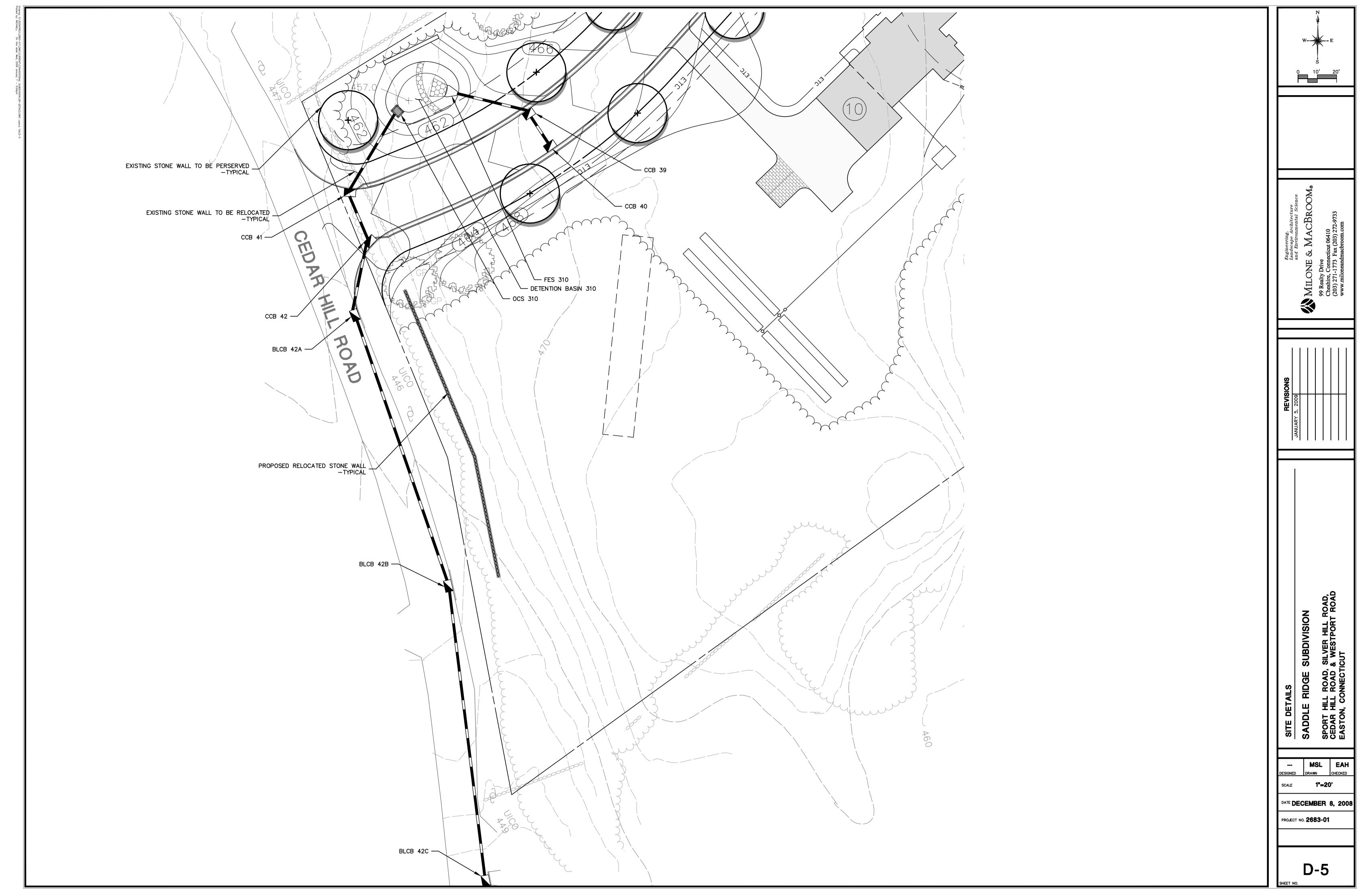
RIDGE

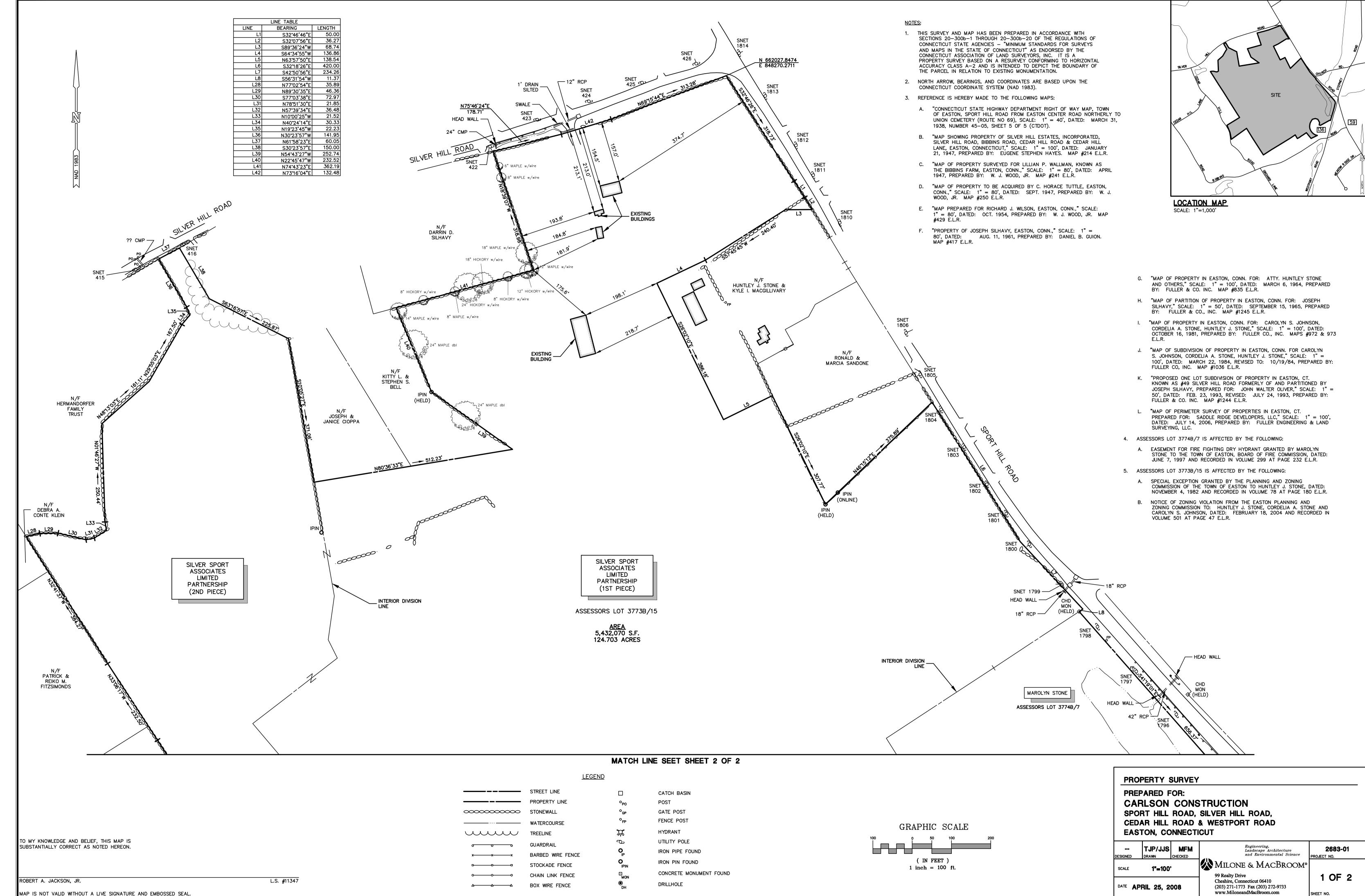
SADDLE

MACBRO

PROJECT NO. **2683-01** 

D-4





SEE SHEET 1 OF 2 FOR CERTIFICATION, NOTES, LEGEND, AND LOCATION MAP