CONTRACT DRAWINGS

SHEET NO.	TITLE
1 OF 5	EXISTING CONDITIONS SURVEY
2 OF 5	PROPOSED IMPROVEMENTS
3 OF 5	LIVING WALL X-SECTION – WATER VIEW
4 OF 5	LIVING WALL X-SECTION “B” (PARGE COAT)
5 OF 5	LIVING WALL X-SECTION “A”

Notes

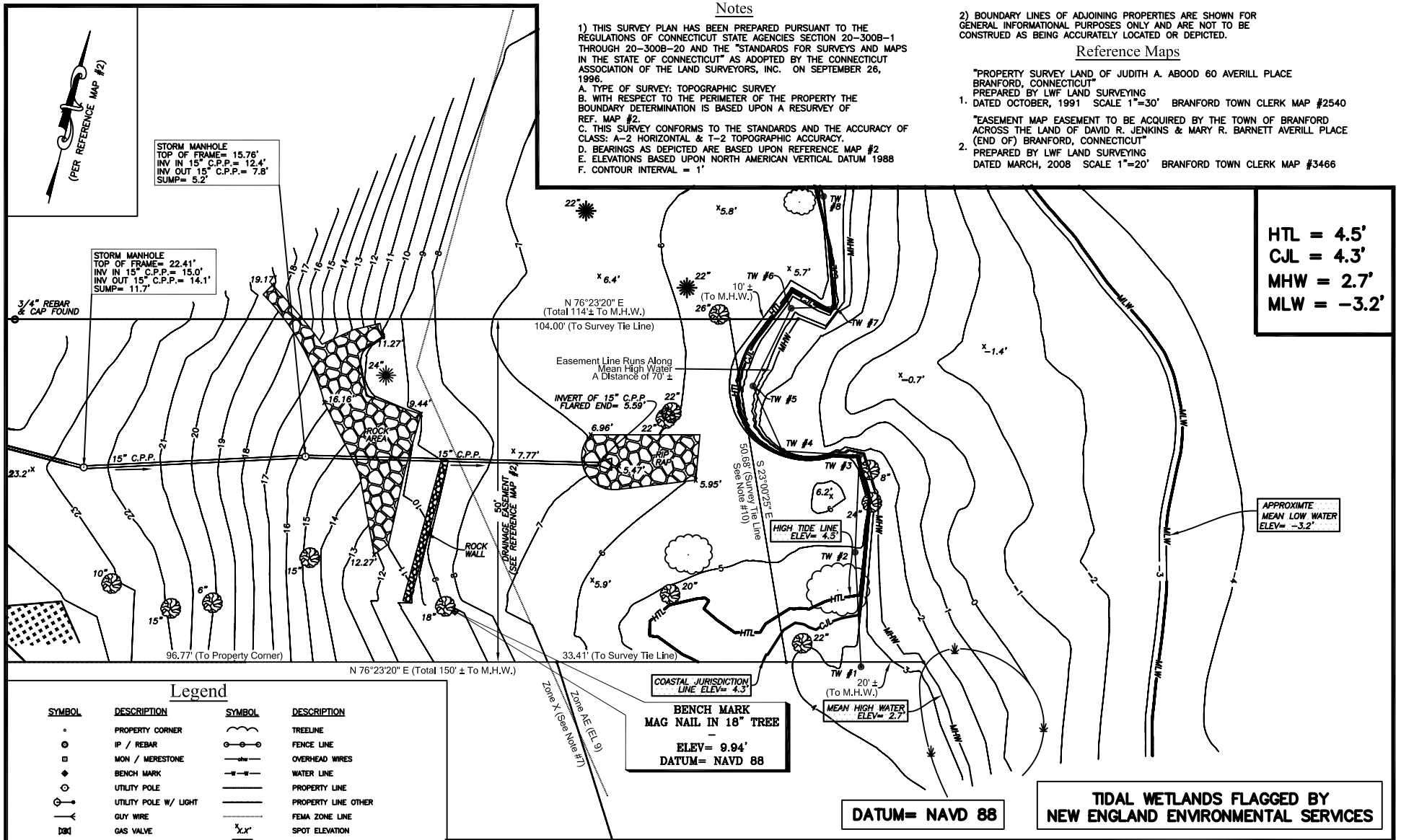
1) THIS SURVEY PLAN HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTION 20-300B-1 THROUGH 20-300B-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF THE LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.
A. TYPE OF SURVEY: TOPOGRAPHIC SURVEY
B. WITH RESPECT TO THE PERIMETER OF THE PROPERTY THE BOUNDARY DETERMINATION IS BASED UPON A RESURVEY OF REF. MAP #2.
C. THIS SURVEY CONFORMS TO THE STANDARDS AND THE ACCURACY OF CLASS: A-2 HORIZONTAL & T-2 TOPOGRAPHIC ACCURACY.
D. BEARINGS AS DEPICTED ARE BASED UPON REFERENCE MAP #2
E. ELEVATIONS BASED UPON NORTH AMERICAN VERTICAL DATUM 1988
F. CONTOUR INTERVAL = 1'

2) BOUNDARY LINES OF ADJOINING PROPERTIES ARE SHOWN FOR GENERAL INFORMATIONAL PURPOSES ONLY AND ARE NOT TO BE CONSTRUED AS BEING ACCURATELY LOCATED OR DEPICTED.

Reference Maps

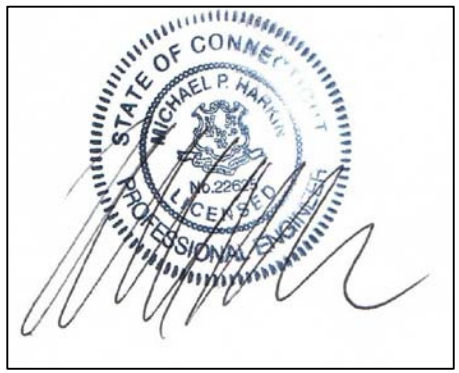
"PROPERTY SURVEY LAND OF JUDITH A. ABOOD 60 AVERILL PLACE BRANFORD, CONNECTICUT"
PREPARED BY LWF LAND SURVEYING
1. DATED OCTOBER, 1991 SCALE 1"=30' BRANFORD TOWN CLERK MAP #2540

"EASEMENT MAP EASEMENT TO BE ACQUIRED BY THE TOWN OF BRANFORD ACROSS THE LAND OF DAVID R. JENKINS & MARY R. BARNETT AVERILL PLACE (END OF) BRANFORD, CONNECTICUT"
2. PREPARED BY LWF LAND SURVEYING
DATED MARCH, 2008 SCALE 1"=20' BRANFORD TOWN CLERK MAP #3466



Legend

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
•	PROPERTY CORNER		TREELINE
IP / REBAR		FENCE LINE	
MON / MERESTONE		OHW	OVERHEAD WIRES
BENCH MARK	W W	WATER LINE	
UTILITY POLE		PROPERTY LINE	
UTILITY POLE W/ LIGHT		PROPERTY LINE OTHER	
GUY WIRE		FEMA ZONE LINE	
GAS VALVE	X.X'	SPOT ELEVATION	
WATER VALVE		PLANTED AREA	
FIRE HYDRANT		GRAVEL AREA	
CATCH BASIN		EXISTING BUILDING	
MANHOLE	N/F	NOW OR FORMERLY	
SIGN	ELEV	ELEVATION	
LIGHT POLE	(TYP)	TYPICAL	
YARD LIGHT	CMP	CORRUGATED METAL PIPE	
WOOD POST	RCP	REINFORCED CONCRETE PIPE	
DECIDUOUS TREE	CPP	CORRUGATED PLASTIC PIPE	
CONIFEROUS TREE	E.O.P.	EDGE OF PAVEMENT	
SHRUB	E.O.G.	EDGE OF GRAVEL	
STUMP	B.C.L.C.	BITUMINOUS CONCRETE LIP CURB	
HEDGE	W/	WITH	
STONEWALL	F.F.	FINISHED FLOOR	
EDGE OF MARSH	(TS)	TOP OF SLATE	
INDEX CONTOUR	(TW)	TOP OF WALL	
INTERMEDIATE CONTOUR	(TB)	TOP OF BORDER	
COASTAL JURISDICTION LINE			



GRAPHIC SCALE: 1"=20'

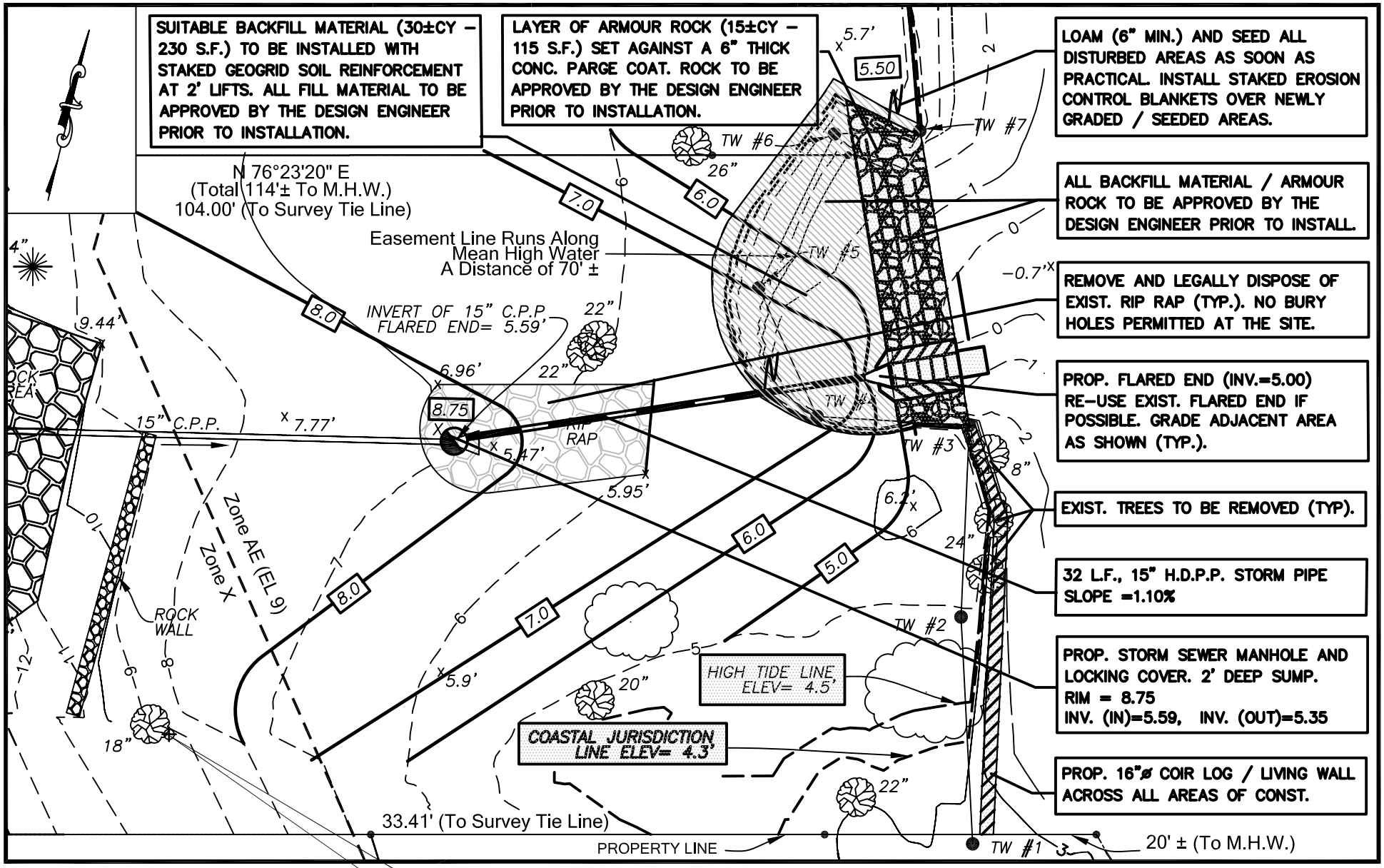
0' 10' 20' 40'

EXISTING CONDITIONS SURVEY

PREPARED FOR
TOWN OF BRANFORD
AVERILL PLACE DRAINAGE EASEMENT
BRANFORD, CONNECTICUT

HARKIN ENGINEERING, LLC
78 WOLF HOLLOW LANE KILLINGWORTH, CT. (860) 663-4248

Job No. 13-21
Scale: 1"=20'
Date: 9/7/17
Designed: M.P.H.
Drawn: M.P.H.
Sheet: 1 OF 5



BENCH MARK
MAG NAIL IN 18" TREE
–
ELEV= 9.94'
DATUM= NAVD 88

SITE CONTRACTOR TO VERIFY ALL QUANTITIES.

TIDAL WETLANDS FLAGGED BY NEW ENGLAND ENVIRONMENTAL SERVICES

HTL = 4.5'
CJL = 4.3'
MHW = 2.7'
MLW = –3.2'

DATUM= NAVD 88

STATE OF CONNECTICUT
MICHAEL P. HARKIN
No. 22628
LICENSED
PROFESSIONAL ENGINEER

GRAPHIC SCALE: 1"=10'
0' 5' 10' 20'

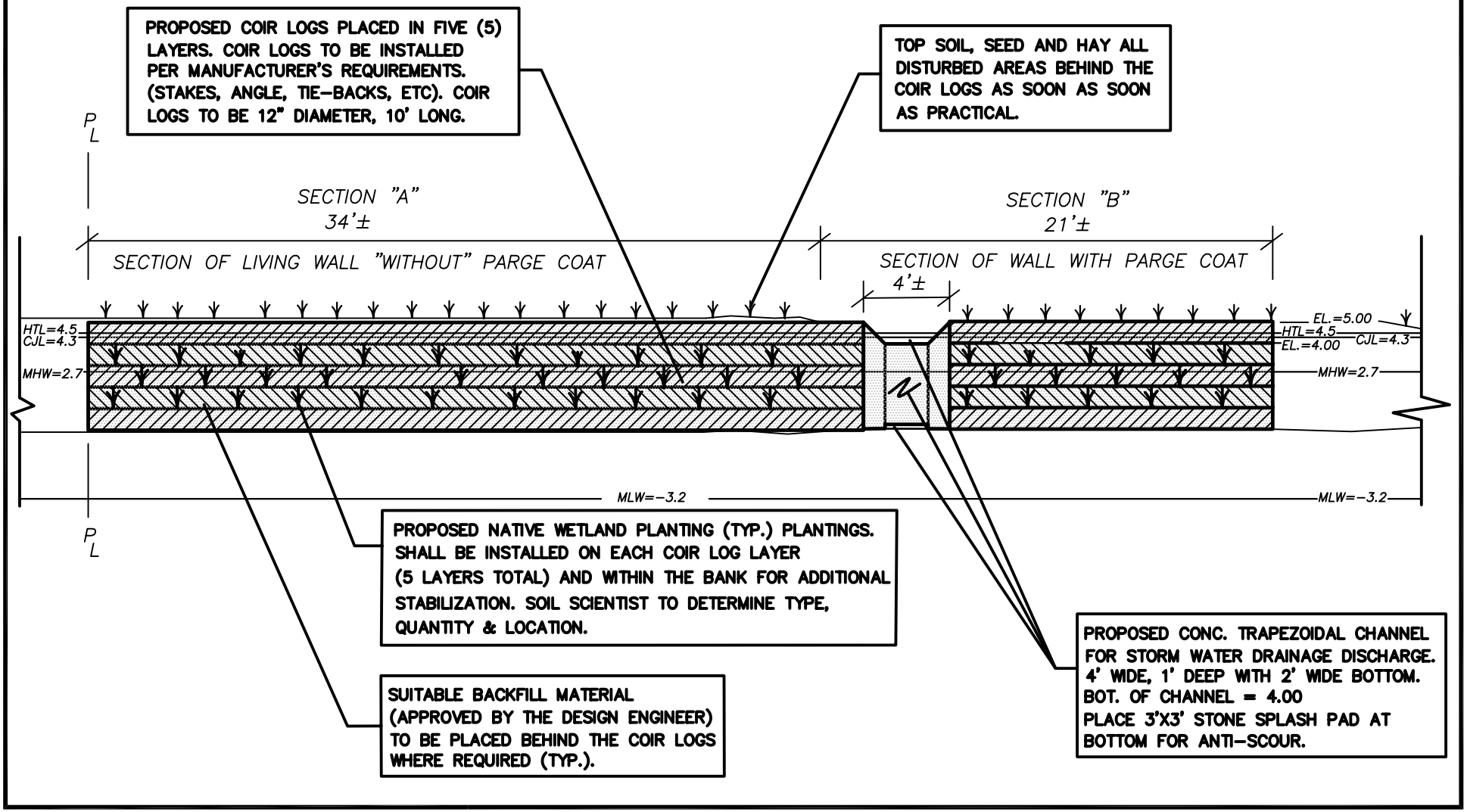
REVISED: 9/27/17 CTDEEP
8/20/18 CTDEEP
7/15/19 TREES

PROPOSED IMPROVEMENTS

PREPARED FOR
TOWN OF BRANFORD
AVERILL PLACE DRAINAGE EASEMENT
BRANFORD, CONNECTICUT

HARKIN ENGINEERING, LLC
78 WOLF HOLLOW LANE KILLINGWORTH, CT. (860) 663-4248

Job No. 13-21
Scale: 1"=10'
Date: 9/7/17
Designed: M.P.H.
Drawn: M.P.H.
Sheet: 2 OF 5



SITE CONTRACTOR TO VERIFY ALL QUANTITIES.

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CJL = 4.3'
MHW = 2.7'
MLW = -3.2'

DATUM= NAVD 88

REVISED:
9/27/17 – CTDEEP
4/18/18 – ARMY CORPS

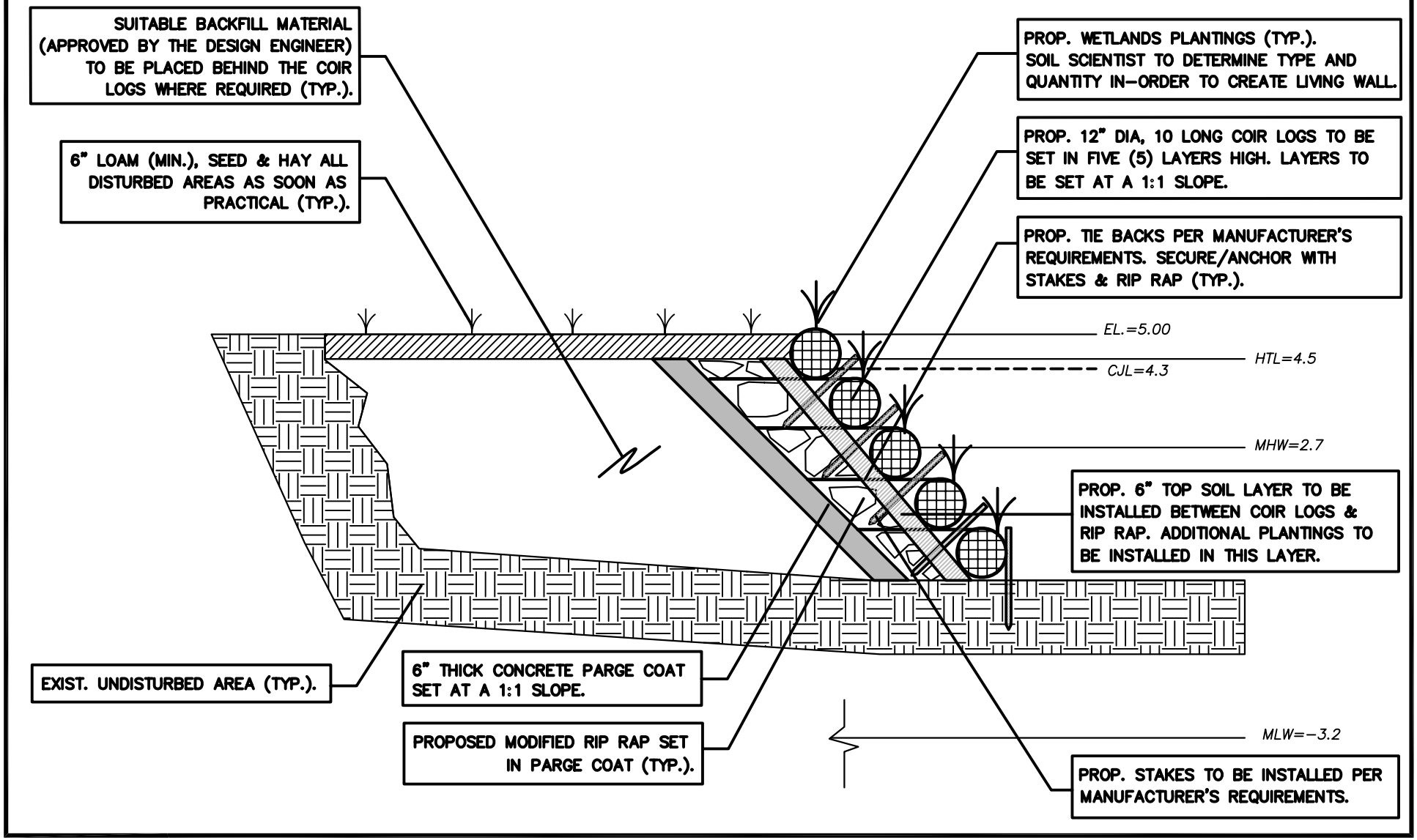
LIVING WALL

X-SECTION – WATER VIEW

PREPARED FOR
TOWN OF BRANFORD
AVERILL PLACE DRAINAGE EASEMENT
BRANFORD, CONNECTICUT

HARKIN ENGINEERING, LLC
78 WOLF HOLLOW LANE KILLINGWORTH, CT. (860) 663-4248

Job No. 13-21
Scale: N.T.S.
Date: 9/7/17
Designed: M.P.H.
Drawn: M.P.H.
Sheet: 3 OF 5



SITE CONTRACTOR TO VERIFY ALL QUANTITIES.

TIDAL WETLANDS FLAGGED BY NEW ENGLAND ENVIRONMENTAL SERVICES

HTL = 4.5'
CJL = 4.3'
MHW = 2.7'
MLW = -3.2'

DATUM= NAVD 88

REVISED:
9/27/17 - CTDEEP
4/18/18 - ARMY CORPS

LIVING WALL

X-SECTION: SECTION "B" (PARGE COAT)

PREPARED FOR
TOWN OF BRANFORD
AVERILL PLACE DRAINAGE EASEMENT
BRANFORD, CONNECTICUT

HARKIN ENGINEERING, LLC
78 WOLF HOLLOW LANE KILLINGWORTH, CT. (860) 663-4248

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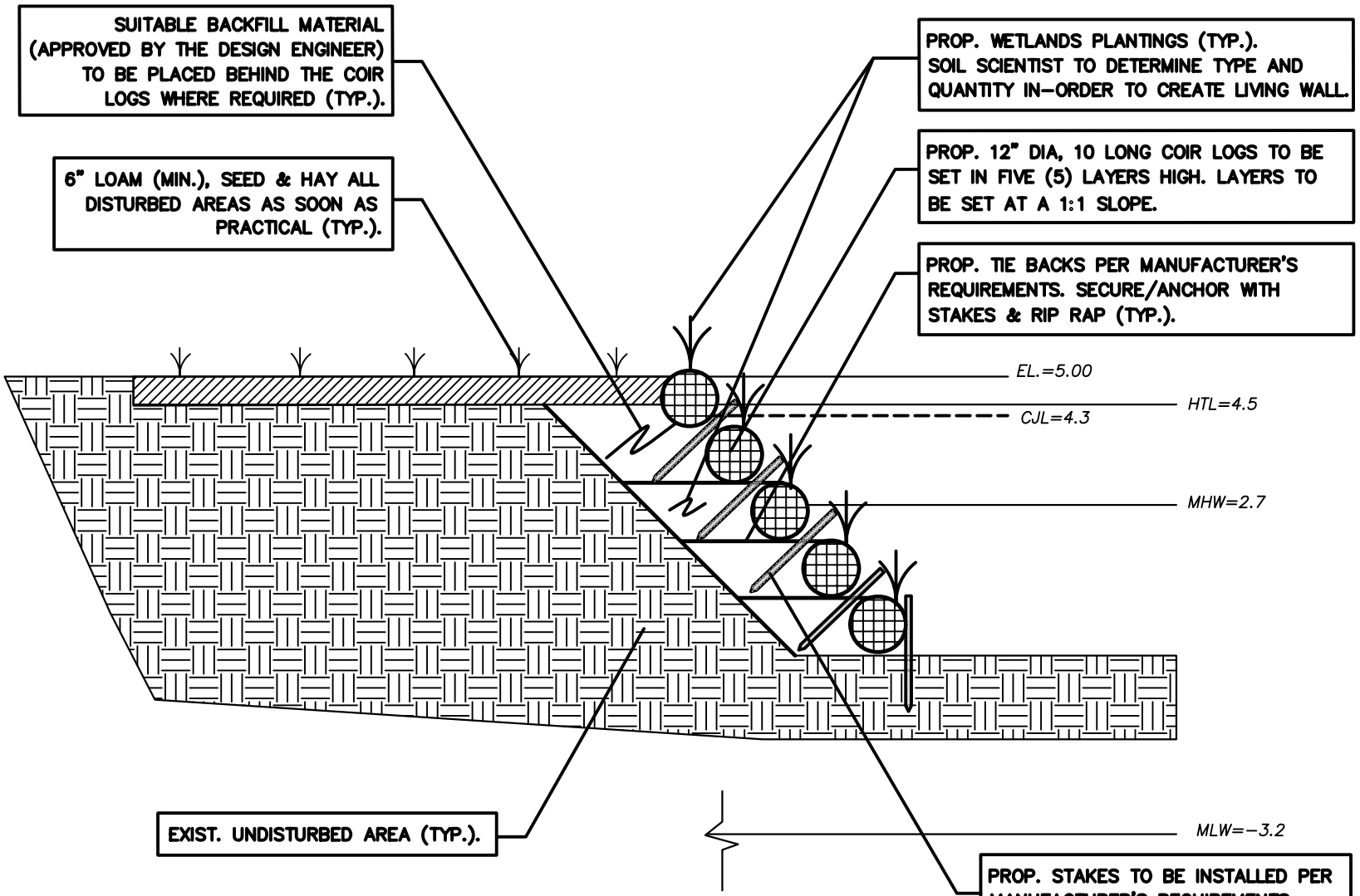
Sheet: 4 OF 5



SITE CONTRACTOR TO VERIFY ALL QUANTITIES.

TIDAL WETLANDS FLAGGED BY NEW ENGLAND ENVIRONMENTAL SERVICES

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REVISED:
9/27/17 – CTDEEP
4/18/18 – ARMY CORPS

LIVING WALL

X-SECTION: SECTION "A"

Job No. 13-21

PREPARED FOR
TOWN OF BRANFORD
AVERILL PLACE DRAINAGE EASEMENT
BRANFORD, CONNECTICUT

Scale: N.T.S.

Date: 9/7/17

Designed: M.P.H.

Drawn: M.P.H.

HARKIN ENGINEERING, LLC
78 WOLF HOLLOW LANE KILLINGWORTH, CT. (860) 663-4248

Sheet: 5 OF 5

PROJECT SPECIFICATIONS

- COIR LOGS (EFFECTIVE EROSION CONTROL)

- COIR LOGS (INSTALLATION INSTRUCTIONS)

- PLANTING PLAN FOR LIVING WALL SPECIFICATIONS (BY NEW ENGLAND ENVIRONMENTAL SERVICES)

- PROJECT SPECIFICATIONS; CTDOT FORM 817

Coir Logs
Effective Erosion Control

Coconut Coir Logs are a completely biodegradable erosion control option for hills, banks, shorelines, and other erosion prone areas. Easy to install, these logs create a natural control area that helps establish growth and control erosion. Logs have been effectively used in restoration projects, stabilization areas, and construction job sites.

Standard design of the coir log features a strong, coir twine outer netting that surrounds a mixture of mattress coconut coir. Logs are designed with a typical lifespan of anywhere from 2 to 5 years.

Applications

- Channel and slope stabilization
- River bank stabilization
- Shoreline protection
- Wetland restoration
- Dam construction
- Detention Ponds
- Highway embankment
- Mining operations
- Ski Slopes and lift traffic
- Pipeline construction
- High altitude construction sites
- Railway embankments
- Wave control structures

Benefits

- Easy to install
- Improves seed germination, vegetative growth and facilitates root development
- Helps build into existing contours
- Returns nutrients to the environment
- Requires no chemical treatment
- High air and water permeability
- Environmentally friendly
- Safe for surrounding wildlife
- Biodegrades over 2-5 years

Specifications

Diameter	Density	Weight	Length
9”	7 lbs/ft^3	3 lbs/ft	10’ or 16’
12”	7 or 9 lbs/ft^3	5.5 lbs/ft	10’ or 20’
16”	7 or 9 lbs/ft^3	9.5 lbs/ft	10’ or 20’
20”	7 or 9 lbs/ft^3	15 lbs/ft	10’ or 20’

GEI WORKS

926-2019-02-26

Phone: (+1) 772-646-0597 | www.geiworks.com | info@geiworks.com

Coir Logs
Installation Instructions

Below you will find the typical installation steps for coconut coir logs. Installation requirements and methods may vary depending on the specifications of your location.

STEP 1: Clear the installation area of any debris, trees, rocks or large obstructions. Coir logs are designed to come in contact with the soil, so any stumps or potential obstructions should be removed.

STEP 2: Dig a small trench in the location where the coir logs need to be placed.

STEP 3: Place the coir logs in the trench and backfill with soil so that the coir logs are tightly packed against the slope. Adjacent coir logs should be positioned so that the ends fit tightly against each other. Ends should be joined/secured together with coir twine or other suitable ties. Mattress coir fiber may be used to fill spacing between log ends.

STEP 4: Stake/anchor the coir logs into position. Coir logs should be anchored according to site requirements or specifications. Typical anchoring can be seen below:

Stream Size	Water Flow	Log Diameter	Anchor Height	Anchor Spacing
Large	Moderate	16”	3’ minimum	Every 2.5’
Medium	Moderate	12”	30” minimum	Every 3’
Medium	Low	12”	30” minimum	Every 3.5’

GEI WORKS

926-2018-12-18

Phone: (+1) 772-646-0597 | www.geiworks.com | info@geiworks.com

NEW ENGLAND ENVIRONMENTAL SERVICES

BLACKLEDGE RIVER NURSERY

Planting Plan for Living Wall

Averill Place
Branford, Connecticut

Species	Elevations	Spacing	Approx. Quantity (each)
Spartina alterniflora	2.0-2.5	1 foot	75
Spartina patens	2.5-3.0	1 foot	25
Panicum virgatum	3.0-5.0	1 foot	50

Payment based and Form 817 install per unit and planting establishment as a percentage

1. The plants will be 2" plugs.
2. A potting soil containing over 10% organic matter will be put in the logs around each soil plug.
3. The *Panicum virgatum* plugs may need to be watered until the roots become established into the logs.

Prepared by:

R. Richard Snarski
Professional Wetlands Scientist #1391
Registered Professional Soil Scientist #1975

May 28, 2019

RRS/srh

155 JERRY DANIELS ROAD, MARLBOROUGH, CONNECTICUT 06447
PHONE/FAX 860-295-1022 RICHSNARSKI@GMAIL.COM WWW.RICHSNARSKI.COM

PROJECT SPECIFICATIONS:

"Averill Place Strom Drainage & Erosion Control Project"

All work on this project shall be done in accordance with the following:

STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

The Standard Specifications for Roads, Bridges, Facilities and Incidental Construction

FORM 817

Dated: 2016

Merged with
SUPPLEMENTAL SPECIFICATIONS

Dated: January 2019

All Form 817 specifications listed below can be found on the CTDOT Website.

Specifically, the following sections shall be implemented as part of this project:

Division I

General Requirements and Covenants:

Sections:

1.01 Thru 1.20-9.75

Division II

Construction Details:

Sections:

2.01 Clearing and Grubbing
2.02 Roadway Excavation, Formation of Embankment and Disposal
2.03 Structure Excavation
2.11 Anti – Tracking Pad

Division II Continued…..

Construction Details:

Sections:

2.13 Granular Fill
2.19 Sedimentation Control System

Division II

Structures:

Sections:

5.01 General Clauses
5.07 Catch Basins, Manholes and Drop Inlets
5.13 Polyvinyl Chloride Plastic Pipe

6.01 Concrete for Structures
6.11 Shotcrete
6.51 Culverts
6.52 Culvert Ends
6.53 Cleaning Existing Drainage System

Division II

Incidental Construction:

Sections:

7.03 Riprap
7.17 Earth Retaining System Left in Place
7.28 Crushed Stone for Slope Protection
7.55 Geotextile

8.03 Paved Ditches, paved Aprons and Paved Channels

9.15 Tree Root Protection
9.44 Topsoil
9.50 Turf Establishment, Erosion Control Matting
9.52 Selective Clearing and Thinning
9.75 Mobilization and Project Closeout
9.80 Construction Staking

Division III

Materials Section:

Sections:

M.01 Gradation of Aggregates
M.02 Granular Fill, Subbase, Granular Base and Surfaces, Stone Base, Pervious Structure Backfill, Free Draining Material, Crusher-Run Stone
M.03 Portland Cement Concrete
M.08 Drainage
M.12 Bearing Areas, Riprap, Slope Paving & Slope Protection, Waterproofing and Damp-proofing, Stone and Granite, Slope Curbing, Calcium Chloride for Dust Control, Wood