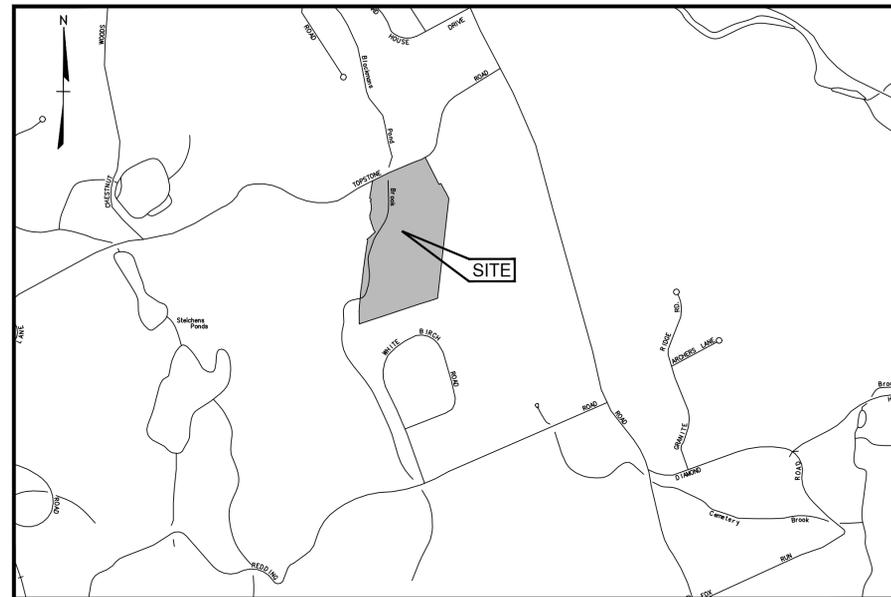


PROPOSED SITE DEVELOPMENT PLAN

4-LOT SUBDIVISION

130 TOPSTONE ROAD
REDDING, CT



LOCATION MAP
1"=1000'

LEGEND

EXISTING SYMBOLS:	PROPOSED SYMBOLS:
● Iron Pin (Found)	● (YD) Storm Yard Drain
□ Monument (Found)	● (MH) Storm Drain Manhole
○ Manhole	■ (CB) Catch Basin
□ "CB" Catch Basin	▲ Perc Test Hole Location & Number
○ Utility Pole	◆ Deep Test Hole Location & Number
○ Light Pole	TP1
○ Water Gate	⊙ Proposed Well
○ Gas Valve	FE Proposed Flared End Section
○ Gas Meter	HW Proposed Headwall
⊙ Existing Well	CD Proposed Curtain Drain
EXISTING LINETYPES:	PROPOSED LINETYPES:
— Property Line	— S — Sanitary Sewer
— S — Sanitary Sewer Line	— E — Electric Service
— E — U/G Elec. Line	— W — Water Service
— W — Water Line	— T — U/G Telephone Service
— O/H — Overhead Utilities	— E/T — Electric/Telephone Service
— T — U/G Tele. Line	— RL — Roof Leader
— E/T — U/G Electric/Telephone Line	— FD — Footing Drain
— Wood/Chain Link Fence	— Primary Septic
— Stone Ret. Wall	— Reserve Septic
— Contour	— Retaining Wall
— Wetland Limit	— Contour
× 20.1 Spot Elevation	20.1 × Spot Elevation
— Watercourse Limit	— Silt Fence (GSF)
— Drainage Line	— Wood/Chain Link Fence
— Town/City Line	— Construction Fence
— 25 Year Flood Line	— Vegetative Buffer
— 100 Year Flood Line	— Wetland Limit (Flagged)

DRAWING LIST

- T-1 COVER SHEET
- EX-1.0 EXISTING CONDITIONS SURVEY
- C-1.0 SITE OVERVIEW PLAN
- C-1.1 SITE DEVELOPMENT PLAN (1 OF 4)
- C-1.2 SITE DEVELOPMENT PLAN (2 OF 4)
- C-1.3 SITE DEVELOPMENT PLAN (3 OF 4)
- C-1.4 SITE DEVELOPMENT PLAN (4 OF 4)
- C-2.0 SOIL EROSION AND SEDIMENT CONTROL PLAN
- C-3.0 SIGHT DISTANCE PLAN & PROFILE
- C-4.0 SEPTIC DESIGN CALCULATIONS AND SOIL TESTING DATA
- C-5.0 CONSTRUCTION DETAILS SHEET (1 OF 3)
- C-5.1 CONSTRUCTION DETAILS SHEET (2 OF 3)
- C-5.2 CONSTRUCTION DETAILS SHEET (3 OF 3)

GENERAL NOTES

1. LOT LINES & TOPOGRAPHICAL INFORMATION FOR 130 TOPSTONE ROAD HAS BEEN TAKEN FROM SURVEY PREPARED BY BRAUTIGAM LAND SURVEYORS, P.C. DATED MAY 9, 2003, REVISED JANUARY 15, 2020.
2. ELEVATIONS ARE BASED ON NAVD '88 DATUM.
3. EROSION AND SEDIMENT CONTROL MEASURES SPECIFIED IN THE PLAN SHALL BE MAINTAINED UNTIL DISTURBED AREAS HAVE BEEN STABILIZED.
4. THIS DESIGN CONFORMS TO APPLICABLE CODES AND ACCEPTED PRACTICE. NO OTHER WARRANTY IS EXPRESSED OR IMPLIED.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT "CALL BEFORE YOU DIG," 1-800-922-4455 PRIOR TO ANY EXCAVATION WORK ON THE PROPERTY.
6. LOCATIONS OF EXISTING UTILITIES ARE TAKEN FROM EXISTING RECORDS AND ARE NOT CONSTRUED AS "AS-BUILT" INFORMATION. THE CONTRACTOR SHALL VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO STARTING UTILITY TIE INS.

EXCAVATION/FILL NOTES:

MAXIMUM CUT/FILL:
PROPOSED FILL: 4,150 CY
PROPOSED CUT: 2,050 CY
NET CUT / FILL: 2,100 CY (FILL)

ZONING DATA - LOT 1				
ZONING DISTRICT: R-2 DISTRICT				
PROPOSED USE: SINGLE-FAMILY RESIDENCE				
DIMENSIONAL	REQUIRED/ALLOWED	EXISTING	PROVIDED	CONFORMS
MINIMUM LOT AREA	87,120 SF (2.0 AC.)	-	100,146 SF (2,299 AC)	Y
MINIMUM RECTANGLE AREA	50,000 SF	-	50,000 SF	Y
MINIMUM LOT AND RECTANGLE WIDTH	200'	-	200'	Y
MINIMUM LOT FRONTAGE	FRONT LOTS	50'	240.46'	Y
	REAR LOTS	25'	N/A	N/A
YARDS	FRONT	50'	174.0'	Y
	SIDE	40'	(40.5', 88.0')	Y
	REAR	50'	116'	Y
	UTILITY EASEMENT	25'	N/A	N/A
MAXIMUM BUILDING HEIGHT	40'	-	≤40'	Y
MAXIMUM BUILDING COVERAGE	10% / 8,712 SF	-	2.5% / 2,455 SF	Y
MAXIMUM IMPERVIOUS COVERAGE	20% / 17,424 SF	-	5.8% / 5,761 SF	Y
NOTES: 1. EXISTING UNDEVELOPED LOT				

ZONING DATA - LOT 2				
ZONING DISTRICT: R-2 DISTRICT				
PROPOSED USE: SINGLE-FAMILY RESIDENCE				
DIMENSIONAL	REQUIRED/ALLOWED	EXISTING	PROVIDED	CONFORMS
MINIMUM LOT AREA	87,120 SF (2.0 AC.)	-	100,269 SF (2,302 AC)	Y
MINIMUM RECTANGLE AREA	50,000 SF	-	50,000 SF	Y
MINIMUM LOT AND RECTANGLE WIDTH	200'	-	200'	Y
MINIMUM LOT FRONTAGE	FRONT LOTS	50'	275.93'	Y
	REAR LOTS	25'	N/A	N/A
YARDS	FRONT	50'	133.7'	Y
	SIDE	40'	(109.7', 110.6')	Y
	REAR	50'	53.2'	Y
	UTILITY EASEMENT	25'	N/A	N/A
MAXIMUM BUILDING HEIGHT	40'	-	≤40'	Y
MAXIMUM BUILDING COVERAGE	10% / 8,712 SF	-	2.9% / 2,804 SF	Y
MAXIMUM IMPERVIOUS COVERAGE	20% / 17,424 SF	-	6.8% / 6,698 SF	Y
NOTES: 1. EXISTING UNDEVELOPED LOT				

ZONING DATA - LOT 3				
ZONING DISTRICT: R-2 DISTRICT				
PROPOSED USE: SINGLE-FAMILY RESIDENCE				
DIMENSIONAL	REQUIRED/ALLOWED	EXISTING	PROVIDED	CONFORMS
MINIMUM LOT AREA - SEC. 3.6	87,120 SF (2.0 AC.)	-	155,640 SF (3,573 AC) GROSS 7,734 SF (0.178 AC) ACCESSWAY	Y
MINIMUM RECTANGLE AREA	50,000 SF	-	50,000 SF	Y
MINIMUM LOT AND RECTANGLE WIDTH	200'	-	200'	Y
MINIMUM LOT FRONTAGE	FRONT LOTS	50'	N/A	N/A
	REAR LOTS	25'	25'	Y
YARDS	FRONT	50'	60.1'	Y
	SIDE	40'	(48.7', 147.5')	Y
	REAR	50'	149.3'	Y
	UTILITY EASEMENT	25'	N/A	N/A
MAXIMUM BUILDING HEIGHT	40'	-	≤40'	Y
MAXIMUM BUILDING COVERAGE	10% / 14,397 SF	-	2.8% / 4,033 SF	Y
MAXIMUM IMPERVIOUS COVERAGE	20% / 28,794 SF	-	9.5% / 13,634 SF	Y
NOTES: 1. EXISTING UNDEVELOPED LOT				



7/9/20	5/11/20	REVISION DATE
		REMOVED OPEN SPACE
		REMOVED DRIVEWAYS, GRADING AND DRAINAGE
		ISSUE

Prepared For: ROGER LANCASTER
Project Location: 130 TOPSTONE ROAD, REDDING, CT
Title: SITE IMPROVEMENTS FOR A PROPOSED 4-LOT SUBDIVISION COVER SHEET

LANDTECH
58 Riverside Avenue, Meriden, Connecticut 06880
403-454-2710
info@landtechct.com

PROJECT NO. 19212-01
DATE 3/3/2020
SCALE NTS
DRAWN BY: CL
CHECKED BY: RPP

NOT FOR CONSTRUCTION
FOR REVIEW AND APPROVAL
BY PUBLIC AGENCIES ONLY

T-1

NOTE:
1. OFF-SITE PHYSICAL AND TOPOGRAPHIC FEATURES TAKEN FROM SURVEY PREPARED BY BRAUTIGAM LAND SURVEYORS, P.C. DATED MAY 9, 2003, REVISED JANUARY 15, 2020.



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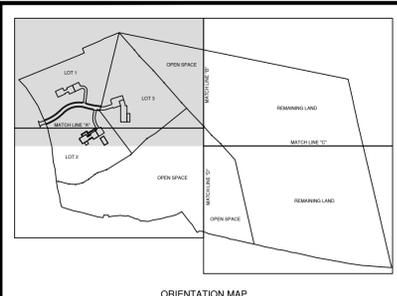
7/9/20	REVISED DRIVEWAYS, GRADING AND DRAINAGE
5/11/20	REVISED OPEN SPACE
	REVISION DATE

LANDTECH
 518 Riverside Avenue • Westport, Connecticut 06880 • 203-454-2110 • info@landtechconsult.com

PREPARED FOR: **ROGER LANCASTER**
 PROJECT LOCATION: **130 TOPSTONE ROAD, REDDING, CT**
 TITLE: **SITE IMPROVEMENTS FOR A PROPOSED 4-LOT SUBDIVISION SITE OVERVIEW PLAN**

PROJECT NO. 19212-01	DATE 3/3/2020
SCALE 1" = 80'	CHECKED BY: RPP
DRAWN BY: CL	

C-1.0



ORIENTATION MAP



REVISION NO.	1
REVISION DATE	5/11/20
REVISION DESCRIPTION	REVISED DRIVEWAYS, GRADING AND DRAINAGE
REVISION BY	REVISED OPEN SPACE
REVISION DATE	
REVISION DESCRIPTION	
REVISION BY	

LANDTECH
 518 Riverside Avenue • Westport, Connecticut 06880 • 203-454-2110 • info@landtechconsult.com

PREPARED FOR: ROGER LANCASTER
 PROJECT LOCATION: 130 TOPSTONE ROAD, REDDING, CT
 TITLE: SITE IMPROVEMENTS FOR A PROPOSED 4-LOT SUBDIVISION, SITE DEVELOPMENT PLAN (1 OF 4)

PROJECT NO.	19212-01
SCALE	1" = 30'
DATE	3/3/2020
DRAWN BY:	CL
CHECKED BY:	RPP

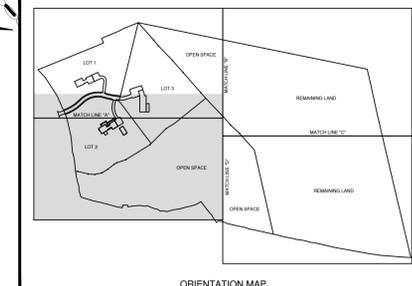
C-1.1

MATCH LINE "B" SEE SHEET C-1.3

MATCH LINE "A" SEE SHEET C-1.2



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MATCH LINE "A"
SEE SHEET C-1.1

MATCH LINE "D" SEE SHEET C-1.4



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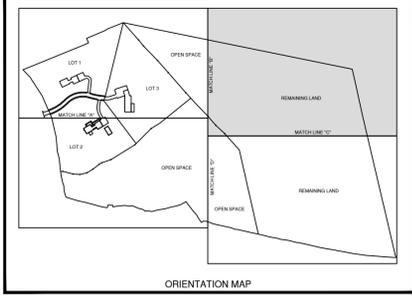
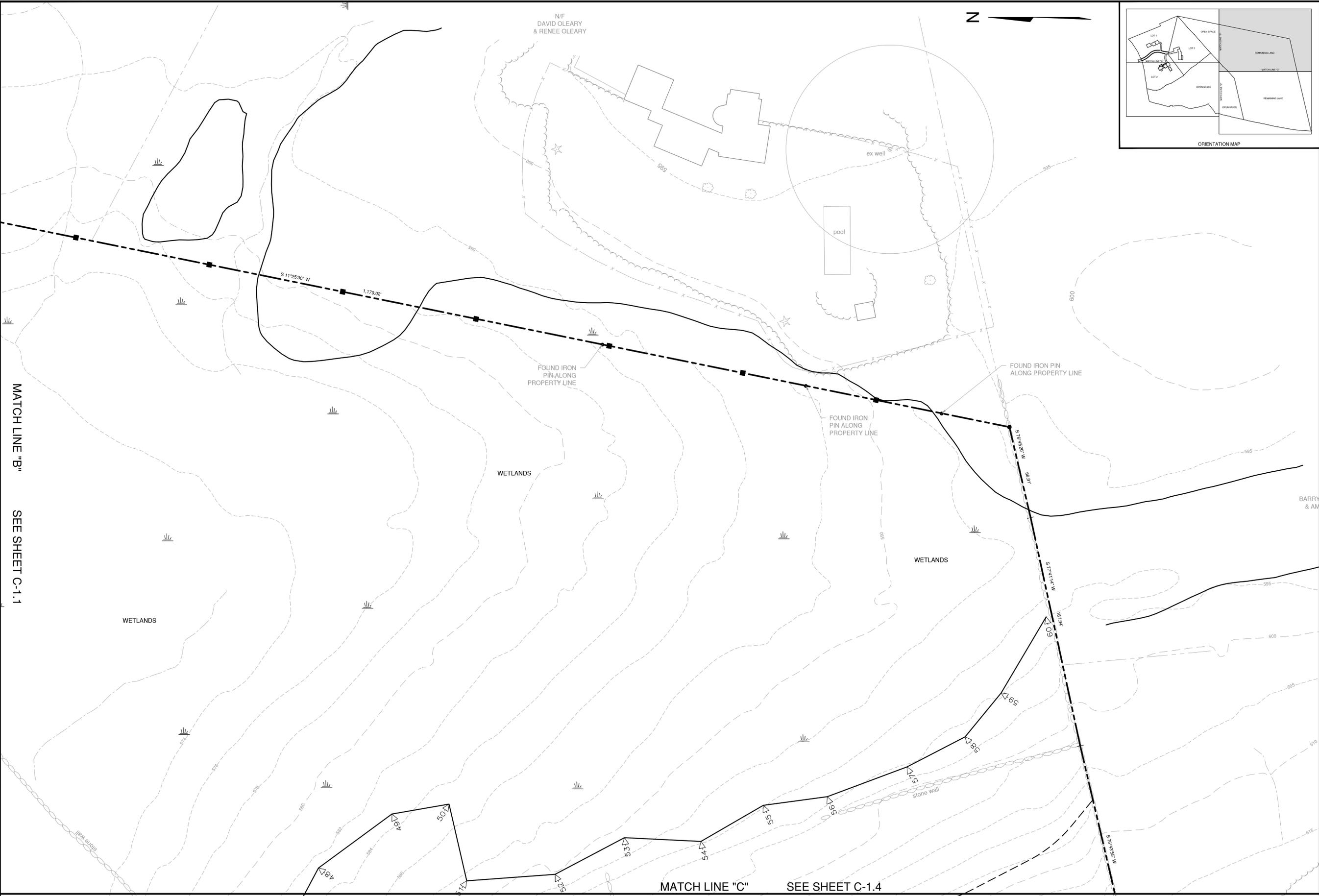
NO.	DATE	REVISION
1	7/9/20	REVISED DRIVEWAYS, GRADING AND DRAINAGE
2	5/19/20	REVISED OPEN SPACE
3		REVISION DATE

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PREPARED FOR:	ROGER LANCASTER
PROJECT LOCATION:	130 TOPSTONE ROAD REDDING, CT
TITLE:	SITE IMPROVEMENTS FOR A PROPOSED 4-LOT SUBDIVISION SITE DEVELOPMENT PLAN (2 OF 4)
PROJECT NO.:	19212-01
SCALE:	1" = 30'
DRAWN BY:	CL
CHECKED BY:	RPP
DATE:	3/3/2020

C-1.2

MATCH LINE "B" SEE SHEET C-1.1



REVISION DATE	REVISION
7/9/20	REVISED DRIVEWAYS, GRADING AND DRAINAGE
5/11/20	REVISED OPEN SPACE
	ISSUE

Civil Engineering Site Planning
 Surveying & Boundary Land Surveying
 Structural Engineering Land Surveying
 Permit Coordinating & Management
 Construction Management & Financing

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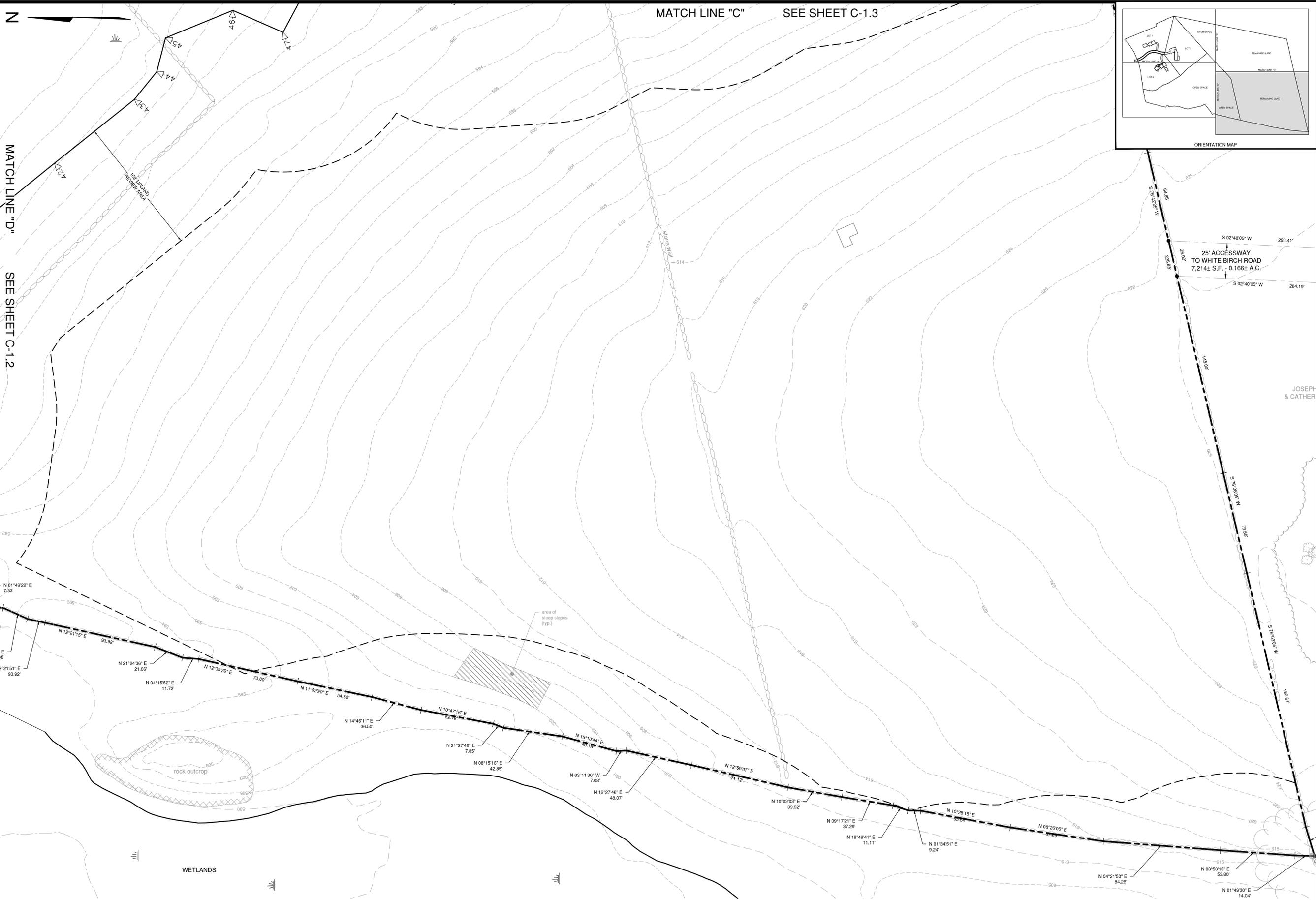
PREPARED FOR: ROGER LANCASTER
 PROJECT LOCATION: 130 TOPSTONE ROAD, REDDING, CT
 TITLE: SITE IMPROVEMENTS FOR A PROPOSED 4-LOT SUBDIVISION, SITE DEVELOPMENT PLAN (3 OF 4)

PROJECT NO.: 19212-01
 SCALE: 1" = 30'
 DATE: 3/3/2020
 DRAWN BY: CL
 CHECKED BY: RPP

MATCH LINE "C" SEE SHEET C-1.4

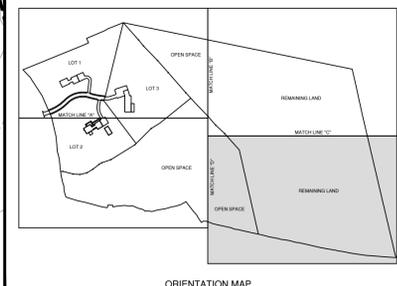


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MATCH LINE "D" SEE SHEET C-1.2

MATCH LINE "C" SEE SHEET C-1.3



ORIENTATION MAP



REVISION DATE	REVISION DESCRIPTION
7/9/20	REVISED DRIVEWAYS, GRADING AND DRAINAGE
5/11/20	REMOVED OPEN SPACE
	ISSUE

CIVIL ENGINEERING - SITE PLANNING
 CIVIL ENGINEERING - SOILS AND FOUNDATIONS
 STRUCTURAL ENGINEERING - LANDSLIDE
 PERMIT COORDINATING & MANAGEMENT
 CONSTRUCTION MANAGEMENT & FINANCING

ROGER LANCASTER
 & CATHERINE

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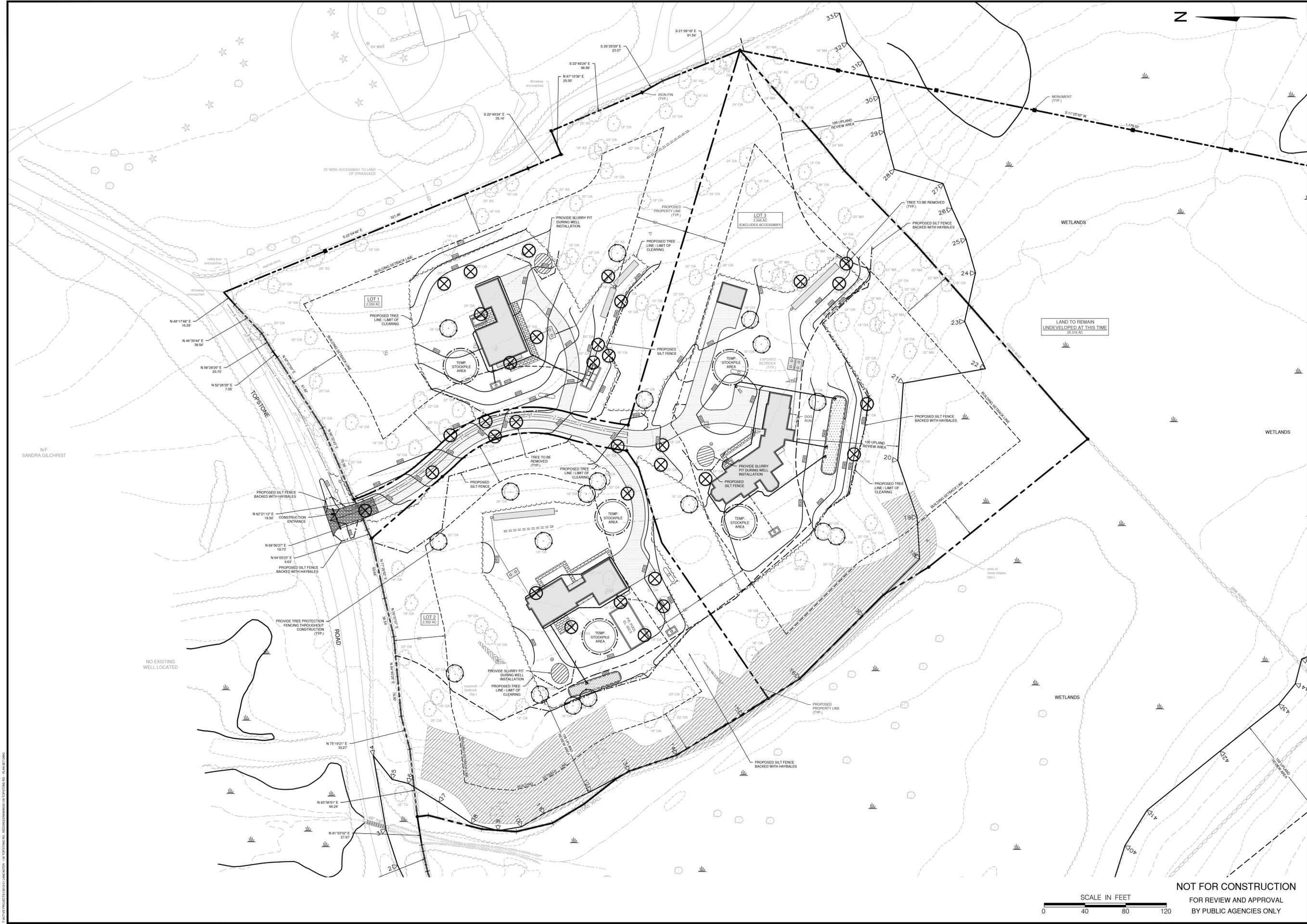
PROJECT NO.	19212-01
SCALE	1" = 10'
DATE	3/3/2020
DRAWN BY:	CL
CHECKED BY:	RPP

PREPARED FOR: ROGER LANCASTER
 PROJECT LOCATION: 130 TOPSTONE ROAD, REDDING, CT
 TITLE: SITE IMPROVEMENTS FOR A PROPOSED 4-LOT SUBDIVISION, SITE DEVELOPMENT PLAN (4 OF 4)



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C-1.4



7/9/20	REVISED DRIVEWAYS, GRADING AND DRAINAGE
5/11/20	REVISED OPEN SPACE
	REVISION DATE
	ISSUE

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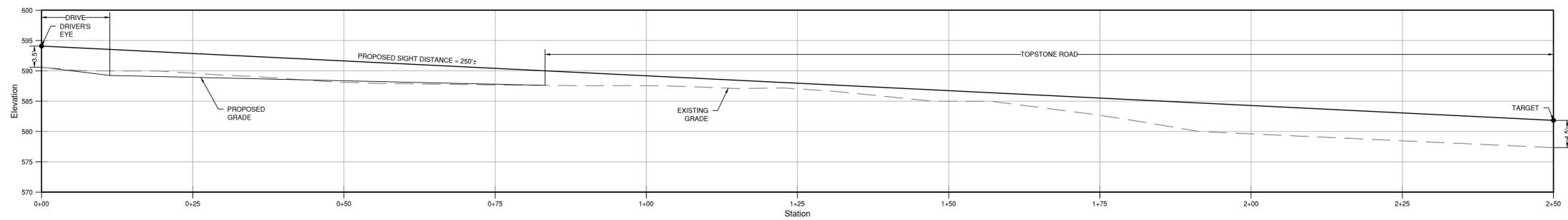
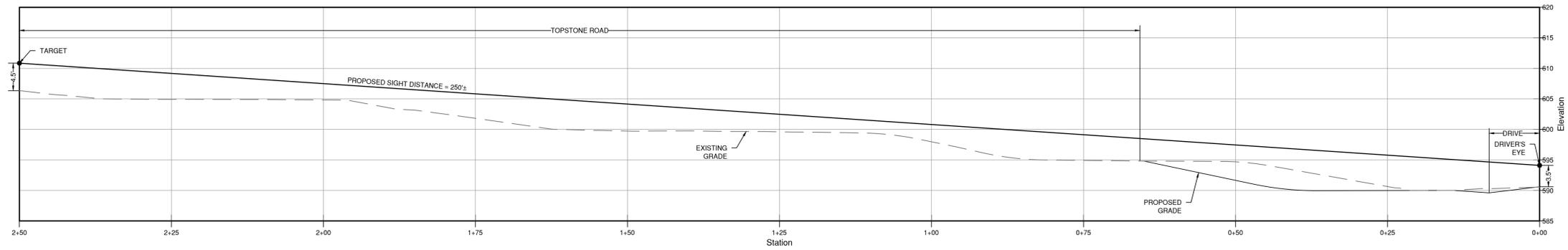
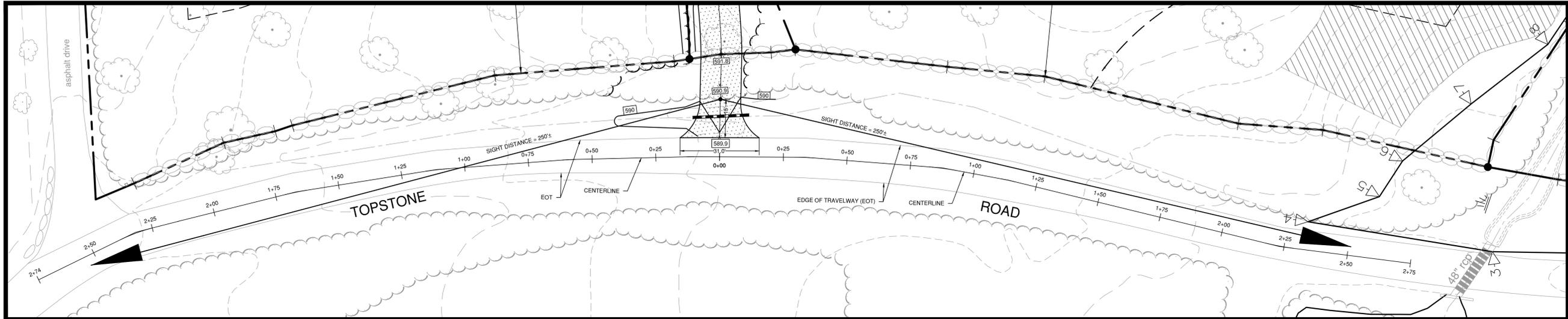
PREPARED FOR: ROGER LANCASTER
 PROJECT LOCATION: 130 TOPSTONE ROAD, REDDING, CT
 TITLE: SITE IMPROVEMENTS FOR A PROPOSED 4-LOT SUBDIVISION SOIL EROSION AND SEDIMENT CONTROL PLAN

PROJECT NO.	19212-01
SCALE	1" = 40'
DATE	3/3/2020
DRAWN BY:	CL
CHECKED BY:	RPP



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C-2.0



NOT FOR CONSTRUCTION
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REVISION DATE	REVISION DESCRIPTION
7/9/20	REVISED DRIVEWAYS, GRADING AND DRAINAGE
5/11/20	REVISED OPEN SPACE
	ISSUE

LANDTECH
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PREPARED FOR: ROGER LANCASTER	PROJECT NO.: 19212-01
PROJECT LOCATION: 130 TOPSTONE ROAD REDDING, CT	DATE: 3/3/2020
TITLE: SITE IMPROVEMENTS FOR A PROPOSED 4-LOT SUBDIVISION SIGHT DISTANCE PLAN & PROFILE	DRAWN BY: CL
	CHECKED BY: RPP

C-3.0

GENERAL SEPTIC NOTES

- 1. THE PROPOSED SEPTIC SYSTEMS ARE TO BE CONSTRUCTED TO CONFORM TO THE LATEST REVISION OF THE STATE OF CONNECTICUT PUBLIC HEALTH CODE.
2. IT IS THE RESPONSIBILITY OF THE INSTALLER TO CALL "CALL BEFORE YOU DIG."
3. IT IS THE RESPONSIBILITY OF THE INSTALLER TO KEEP THE LOCAL HEALTH DEPARTMENT AND THE ENGINEER OF RECORD INFORMED OF CONSTRUCTION PROGRESS...
4. THE INSTALLATION OF THE SEPTIC SYSTEMS SHALL BE UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER.
5. ELEVATIONS SHOWN REFER TO THE INVERT (FLOW LINE) OF THE PROPOSED LEACHING SYSTEMS UNLESS NOTED OTHERWISE.
6. PROVIDE A 1,250 GALLON, TWO COMPARTMENT SEPTIC TANK MADE OF CONCRETE WITH A MINIMUM 4,000 PSI CONCRETE PER ASTM STANDARDS FOR LOTS 1, 2 AND 3.
7. SEPTIC TANK ACCESS SHALL BE OUTFITTED WITH 24" DIAMETER RISERS TO FINISHED GRADE WHERE SOIL COVER OVER THE TANK EXCEEDS 12 INCHES.
8. SEPTIC TANK SHALL HAVE AN APPROVED NON-BYPASS EFFLUENT FILTER AT THE OUTLET.
9. ALL PIPING BETWEEN HOUSE AND SEPTIC TANK SHALL BE FOUR INCHES IN DIAMETER WITH A MINIMUM SLOPE OF 1/4" PER FOOT OR SIX INCHES IN DIAMETER WITH A MINIMUM SLOPE OF 1/8" PER FOOT.
10. ALL PIPE USED BETWEEN SEPTIC TANK AND LEACHING AREA SHALL BE 4" SDR-35 PVC PIPE WITH WATER-TIGHT JOINTS OR EQUIVALENT ALLOWED BY TECHNICAL STANDARDS.
11. PROVIDE A 1,500 GALLON PUMP CHAMBER AS MANUFACTURED BY EASTERN PRECAST OR EQUIVALENT FOR LOT 3.
12. PROVIDE PUMP CHAMBER WITH A 6" (MIN) THICK WIRE MESH, REINFORCED CONCRETE SADDLE OR PRECAST EQUIVALENT.
13. THE PUMP SHALL BE A GOULDS MODEL #3895, WE0311L, SINGLE PHASE OR EQUIVALENT.
14. MECHANICAL NON-MERCURY LEVEL CONTROL FLOAT SWITCHES ARE TO BE PROVIDED AND SET SO THAT THE PUMP DISCHARGES 216 GALLONS PER CYCLE.
15. ELIEN MANTIS DW-58 BOTTOM = 595.30 (PRIMARY)
16. ELIEN MANTIS DW-58 BOTTOM = 595.30 (PRIMARY)
17. ELIEN MANTIS DW-58 INVERT = 595.80 (PRIMARY)
18. NO FOOTING DRAINS OR OTHER GROUNDWATER DRAINS SHALL BE INSTALLED WITHIN 25' OF PROPOSED SEPTIC SYSTEM OR WITHIN 50 FEET OF SEPTIC SYSTEM IF DRAIN IS DOWN GRADIENT.
19. PRIOR TO CONSTRUCTION ACTIVITIES THE LEACHING SYSTEM AREAS SHALL BE roped OFF OR OTHERWISE DELINEATED SO AS TO KEEP CONSTRUCTION TRAFFIC OFF THE SEPTIC AREA.
20. STRIP AND STOCKPILE TOPSOIL AND REMOVE BOULDERS PRIOR TO PLACING FILL.
21. GRAVEL FILL TO BE DUMPED AT THE EDGE OF PREPARED LEACHING AREA AND PUSHED ONTO HARROWED SURFACE WITH TRACK MACHINE.
22. SELECT FILL SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL, FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES.
23. THE SELECT FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN THE 3 INCH SIEVE.
24. UP TO 45% OF THE DRY WEIGHT OF THE REPRESENTATIVE SAMPLE MAY BE RETAINED ON THE #4 SIEVE.
25. THE MATERIAL THAT PASSES THE #4 SIEVE IS TO BE REWEIGHED AND A SECOND SIEVE ANALYSIS COMPLETED.
26. THE REMAINING SAMPLE SHALL MEET THE FOLLOWING GRADATION CRITERIA.
27. NON-SELECT FILL SHALL BE A CLEAN LOAM OR BETTER FREE OF ORGANIC MATTER.
28. THIS SYSTEM IS NOT DESIGNED FOR BACKWASH FROM A WATER SOTTING SYSTEM OR THE OUTFLOW FROM A GARBAGE DISPOSAL OR TUB (BATHTUB, WHIRLPOOL, JACUZZI, ETC.) IN EXCESS OF 100 GALLONS.
29. MEASUREMENTS FOR AS-BUILT DRAWING TO BE COMPLETED BY PROFESSIONAL ENGINEER PRIOR TO BACKFILLING.
30. FINAL GRADING TO BE COMPLETED IMMEDIATELY AFTER INSPECTION AND COMPLETION OF MEASUREMENTS FOR AS-BUILT DRAWING.
31. THERE ARE NO WELLS WITHIN 75' OF THE PROPOSED SEPTIC SYSTEMS.
32. THIS DESIGN CONFORMS TO APPLICABLE CODES AND ACCEPTED PRACTICE.
33. LAND-TECH CONSULTANTS, INC. ASSUMES NO RESPONSIBILITY FOR SEPTIC SYSTEM SITE PREPARATION, LOCATION OR INVERT ELEVATIONS IN COMPLIANCE WITH THE APPROVED PLAN, UNLESS IT SUPERVISES EACH PHASE OF SYSTEM INSTALLATION.
34. MLSS IS REQUIRED FOR LOTS 1 AND 3. MLSS NOT CONSIDERED FOR LOT #2 DUE TO ABSENCE OF RESTRICTED LAYER WITHIN 60 INCHES.
35. BASED ON A VISUAL INSPECTION OF NEIGHBORING PROPERTIES AND A REVIEW OF AVAILABLE RECORDS, NO PART OF THE PROPOSED SEPTIC SYSTEM IS WITHIN THE REQUIRED SEPARATION DISTANCE FROM A WATER SUPPLY WELL, OR CLOSED LOOP GEOTHERMAL SYSTEM BOREHOLE/TRENCH AS DEFINED IN TABLE 1 OF THE TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS, LATEST REVISION.

Table with 3 columns: SIEVE SIZE, WET SIEVE, DRY SIEVE. Rows include #4, #10, #40, #100, #200 sieves.

*PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10% AND THE #200 SIEVE DOES NOT EXCEED 5%.

SEPTIC SYSTEM DESIGN CALCULATIONS LOT #1

OF BEDROOMS = 5
PERCOLATION RATE = 1 INCH <10.1 MINUTES USED FOR DESIGN (OBSERVED PERCOLATION RATE OF 1" IN LESS THAN 10.1 MINUTES)
SQUARE FEET OF LEACHING AREA REQUIRED = 660 SF
1,250 GALLON SEPTIC TANK REQUIRED
PROPOSED SEPTIC SYSTEM LEACHING FIELD
60 LF OF ELIEN MANTIS DW-58
60 LF X 11.6 SFLF = 696 SF OF LEACHING AREA PROVIDED

MLSS CALCULATION - PRIMARY LOT #1
HYDRAULIC FACTOR (HF):
HYDRAULIC GRADIENT AT BOTH ENDS OF SYSTEM = (598.0 - 593.3) / 66 = 7.1%; (598.3 - 592.9) / 66 = 8.1%
AVG. HYDRAULIC GRADIENT = (7.1 + 8.1) / 2 = 7.6%
HYDRAULIC GRADIENT = 6.1 - 8.0%

AVERAGE DEPTH OF TEST HOLES WITHIN THE SYSTEM = DTH-36 = 42", DTH-37 = 42"
(42 + 42) / 2 = 42"
DEPTH OF DOWNGRADIENT TEST HOLE = DTH-4 = 24", DTH-38 = 38"
(24 + 38) / 2 = 31"
AVERAGE DEPTH OF RESTRICTIVE LAYER = (42 + 31) / 2 = 36.5"
HF = 24

FLOW FACTOR (FF):
NUMBER OF BEDROOMS = 5
FF = 2.0

PERCOLATION FACTOR (PF):
PERCOLATION RATE = 1" IN UP TO 10.0 MINUTES
PF = 1.0

MLSS = HF X FF X PF
MLSS = 24 X 2.0 X 1.0
MLSS = 48 FEET

PRIMARY LEACHING SYSTEM SPREAD = 60 FEET

INVERT ELEVATIONS LOT #1

HOUSE SEWER AT FOUNDATION = 601.75 MIN.

SEPTIC TANK
INLET = 601.00
OUTLET = 600.20

DISTRIBUTION BOX
INLET = 595.81
LATERALS = 595.81

ELIEN MANTIS DW-58 INVERT = 595.80 (PRIMARY)
ELIEN MANTIS DW-58 BOTTOM = 595.30 (PRIMARY)
GEOMAT EDGE ST 600 BOTTOM = 607.93 (RESERVE)

SEPTIC SYSTEM DESIGN CALCULATIONS LOT #2

OF BEDROOMS = 5
PERCOLATION RATE = 1 INCH <10.1 MINUTES USED FOR DESIGN (OBSERVED PERCOLATION RATE OF 1" IN LESS THAN 10.1 MINUTES)
SQUARE FEET OF LEACHING AREA REQUIRED = 660 SF
1,250 GALLON SEPTIC TANK REQUIRED

PROPOSED SEPTIC SYSTEM LEACHING FIELD
60 LF OF ELIEN MANTIS DW-58
60 LF X 11.6 SFLF = 696 SF OF LEACHING AREA PROVIDED

PROPOSED RESERVE AREA
48 LF OF GEOMAT EDGE ST 600
48 LF X 14.0 SFLF = 672 SF OF LEACHING AREA PROVIDED

INVERT ELEVATIONS LOT #2
HOUSE SEWER AT FOUNDATION = 591.07 MIN.

SEPTIC TANK
INLET = 590.54
OUTLET = 590.24

DISTRIBUTION BOX
INLET = 589.68
LATERALS = 589.68

ELIEN MANTIS DW-58 INVERT = 589.67 (PRIMARY)
ELIEN MANTIS DW-58 BOTTOM = 589.17 (PRIMARY)
GEOMAT EDGE ST 600 BOTTOM = 590.06 (RESERVE)

SEPTIC SYSTEM DESIGN CALCULATIONS LOT #3

OF BEDROOMS = 5
PERCOLATION RATE = 1 INCH <10.1 MINUTES USED FOR DESIGN (OBSERVED PERCOLATION RATE OF 1" IN LESS THAN 10.1 MINUTES)
SQUARE FEET OF LEACHING AREA REQUIRED = 660 SF
1,250 GALLON SEPTIC TANK REQUIRED

PROPOSED SEPTIC SYSTEM LEACHING FIELD
60 LF OF ELIEN MANTIS DW-58
60 LF X 11.6 SFLF = 696 SF OF LEACHING AREA PROVIDED

PROPOSED RESERVE AREA
48 LF OF GEOMAT EDGE ST 600
48 LF X 14.0 SFLF = 672 SF OF LEACHING AREA PROVIDED

MLSS CALCULATION - PRIMARY LOT #3

HYDRAULIC FACTOR (HF):
HYDRAULIC GRADIENT AT BOTH ENDS OF SYSTEM = (590.5 - 586.0) / 66 = 6.8%; (591.0 - 582.2) / 66 = 13.3%
AVG. HYDRAULIC GRADIENT = (6.8 + 13.3) / 2 = 10.1%
HYDRAULIC GRADIENT = 10.1 - 15.0%

AVERAGE DEPTH OF TEST HOLES WITHIN THE SYSTEM = DTH-33 = 30", DTH-34 = 30"
(30 + 30) / 2 = 30"
DEPTH OF DOWNGRADIENT TEST HOLE = DTH-33 = 51", DTH-35 = 38", DTH-7 = NONE (USE 60"), DTH-8 = NONE (USE 60")
(51 + 38 + 60 + 60) / 4 = 32.3"
AVERAGE DEPTH OF RESTRICTIVE LAYER = (30 + 52.3) / 2 = 41.2"
HF = 18

FLOW FACTOR (FF):
NUMBER OF BEDROOMS = 5
FF = 2.0

PERCOLATION FACTOR (PF):
PERCOLATION RATE = 1" IN UP TO 10.0 MINUTES
PF = 1.0

MLSS = HF X FF X PF
MLSS = 18 X 2.0 X 1.0
MLSS = 36 FEET

PRIMARY LEACHING SYSTEM SPREAD = 60 FEET

INVERT ELEVATIONS LOT #3

HOUSE SEWER AT FOUNDATION = 589.67 MIN.

SEPTIC TANK
INLET = 588.45
OUTLET = 588.15

PUMP CHAMBER
INLET = 588.14
OUTLET = 588.34

DISTRIBUTION BOX
INLET = 589.51
LATERALS = 589.51

ELIEN MANTIS DW-58 INVERT = 589.50 (PRIMARY)
ELIEN MANTIS DW-58 BOTTOM = 589.00 (PRIMARY)
GEOMAT EDGE ST 600 BOTTOM = 586.85 (RESERVE)

SOIL DATA

SOIL TESTS CONDUCTED ON SEPTEMBER 29, 2005

TEST HOLE 1
0 - 12" TOPSOIL
12 - 34" RED BROWN FINE SANDY LOAM
34 - 84" GRAY/TAN COMPACT SANDY TILL
ROOTS TO 30", RESTRICTIVE LAYER AT 34"
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 2
0 - 9" TOPSOIL
9 - 32" RED BROWN FINE SANDY LOAM
32 - 84" GRAY/TAN COMPACT SANDY TILL
ROOTS TO 32", RESTRICTIVE LAYER AT 32"
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 3
0 - 7" TOPSOIL
7 - 20" YELLOW BROWN FINE SANDY LOAM
20 - 51" GRAY/TAN COMPACT SANDY TILL
ROOTS TO 22", RESTRICTIVE LAYER AT 20"
NO MOTTLING, NO G.W., LEDGE AT 51"

TEST HOLE 4
0 - 6" TOPSOIL
6 - 24" YELLOW BROWN FINE SANDY LOAM
24 - 43" GRAY/TAN COMPACT SANDY TILL
ROOTS TO 24", RESTRICTIVE LAYER AT 24"
NO MOTTLING, NO G.W., LEDGE AT 43"

TEST HOLE 5
0 - 8" TOPSOIL
8 - 29" YELLOW BROWN FINE SANDY LOAM
29 - 68" GRAY/TAN COMPACT SANDY TILL
ROOTS TO 29", RESTRICTIVE LAYER AT 29"
NO MOTTLING, NO G.W., LEDGE AT 68"

TEST HOLE 6
0 - 10" TOPSOIL
10 - 25" YELLOW BROWN FINE SANDY LOAM
25 - 72" GRAY/TAN COMPACT SANDY TILL
ROOTS TO 25", RESTRICTIVE LAYER AT 25"
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 7
0 - 7" TOPSOIL
7 - 35" RED BROWN FINE SANDY LOAM
35 - 72" BROWN SANDY TILL
ROOTS TO 46", RESTRICTIVE LAYER AT 35"
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 8
0 - 6" TOPSOIL
6 - 31" RED BROWN SANDY LOAM
31 - 96" TAN COARSE SANDY TILL
ROOTS TO 67", NO RESTRICTIVE LAYER
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 9
0 - 8" TOPSOIL
8 - 31" YELLOW BROWN SANDY LOAM
31 - 48" TAN COARSE SANDY TILL
ROOTS TO 48", RESTRICTIVE LAYER AT 48"
NO MOTTLING, NO G.W., LEDGE AT 48"

TEST HOLE 10
0 - 8" TOPSOIL
8 - 27" YELLOW BROWN FINE SANDY LOAM
27 - 36" TAN COARSE SANDY TILL
36 - 80" BROWN MODERATELY COMPACT GRAVELLY SANDY TILL
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 11
0 - 6" TOPSOIL
6 - 26" YELLOW BROWN FINE SANDY LOAM
26 - 36" LIGHT TAN COARSE SANDY TILL
36 - 78" BROWN COMPACT GRAVELLY SANDY TILL
ROOTS TO 36", RESTRICTIVE LAYER AT 36"
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 12
0 - 6" TOPSOIL
6 - 20" YELLOW BROWN FINE SANDY LOAM
20 - 48" RED BROWN COMPACT GRAVELLY SANDY TILL
ROOTS TO 20", RESTRICTIVE LAYER AT 20"
NO MOTTLING, NO G.W., LEDGE AT 48"

TEST HOLE 13
0 - 7" TOPSOIL
7 - 24" YELLOW BROWN FINE SANDY LOAM
24 - 72" YELLOW BROWN FINE SANDY LOAM
72 - 247" RESTRICTIVE LAYER AT 24"
NO MOTTLING, NO G.W., LEDGE AT 24"

TEST HOLE 14
0 - 9" TOPSOIL
9 - 36" RED/BROWN FINE SANDY LOAM
36 - 64" YELLOW/BROWN MEDIUM SAND & GRAVEL
ROOTS TO 60", RESTRICTIVE LAYER AT 60"
NO MOTTLING, NO G.W., LEDGE AT 64"

TEST HOLE 15
0 - 9" TOPSOIL
9 - 24" RED/BROWN FINE SANDY LOAM
24 - 70" GRAY/TAN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 24", RESTRICTIVE LAYER AT 24"
NO MOTTLING, NO G.W., LEDGE AT 70"

TEST HOLE 16
0 - 12" TOPSOIL
12 - 37" YELLOW BROWN FINE SANDY LOAM
37 - 75" GRAY/TAN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 37", RESTRICTIVE LAYER AT 37"
NO MOTTLING, NO G.W., LEDGE AT 75"

TEST HOLE 17
0 - 6" TOPSOIL
6 - 28" RED/BROWN FINE SANDY LOAM
28 - 52" LIGHT GRAY FRIABLE SANDY TILL
52 - 76" DARK GRAY/BROWN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 35", RESTRICTIVE LAYER AT 28"
NO MOTTLING, NO G.W., LEDGE AT 76"

TEST HOLE 18
0 - 6" TOPSOIL
6 - 24" RED/BROWN FINE SANDY LOAM
24 - 34" LIGHT GRAY FRIABLE SANDY TILL
34 - 72" DARK GRAY/BROWN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 34", RESTRICTIVE LAYER AT 34"
NO MOTTLING, NO G.W., LEDGE AT 72"

TEST HOLE 19
0 - 9" TOPSOIL
9 - 50" RED/BROWN FINE SANDY LOAM
50 - 90" DARK GRAY/BROWN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 50", RESTRICTIVE LAYER AT 50"
NO MOTTLING, NO G.W., LEDGE AT 50"

TEST HOLE 20
0 - 6" TOPSOIL
6 - 24" RED/BROWN FINE SANDY LOAM
24 - 46" LIGHT GRAY FRIABLE SANDY TILL
46 - 96" DARK GRAY/BROWN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 24", RESTRICTIVE LAYER AT 46"
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 21
0 - 6" TOPSOIL
6 - 30" RED/BROWN FINE SANDY LOAM
30 - 86" GRAY/TAN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 48", RESTRICTIVE LAYER AT 20"
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 22
0 - 7" TOPSOIL
7 - 30" RED/BROWN FINE SANDY LOAM
30 - 30" GRAY/BROWN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 30", RESTRICTIVE LAYER AT 30"
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 23
0 - 9" TOPSOIL
9 - 20" YELLOW BROWN FINE SANDY LOAM
20 - 48" GRAY/BROWN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 36", RESTRICTIVE LAYER AT 36"
NO MOTTLING, NO G.W., NO LEDGE

SOIL DATA

SOIL TESTS CONDUCTED ON AUGUST 8, 2006

TEST HOLE 14
0 - 11" TOPSOIL
11 - 33" RED/BROWN FINE SANDY LOAM
33 - 55" YELLOW/BROWN MEDIUM SAND & GRAVEL
ROOTS TO 60", RESTRICTIVE LAYER AT 60"
NO MOTTLING, NO G.W., LEDGE AT 64"

TEST HOLE 15
0 - 9" TOPSOIL
9 - 24" RED/BROWN FINE SANDY LOAM
24 - 70" GRAY/TAN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 24", RESTRICTIVE LAYER AT 24"
NO MOTTLING, NO G.W., LEDGE AT 70"

TEST HOLE 16
0 - 12" TOPSOIL
12 - 37" YELLOW BROWN FINE SANDY LOAM
37 - 75" GRAY/TAN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 37", RESTRICTIVE LAYER AT 37"
NO MOTTLING, NO G.W., LEDGE AT 75"

TEST HOLE 17
0 - 6" TOPSOIL
6 - 28" RED/BROWN FINE SANDY LOAM
28 - 52" LIGHT GRAY FRIABLE SANDY TILL
52 - 76" DARK GRAY/BROWN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 35", RESTRICTIVE LAYER AT 28"
NO MOTTLING, NO G.W., LEDGE AT 76"

TEST HOLE 18
0 - 6" TOPSOIL
6 - 24" RED/BROWN FINE SANDY LOAM
24 - 34" LIGHT GRAY FRIABLE SANDY TILL
34 - 72" DARK GRAY/BROWN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 34", RESTRICTIVE LAYER AT 34"
NO MOTTLING, NO G.W., LEDGE AT 72"

TEST HOLE 19
0 - 15" TOPSOIL
15 - 34" ORANGE BROWN FINE SANDY LOAM
34 - 70" OLIVE BROWN SANDY TILL
ROOTS TO 34", RESTRICTIVE LAYER AT 34"
NO MOTTLING, NO G.W., LEDGE AT 50"

TEST HOLE 20
0 - 11" TOPSOIL
11 - 37" ORANGE BROWN FINE SANDY LOAM
37 - 80" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 37"
NO MOTTLING, NO G.W., LEDGE AT 80"

TEST HOLE 21
0 - 10" TOPSOIL
10 - 20" ORANGE BROWN FINE SANDY LOAM
20 - 48" LIGHT GRAY FRIABLE SANDY TILL
48 - 96" DARK GRAY/BROWN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 24", RESTRICTIVE LAYER AT 48"
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 22
0 - 11" TOPSOIL
11 - 25" ORANGE BROWN FINE SANDY LOAM
25 - 74" OLIVE BROWN SANDY TILL
ROOTS TO 25"
NO MOTTLING, NO G.W., LEDGE AT 74"

TEST HOLE 23
0 - 7" TOPSOIL
7 - 26" ORANGE BROWN FINE SANDY LOAM
26 - 48" OLIVE BROWN SANDY TILL
ROOTS TO 48"
NO MOTTLING, NO G.W., LEDGE AT 48"

TEST HOLE 24
0 - 11" TOPSOIL
11 - 25" ORANGE BROWN FINE SANDY LOAM
25 - 74" OLIVE BROWN SANDY TILL
ROOTS TO 25"
NO MOTTLING, NO G.W., LEDGE AT 74"

TEST HOLE 25
0 - 8" TOPSOIL
8 - 27" ORANGE BROWN FINE SANDY LOAM
27 - 30" YELLOW BROWN FINE SANDY LOAM
30 - 79" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 40"
NO MOTTLING, NO G.W., LEDGE AT 48"

TEST HOLE 26
0 - 11" TOPSOIL
11 - 37" ORANGE BROWN FINE SANDY LOAM
37 - 80" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 37"
NO MOTTLING, NO G.W., LEDGE AT 80"

TEST HOLE 27
0 - 11" TOPSOIL
11 - 37" ORANGE BROWN FINE SANDY LOAM
37 - 80" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 37"
NO MOTTLING, NO G.W., LEDGE AT 80"

TEST HOLE 28
0 - 15" TOPSOIL
15 - 34" ORANGE BROWN FINE SANDY LOAM
34 - 70" OLIVE BROWN SANDY TILL
ROOTS TO 34"
NO MOTTLING, NO G.W., LEDGE AT 50"

TEST HOLE 29
0 - 10" TOPSOIL
10 - 20" ORANGE BROWN FINE SANDY LOAM
20 - 48" LIGHT GRAY FRIABLE SANDY TILL
48 - 96" DARK GRAY/BROWN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 24", RESTRICTIVE LAYER AT 48"
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 30
0 - 11" TOPSOIL
11 - 25" ORANGE BROWN FINE SANDY LOAM
25 - 74" OLIVE BROWN SANDY TILL
ROOTS TO 25"
NO MOTTLING, NO G.W., LEDGE AT 74"

TEST HOLE 31
0 - 7" TOPSOIL
7 - 26" ORANGE BROWN FINE SANDY LOAM
26 - 48" OLIVE BROWN SANDY TILL
ROOTS TO 48"
NO MOTTLING, NO G.W., LEDGE AT 48"

TEST HOLE 32
0 - 8" TOPSOIL
8 - 27" ORANGE BROWN FINE SANDY LOAM
27 - 30" YELLOW BROWN FINE SANDY LOAM
30 - 79" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 40"
NO MOTTLING, NO G.W., LEDGE AT 48"

TEST HOLE 33
0 - 12" TOPSOIL
12 - 37" ORANGE BROWN FINE SANDY LOAM
37 - 51" OLIVE BROWN SANDY TILL
ROOTS TO 40"
NO MOTTLING, NO G.W., LEDGE AT 51"

TEST HOLE 34
0 - 6" TOPSOIL
6 - 22" ORANGE BROWN FINE SANDY LOAM
22 - 30" YELLOW BROWN FINE SANDY LOAM
30 - 80" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 26"
NO MOTTLING, NO G.W., LEDGE AT 30"

TEST HOLE 35
0 - 11" TOPSOIL
11 - 25" ORANGE BROWN FINE SANDY LOAM
25 - 74" OLIVE BROWN SANDY TILL
ROOTS TO 25"
NO MOTTLING, NO G.W., LEDGE AT 74"

TEST HOLE 36
0 - 11" TOPSOIL
11 - 26" ORANGE BROWN FINE SANDY LOAM
26 - 42" YELLOW BROWN FINE SANDY LOAM
42 - 62" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 42"
NO MOTTLING, NO G.W., LEDGE AT 42"

TEST HOLE 37
0 - 9" TOPSOIL
9 - 37" ORANGE BROWN FINE SANDY LOAM
37 - 41" YELLOW BROWN FINE SANDY LOAM
41 - 72" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 41"
NO MOTTLING, NO G.W., LEDGE AT 72"
RESTRICTIVE LAYER AT 42"

TEST HOLE 38
0 - 12" TOPSOIL
12 - 34" ORANGE BROWN FINE SANDY LOAM
34 - 38" YELLOW BROWN FINE SANDY LOAM
38 - 66" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 38"
NO MOTTLING, NO G.W., LEDGE AT 66"
RESTRICTIVE LAYER AT 38"

TEST HOLE 39
0 - 10" TOPSOIL
10 - 35" ORANGE BROWN FINE SANDY LOAM
35 - 84" OLIVE BROWN SANDY TILL
ROOTS TO 35"
NO MOTTLING, NO G.W., LEDGE AT 84"
NO RESTRICTIVE LAYER

TEST HOLE DATA

SOIL TESTS CONDUCTED ON JANUARY 15, 2020

TEST HOLE 24
0 - 11" TOPSOIL
11 - 33" ORANGE BROWN FINE SANDY LOAM
33 - 55" YELLOW/BROWN MEDIUM SAND & GRAVEL
ROOTS TO 60", RESTRICTIVE LAYER AT 60"
NO MOTTLING, NO G.W., LEDGE AT 64"

TEST HOLE 25
0 - 16" TOPSOIL
16 - 42" ORANGE BROWN FINE SANDY LOAM
42 - 74" OLIVE BROWN SANDY TILL
ROOTS TO 42"
NO MOTTLING, NO G.W., LEDGE AT 74"

TEST HOLE 26
0 - 12" TOPSOIL
12 - 28" ORANGE BROWN FINE SANDY LOAM
28 - 83" OLIVE BROWN SANDY TILL
ROOTS TO 32"
NO MOTTLING, NO G.W., LEDGE AT 83"

TEST HOLE 27
0 - 11" TOPSOIL
11 - 37" ORANGE BROWN FINE SANDY LOAM
37 - 80" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 37"
NO MOTTLING, NO G.W., LEDGE AT 80"

TEST HOLE 28
0 - 15" TOPSOIL
15 - 34" ORANGE BROWN FINE SANDY LOAM
34 - 70" OLIVE BROWN SANDY TILL
ROOTS TO 34"
NO MOTTLING, NO G.W., LEDGE AT 50"

TEST HOLE 29
0 - 10" TOPSOIL
10 - 20" ORANGE BROWN FINE SANDY LOAM
20 - 48" LIGHT GRAY FRIABLE SANDY TILL
48 - 96" DARK GRAY/BROWN COMPACT GRAVELLY FINE SANDY TILL
ROOTS TO 24", RESTRICTIVE LAYER AT 48"
NO MOTTLING, NO G.W., NO LEDGE

TEST HOLE 30
0 - 11" TOPSOIL
11 - 25" ORANGE BROWN FINE SANDY LOAM
25 - 74" OLIVE BROWN SANDY TILL
ROOTS TO 25"
NO MOTTLING, NO G.W., LEDGE AT 74"

TEST HOLE 31
0 - 7" TOPSOIL
7 - 26" ORANGE BROWN FINE SANDY LOAM
26 - 48" OLIVE BROWN SANDY TILL
ROOTS TO 48"
NO MOTTLING, NO G.W., LEDGE AT 48"

TEST HOLE 32
0 - 8" TOPSOIL
8 - 27" ORANGE BROWN FINE SANDY LOAM
27 - 30" YELLOW BROWN FINE SANDY LOAM
30 - 79" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 40"
NO MOTTLING, NO G.W., LEDGE AT 48"

TEST HOLE 33
0 - 12" TOPSOIL
12 - 37" ORANGE BROWN FINE SANDY LOAM
37 - 51" OLIVE BROWN SANDY TILL
ROOTS TO 40"
NO MOTTLING, NO G.W., LEDGE AT 51"

TEST HOLE 34
0 - 6" TOPSOIL
6 - 22" ORANGE BROWN FINE SANDY LOAM
22 - 30" YELLOW BROWN FINE SANDY LOAM
30 - 80" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 26"
NO MOTTLING, NO G.W., LEDGE AT 30"

TEST HOLE 35
0 - 11" TOPSOIL
11 - 25" ORANGE BROWN FINE SANDY LOAM
25 - 74" OLIVE BROWN SANDY TILL
ROOTS TO 25"
NO MOTTLING, NO G.W., LEDGE AT 74"

TEST HOLE 36
0 - 11" TOPSOIL
11 - 26" ORANGE BROWN FINE SANDY LOAM
26 - 42" YELLOW BROWN FINE SANDY LOAM
42 - 62" OLIVE BROWN COMPACT SANDY TILL
ROOTS TO 42"
NO MOTTLING, NO G.W., LEDGE AT

LOT #3
1,500 GALLON PUMP CHAMBER
VOLUME & DOSING CALCULATIONS

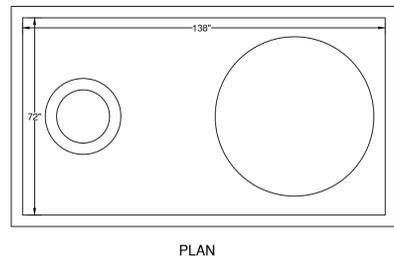
1,500 GALLON PRECAST CONCRETE PUMP CHAMBER AS MANUFACTURED BY EASTERN PRECAST CO. INC.

DESIGN FLOW = 600 GPD

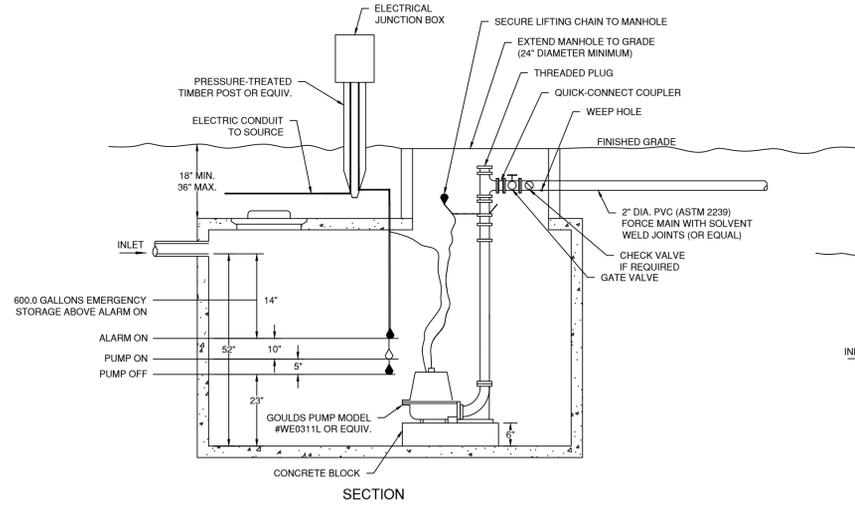
PUMP CHAMBER VOLUME:
 TANK INSIDE DIMENSIONS = 138.0" x 72.0" = 69.0 SF
 VOLUME OF 1" OF STORAGE = 43.0 GAL./INCH

PUMP DOSING VOLUME:
 ELJEN MANTIS DW-58 DOSING VOLUME PER UNIT = 18.0 GAL. (PER MANUFACTURER GUIDELINES)
 60 L.F./UNIT x 12 UNITS = 720.0 GAL.
 DOSING VOLUME = 12 UNITS x 18 GAL./UNIT = 216.0 GAL.
 216.0 GAL. / 43.0 GAL./INCH = 5.0"
 SET DIFFERENTIAL BETWEEN "PUMP ON" AND "PUMP OFF" FLOATS AT 5.0"
 PROVIDING 216.0 GALLONS PER PUMP CYCLE
 600 GPD / 216.0 GAL./CYCLE = 2.8 CYCLES/DAY

EMERGENCY STORAGE VOLUME:
 DESIGN FLOW VOLUME = 600 GAL.
 600 GAL. / 43.0 GAL./INCH = 14.0"
 SET EMERGENCY "ALARM ON" FLOAT AT 14" BELOW INLET INVERT ELEVATION PROVIDING 600 GALLONS ABOVE ALARM LEVEL.



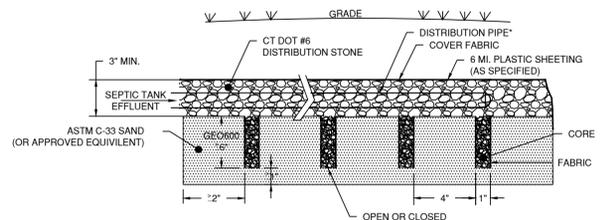
PLAN



SECTION

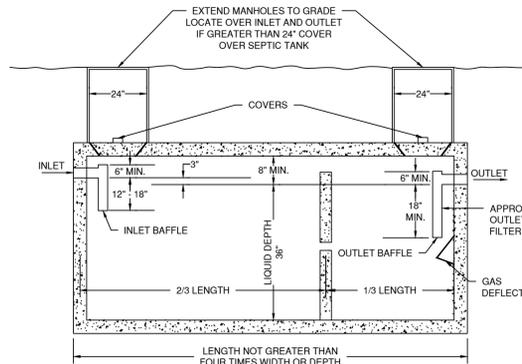
GENERAL NOTES:
 1. SET FLOATS TO PUMP 216.0 GALLONS PER CYCLE.
 2. PUMP CHAMBER SHALL BE PRECAST CONCRETE AS MANUFACTURED BY EASTERN PRECAST CO. INC. OR APPROVED EQUAL.

1,500 GALLON PUMP CHAMBER (NTS)



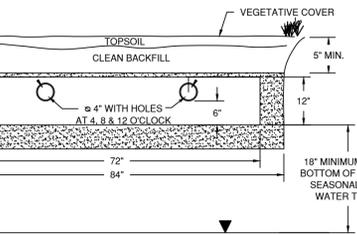
GENERAL NOTES:
 SHALL ONLY BE UTILIZED IN CONJUNCTION WITH A FLOW EQUALIZATION DEVICE TO ENSURE THAT THE INTERIOR VOID STORAGE VOLUME IS NOT EXCEEDED DURING PEAK FLOW EVENTS.
 *3" MIN. I.D., ASTM D-3034, SDR 35 PIPE FOR GRAVITY APPLICATIONS.
 *0.75" MIN. I.D., ASTM D-2665, SCH 40 PVC PIPE FOR PRESSURE APPLICATIONS.
 FINISHED GRADE SHALL BE PITCHED TO SHEET FLOW STORMWATER AWAY FROM SYSTEM.
 COVER MATERIAL DEPTH SHALL BE GREATER THAN OR EQUAL TO 6" AND SHALL BE UNIFORM OVER SYSTEM.

GEOMAT EDGE ST 600 GALLERY TYPICAL CROSS SECTION (NTS)

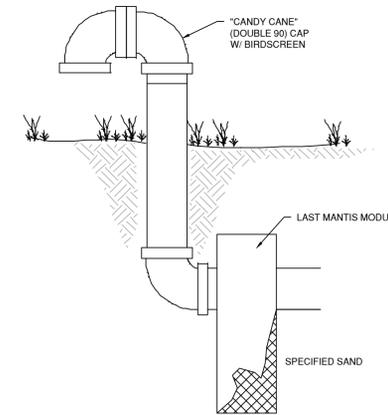


SEPTIC TANK (NTS)

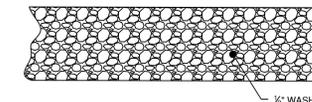
SEPTIC TANK DIMENSIONS			
CAPACITY (GALLONS)	LENGTH	WIDTH	HEIGHT
1,250	10'	5'	54"



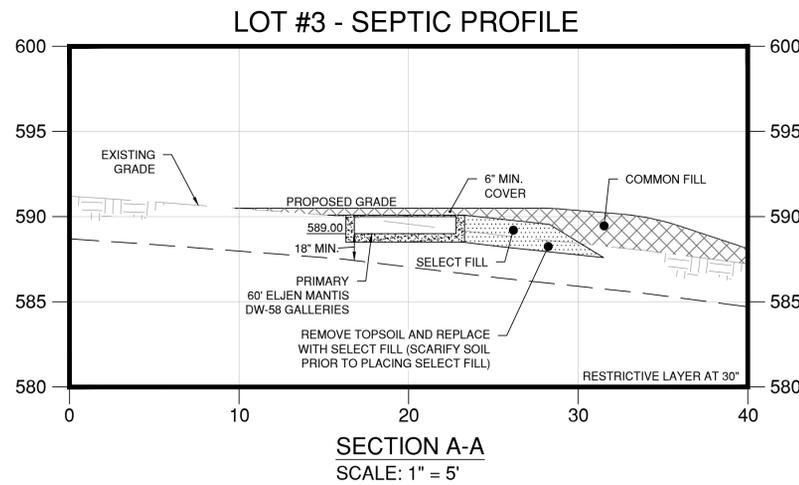
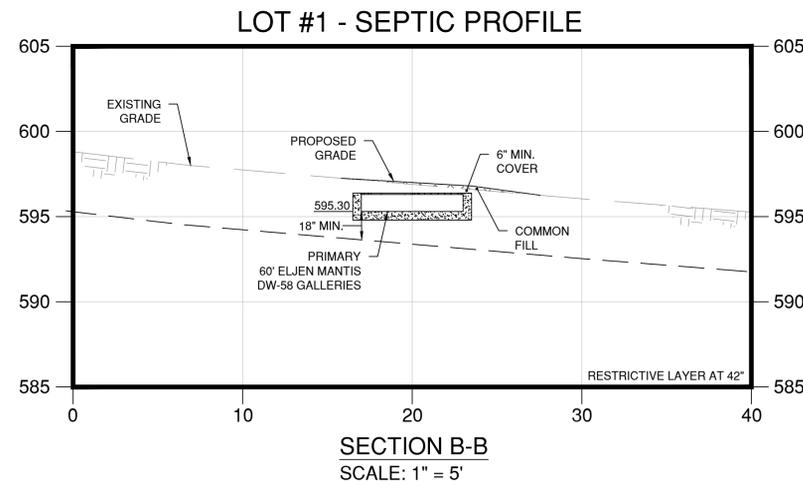
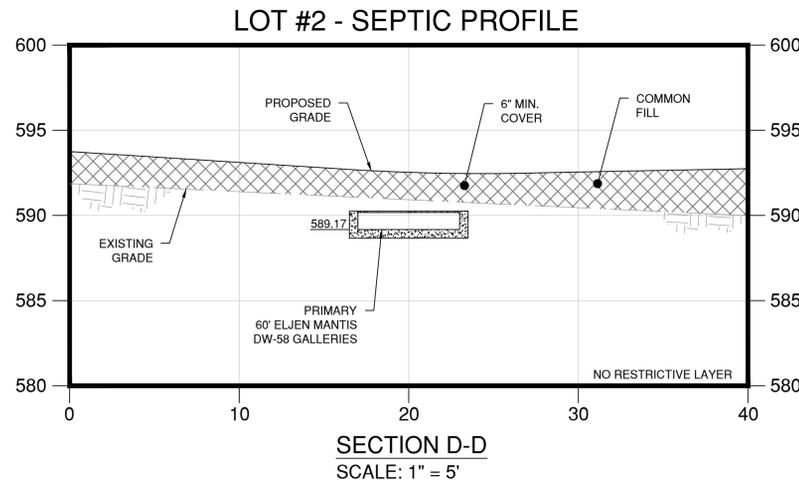
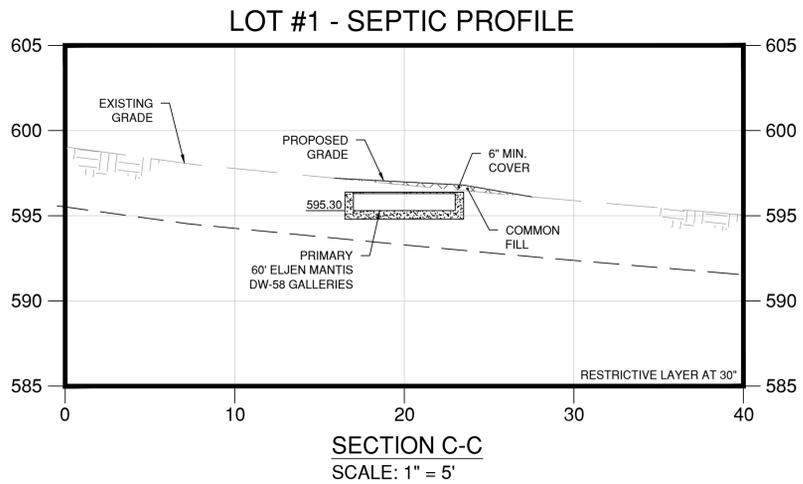
ELJEN MANTIS DW-58 TYPICAL CROSS SECTION (NTS)



MANTIS VENTING DETAIL - "CANDY CANE" TYPICAL SECTION (NTS)



COMMON AND INDIVIDUAL LOTS DRIVEWAY TYPICAL CROSS SECTION (NTS)



NO.	REVISION	DATE
1	REVISED DRIVEWAYS, GRADING AND DRAINAGE	7/17/20
2	REVISED BID PACKAGE	6/12/20
3	REVISED OPEN SPACE	5/11/20
4	ISSUE	

Civil & Structural Engineers
 Environmental Scientists
 Permit Coordinators
 Construction Management
 Construction France

LANDTECH

518 Riverside Avenue • Westport, Connecticut 06880 • 203-454-2110 • info@landtechconsult.com

PREPARED FOR: **ROGER LANCASTER**

PROJECT LOCATION: **130 TOPSTONE ROAD, REDDING, CT**

TITLE: **SITE IMPROVEMENTS FOR A PROPOSED 4-LOT SUBDIVISION CONSTRUCTION DETAILS (1 OF 3)**

PROJECT NO.: **19212-01**

SCALE: **NTS**

DATE: **3/3/2020**

DRAWN BY: **CL**

CHECKED BY: **RPP**

NOT FOR CONSTRUCTION
 FOR REVIEW AND APPROVAL
 BY PUBLIC AGENCIES ONLY

C-5.0

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- LAND DISTURBANCE WILL BE KEPT TO A MINIMUM. RESTABILIZATION WILL BE SCHEDULED AS SOON AS POSSIBLE.
- SILT FENCE WILL BE INSTALLED ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES, SOIL STOCKPILE AREAS, AND IN THOSE AREAS SHOWN ON THE PLAN.
- ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE STATE OF CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, 2002.
- EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO LAND DISTURBANCE WHENEVER POSSIBLE.
- ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PROPERLY MAINTAINED UNTIL STABILIZATION HAS BEEN ACHIEVED.
- ADDITIONAL CONTROL MEASURES WILL BE INSTALLED DURING THE CONSTRUCTION PERIOD IF NECESSARY OR REQUIRED. A MINIMUM OF 50 FEET OF SILT FENCE SHALL BE STORED AT THE SITE FOR EMERGENCY USE.
- ANY EXCAVATIONS THAT MUST BE DEWATERED WILL BE PUMPED INTO AN ACTIVE DRAINAGE SYSTEM OR DISPERSED IN AN UNDISTURBED FIELD AREA. THE INLETS OF ALL PUMPS ARE TO BE FLOATED A MINIMUM OF 24 INCHES OFF THE BOTTOM OF THE EXCAVATION.
- WATER AND CALCIUM CHLORIDE SHALL BE APPLIED TO UNPAVED ACCESSWAYS TO PREVENT WIND GENERATED SEDIMENTS AND DUST.
- DEBRIS AND OTHER WASTES RESULTING FROM EQUIPMENT MAINTENANCE AND CONSTRUCTION ACTIVITIES WILL NOT BE DISCARDED ON-SITE.
- SEDIMENT REMOVED FROM CONTROL STRUCTURES WILL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH INTENT OF THE PLAN.
- SILT FENCES SHALL HAVE SEDIMENT REMOVED WHEN THE DEPTH OF THE SEDIMENT IS EQUAL TO 1/4 TO 1/2 THE HEIGHT OF THE FENCE. FENCES SHALL BE PROPERLY INSTALLED AND RIPPED FENCE OR BROKEN POSTS REPAIRED AS SOON AS PRACTICAL.
- ANTI-TRACKING PADS AND GRAVEL CHECK DAMS SHALL BE REPLACED WHEN VOID SPACES ARE FULL OR STRUCTURES ARE BREACHED, AS APPLICABLE.
- TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND THE SOIL SURFACE STABILIZED WHEN CONSTRUCTION IS COMPLETE AND THE SOIL SURFACES ARE PERMANENTLY STABILIZED. STRUCTURAL COMPONENTS SHALL BE CLEANED OF ALL SEDIMENT UPON COMPLETION OF CONSTRUCTION.
- THE OWNER IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE PLANNING AND ZONING COMMISSION OF ANY TRANSFER OF THIS RESPONSIBILITY, AND FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT PLAN IF AND WHEN THE TITLE OF LAND IS TRANSFERRED.

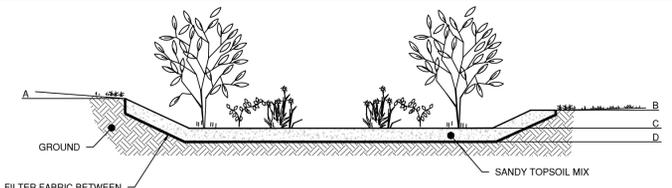
RAIN GARDEN PLANTING NOTES:

RECOMMENDED SEED MIXTURES APPLICATION RATE

NEW ENGLAND EROSION CONTROL/RESTORATION MIX (FOR MOIST SITES) 35 LBS/ACRE

THE NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES CONTAINS A SELECTION OF NATIVE GRASSES AND WILDFLOWERS DESIGNED TO COLONIZE RECENTLY DISTURBED SITES WHERE QUICK GROWTH OF VEGETATION IS DESIRED TO STABILIZE THE SOIL SURFACE. IT IS AN EXCELLENT SEED MIX FOR ECOLOGICALLY APPROPRIATE RESTORATIONS ON MOIST SITES THAT REQUIRE QUICK STABILIZATION AS WELL AS LONG-TERM ESTABLISHMENT OF NATIVE VEGETATION. THIS MIX IS PARTICULARLY APPROPRIATE FOR DETENTION BASINS THAT DO NOT NORMALLY HOLD STANDING WATER. SOME PLANTS IN THIS MIX CAN TOLERATE INFREQUENT INUNDATION, BUT NOT CONSTANT FLOODING. ALWAYS APPLY ON CLEAN BARE SOIL. THE MIX MAY BE APPLIED BY HYDRO-SEEDING, BY MECHANICAL SPREADER, OR ON SMALL SITES IT CAN BE SPREAD BY HAND, LIGHTLY RAKE, OR ROLL TO ENSURE PROPER SOIL-SEED CONTACT. BEST RESULTS ARE OBTAINED WITH A SPRING OR EARLY FALL SEEDING. LATE SPRING AND SUMMER SEEDING WILL BENEFIT WITH A LIGHT MULCHING OF CLEAN WEED-FREE STRAW TO CONSERVE MOISTURE. IF CONDITIONS ARE DRIER THAN USUAL, WATERING MAY BE REQUIRED. LATE FALL AND WINTER DORMANT SEEDING REQUIRE AN INCREASE IN THE SEEDING RATE. FERTILIZATION IS NOT RECOMMENDED. PREPARATION OF A CLEAN WEED FREE SOIL SURFACE IS NECESSARY FOR OPTIMAL RESULTS.

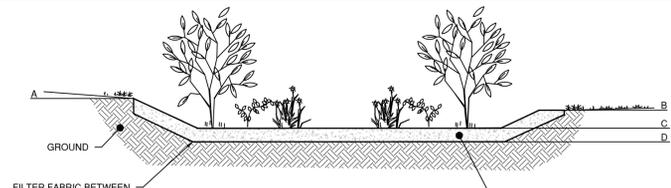
THIS MIXTURE INCLUDES: UPLAND BENTGRASS (AGROSTIS PERENNANS), CREEPING BENTGRASS (AGROSTIS STOLONIFERA), BIG BLUESTEM (ANDROPOGON GERARDII), FOX SEDGE (CAREX VULPINOIDES), CANADA WILD RYE (ELYMUS CANADENSIS), VIRGINIA WILD RYE (ELYMUS VIRGINICUS), CREEPING RED FESCUE (FESTUCA RUBRA), SOFT RUSH (JUNCUS EFFLUSUS), SWITCHGRASS (PANICUM VIRGATUM), LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM), GREEN BURLRUSH (SCIRPUS ATROVIRENS), NEW ENGLAND ASTER (ASTER NOVAE-ANGLIAE), SPOTTED JOE-PYE WEED (EUPATORIUM MACULATUM), AND BLUE VERVAIN (VERBENA HASTATA).



Rain Garden 1			
Elevation ID	Elevation	Area	Description
A	588.00	1100	Top of Berm
B	587.75	-	10 LF Overflow Weir
C	587.00	930	Bottom of Ponding
D	586.00	1100	Bottom of Sandy Topsoil

RAIN GARDEN 1 SOIL LAYERING DETAIL
(NTS)

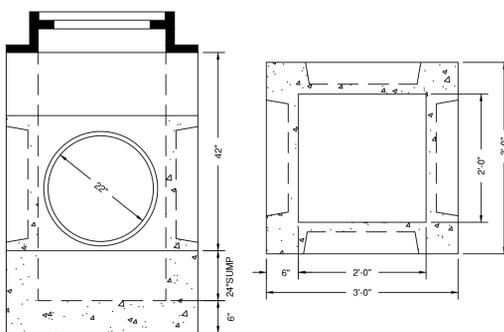
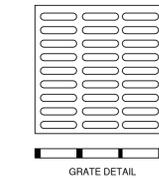
- GENERAL NOTES**
- EXCAVATE RAIN GARDEN AREA TO PROPOSED INVERT DEPTHS AND SCARIFY EXISTING SOIL SURFACES, TAKING CARE NOT TO COMPACT THE IN-SITU MATERIALS.
 - PLACE SOIL IN 6" LIFTS, DO NOT COMPACT.
 - LIFTS MAY BE LIGHTLY WATERED TO ENCOURAGE NATURAL COMPACTION.
 - OVERFILL OF SANDY TOPSOIL MIX IS REQUIRED TO ACCOMMODATE NATURAL SETTLEMENT TO PROPER GRADE.



Rain Garden 2			
Elevation ID	Elevation	Area	Description
A	590.00	555	Top of Berm
B	589.75	-	10 LF Overflow Weir
C	589.00	440	Bottom of Ponding
D	588.00	555	Bottom of Sandy Topsoil

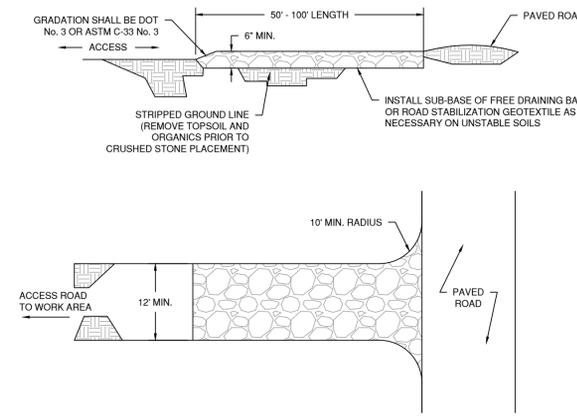
RAIN GARDEN 2 SOIL LAYERING DETAIL
(NTS)

- GENERAL NOTES**
- EXCAVATE RAIN GARDEN AREA TO PROPOSED INVERT DEPTHS AND SCARIFY EXISTING SOIL SURFACES, TAKING CARE NOT TO COMPACT THE IN-SITU MATERIALS.
 - PLACE SOIL IN 6" LIFTS, DO NOT COMPACT.
 - LIFTS MAY BE LIGHTLY WATERED TO ENCOURAGE NATURAL COMPACTION.
 - OVERFILL OF SANDY TOPSOIL MIX IS REQUIRED TO ACCOMMODATE NATURAL SETTLEMENT TO PROPER GRADE.

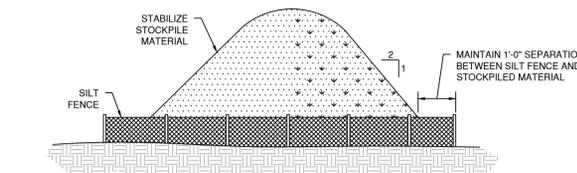


- GENERAL NOTES**
- REINFORCED 6 X 6 X 10 GAUGE MESH OR TO SPECIFICATIONS.
 - GRATE - STEEL OR CAST IRON.
 - 4" HIGH SUMP HAS TWO KNOCKOUTS LOW AND 2 KNOCKOUTS UP HIGH.
 - APPROXIMATE WEIGHTS:
3' - 2100 LBS.
4' - 2800 LBS.

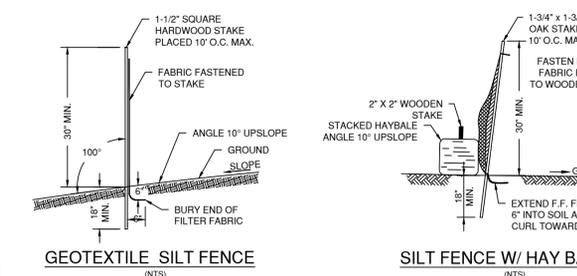
2' X 2' PRECAST CONCRETE CATCH BASIN
(NTS)



CONSTRUCTION ENTRANCE
(NTS)

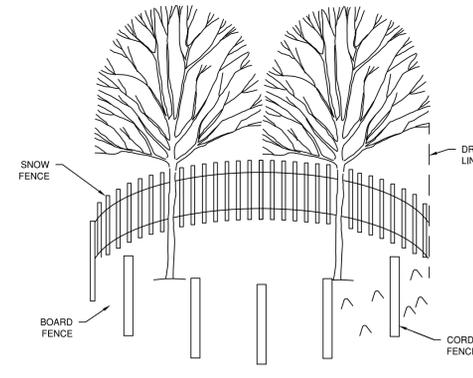


STOCKPILE DETAIL
(NTS)

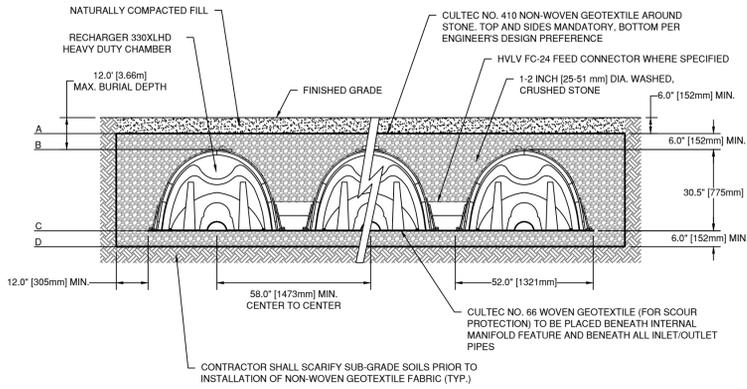


GEOTEXTILE SILT FENCE
(NTS)

SILT FENCE W/ HAY BALES
(NTS)



CORRECT METHODS OF TREE FENCING
(NTS)

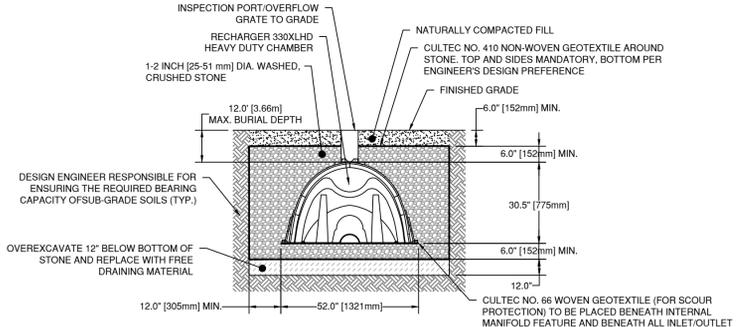


Underground Detention (INF-1)

Elevation ID	Elevation	Description
A	597.21	Top of Stone
B	596.71	Top of System
C	594.17	Bottom of System
D	593.67	Bottom of Stone
-	594.17	6" Inlet Pipe Invert
-	To Grade	24" Dia. Inspection Ports

- GENERAL NOTES**
- RECHARGER 330XL HD BY CULTEC, INC. OF BROOKFIELD, CT. STORAGE PROVIDED = 11.32 CFF FT (1.05 m³/m) PER DESIGN UNIT. REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES. THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS
- ALL RECHARGER 330XL HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER. ALL RECHARGER 330XL HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

CULTEC RECHARGER 330XLHD HEAVY DUTY (NON-TRAFFIC APP.) TYPICAL CROSS SECTION
(NTS)



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CULTEC RECHARGER 330XLHD HEAVY DUTY FOR FOOTING DRAINS TYPICAL CROSS SECTION
(NTS)

NOT FOR CONSTRUCTION
FOR REVIEW AND APPROVAL
BY PUBLIC AGENCIES ONLY

7/9/20	REVISED DRIVEWAYS, GRADING AND DRAINAGE
6/17/20	REVISED BID PACKAGE
5/11/20	REVISED OPEN SPACE
	ISSUE

Civil & Structural Engineers
Environmental Scientists
Civil & Mechanical Engineers
Construction Management
Construction Finance

LANDTECH

518 Riverside Avenue • Westport, Connecticut 06880 • 203-454-2110 • info@landtechconsult.com

PROJECT NO.	19212-01
SCALE	DATE
NTS	3/3/2020
DRAWN BY:	CHECKED BY:
CL	RPP
PROJECT LOCATION:	130 TOPSTONE ROAD REDDING, CT
TITLE:	SITE IMPROVEMENTS FOR A PROPOSED 4-LOT SUBDIVISION CONSTRUCTION DETAILS (2 OF 3)

C-5.1