

STORMWATER RETROFIT PLANS

PREPARED FOR

TOWN OF EAST HAMPTON, CONNECTICUT

LOCATION #1: PAUL AND SANDY'S

LOCATION #2: CHRISTOPHER POND

LOCATION #3: WATER SUPPLY FACILITY FOR EDGEMERE CONDOMINIUMS

LOCATION #4: TOWN HALL POND

LOCATION #5: SPELLMAN POINT ROAD

LOCATION #6: BAY ROAD CULVERT

DATE: MAY 7, 2022, Revised: 6/5/22

RECEIVED
6/5/2022
East Hampton
Land Use Office

TRINKAUS ENGINEERING, LLC

CIVIL ENGINEERS

114 HUNTERS RIDGE ROAD

SOUTHBURY, CONNECTICUT 06488

203-264-4558 (office)

203-525-5153 (mobile)

Email: strinkaus@earthlink.net

Website: www.trinkausengineering.com





APPROXIMATE PATH OF RUNOFF FROM IRRIGATION POND

LIMIT OF CLEARING AND AREA TO BE SEEDED WITH NEW ENGLAND WETMIX BY NEW ENGLAND WETLAND PLANTS

WATTLE #1

WATTLE #2

APPROXIMATE PATH OF RUNOFF FROM CT DOT CULVERT

WATTLE #3

LIMIT OF CLEARING AND AREA TO BE SEEDED WITH NEW ENGLAND WETMIX BY NEW ENGLAND WETLAND PLANTS

LIMIT OF CLEARING AND AREA TO BE SEEDED WITH NEW ENGLAND WETMIX BY NEW ENGLAND WETLAND PLANTS

WATTLE #1 LOCATION STAKED IN FIELD

WATTLE #2 LOCATION STAKED IN FIELD

WATTLE #3 LOCATION STAKED IN FIELD



TRINKAUS ENGINEERING, LLC

CIVIL ENGINEERS
114 HUNTERS RIDGE ROAD
SOUTHBRURY, CONNECTICUT 06488
203-264-4558 (ph)
Email: strinkaus@earthlink.net
Website: www.trinkausengineering.com

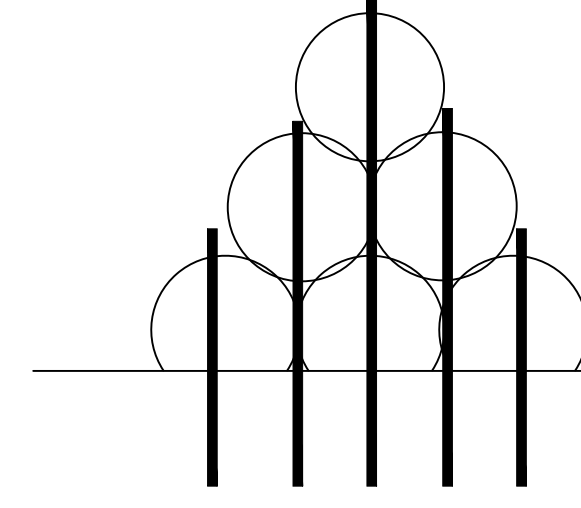


STORMWATER MANAGEMENT PLAN

SHEET 1 OF 9
PROJECT #017-2022
SCALE: 1" = 30'
DATE: 5/7/22, Rev. 6/5/22

PREPARED FOR
TOWN OF EAST HAMPTON
PAUL AND SANDY'S NURSERY
EAST HAMPTON - CONNECTICUT

NOTE: EACH WATTLE SHALL BE 40' IN LENGTH (APPROXIMATE LOCATIONS ARE STAKED IN THE FIELD). EACH WATTLE BARRIER SHALL CONSIST OF SIX STAKED 6" FILTREXX SOXX IN TRIANGULAR CROSS SECTION (SEE DETAIL) AND STAKED IN PLACE. END OF SOXX SHALL BE TIGHTLY BUTTED TOGETHER AND JOINTS SHALL BE STAGGERED AND NOT IN LINE. NOTE: BRUSH SHALL BE CLEARED BY HAND AT EACH WATTLE LOCATION FOR THE BARRIER AS WELL AS 10' BEYOND THE LIMIT OF THE WATTLE BARRIER. REMOVED BRUSH SHALL BE PLACED OUTSIDE LIMIT OF CLEARED END. THE GROUND SURFACE SHALL BE LIGHTLY RAKED WITH A METAL GARDEN RAKE AND THEN SEED WITH NEW ENGLAND WETMIX FROM NEW ENGLAND WETLAND PLANTS AND COVERED WITH STRAW SHREDDED MULCH.



6" FILTREXX SOXX BARRIER ACROSS
FLOW PATH OF RUNOFF
- THREE ON BOTTOM
- TWO ON MIDDLE
- ONE ON TOP
- SOXX SHALL BE STAKED IN PLACE USING 1" X 1" OAK STAKES.
THE STAKES SHALL BE DRIVEN A MINIMUM OF 12" INTO
EXISTING GRADE - STAKES SHALL BE SET 12" FROM THE END OF
THE SOXX AND AT EIGHT (8) FOOT SPACING (PLUS OR MINUS)

EXISTING GRADE
NOTE: THE SOXX ON THE BOTTOM AND SHALL BE STEPPED ON
BY MANUAL LABORERS TO FLATTEN THE BOTTOM OF THE SOXX
ONTO THE EXISTING GRADE PRIOR TO STAKING IN PLACE

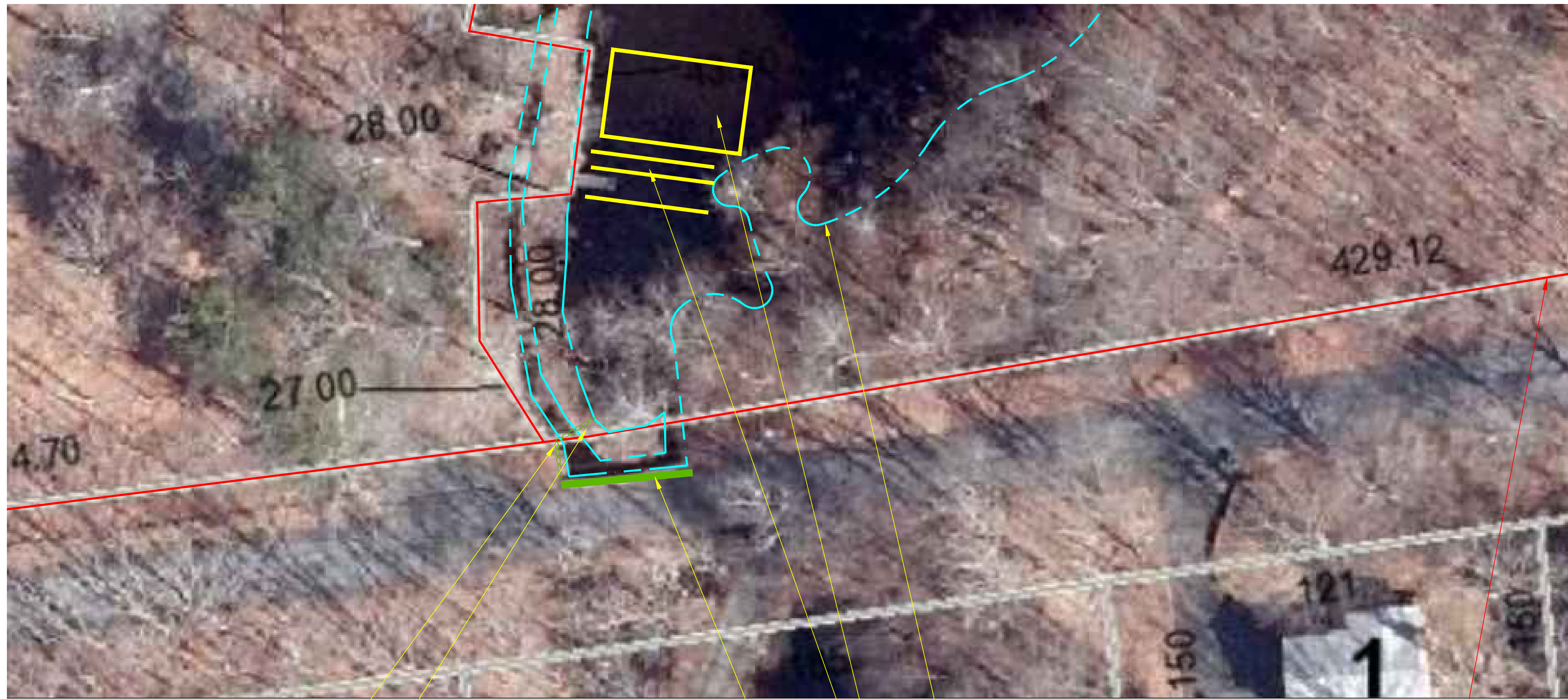
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EAST HAMPTON - CONNECTICUT

STORMWATER MANAGEMENT PLAN

SHEET 2 OF 9
PROJECT #017-2022
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CIVIL ENGINEERS
114 HUNTERS RIDGE ROAD
SOUTHBURY, CONNECTICUT 06488
203-264-4558 (ph)
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Website: www.trinkaengineering.com



SAND BAG BARRIER FROM END OF HEADWALL TO NORTH, THEN ACROSS BYPASS CHANNEL (OPEN WATER) AND TO NORTH SIDE OF EARTH BERM - SEE DETAIL AND PHOTOGRAPHS
 AFTER SAND BAG BARRIER HAS BEEN PLACED, EARTH SHALL BE REMOVED BY HAND ON SOUTH SIDE OF SAND BAG BARRIER TO LOWER GRADE TO TOP OF STONES (SEE PHOTOGRAPH) ACROSS BERM - WIDTH OF SOIL TO BE REMOVED SHALL BE 36"

EXISTING HEADWALL

APPROXIMATE EDGE OF POND AND BYPASS CHANNEL TAKEN FROM GIS MAPPING

PROPERTY LINE PER TOWN OF EAST HAMPTON GIS MAPPING

APPROXIMATE LOCATION OF FLOATING WETLAND TREATMENT SYSTEMS (1,000 SQUARE FEET)
 THREE ROWS OF CATTAILS TO BE PLANTED IN THIS GENERAL AREA

NOTE: THIS PROJECT WILL REQUIRE THE PLACEMENT OF SAND BAGS AND MODIFIED RIPRAP OVER 31 SQUARE FEET OF A MAN-MADE FLOW CHANNEL. THIS CHANNEL WAS CREATED AT A BYPASS CHANNEL FOR THE WESTERNMOST CULVERT UNDER CHRISTOPHER ROAD. IN ADDITION TO THE BYPASS CHANNEL, THE SOUTHERN END OF THE BERM WAS EXTENDED TO THE EAST WHICH IS PERPENDICULAR TO THE FLOW OF THE CROSS CULVERTS WHICH FILLED IN A SMALL PORTION OF THE POND WHEN INSTALLED. THE JUSTIFICATION FOR THE FILLING OF 31 SQUARE FEET OF THE OVERFLOW CHANNEL IS TO DIRECT ALL FLOW FROM THE TWO CROSS CULVERTS DIRECTLY INTO CHRISTOPHER POND SO THAT THE FLOW CAN GO THROUGH THE THREE ROWS OF CATTAILS (TO BE PLANTED) AS WELL AS THE PROPOSED MODULAR WETLAND SYSTEMS. BOTH OF THESE PLANTED SYSTEMS WILL ALLOW FOR THE TRAPPING AND REMOVAL FROM THE WATER COLUMN, BOTH NITROGEN AND PHOSPHOROUS WHICH WILL PREVENT THESE NUTRIENTS FROM REACHING THE LAKE.

NOTE: REFER TO WRITTEN NARRATIVE BY HILLARY KENYON REGARDING THE CATTAIL PLANTINGS AND MODULAR WETLAND SYSTEMS.

LOCATION OF SAND BAG BARRIER STAKED IN THE FIELD

LOCATION WHERE SOIL TO BE REMOVED TO ELEVATION OF TOP OF STONES ON UPHILL SIDE OF SAND BAG BARRIER

LOCATION OF SAND BAG BARRIER FROM STAKE TO FACE OF HEADWALL



TRINKAUS ENGINEERING, LLC
 CIVIL ENGINEERS
 114 HUNTERS RIDGE ROAD
 SOUTHBURY, CONNECTICUT 06488
 203-264-4558 (ph)
 Email: strinkaus@earthlink.net
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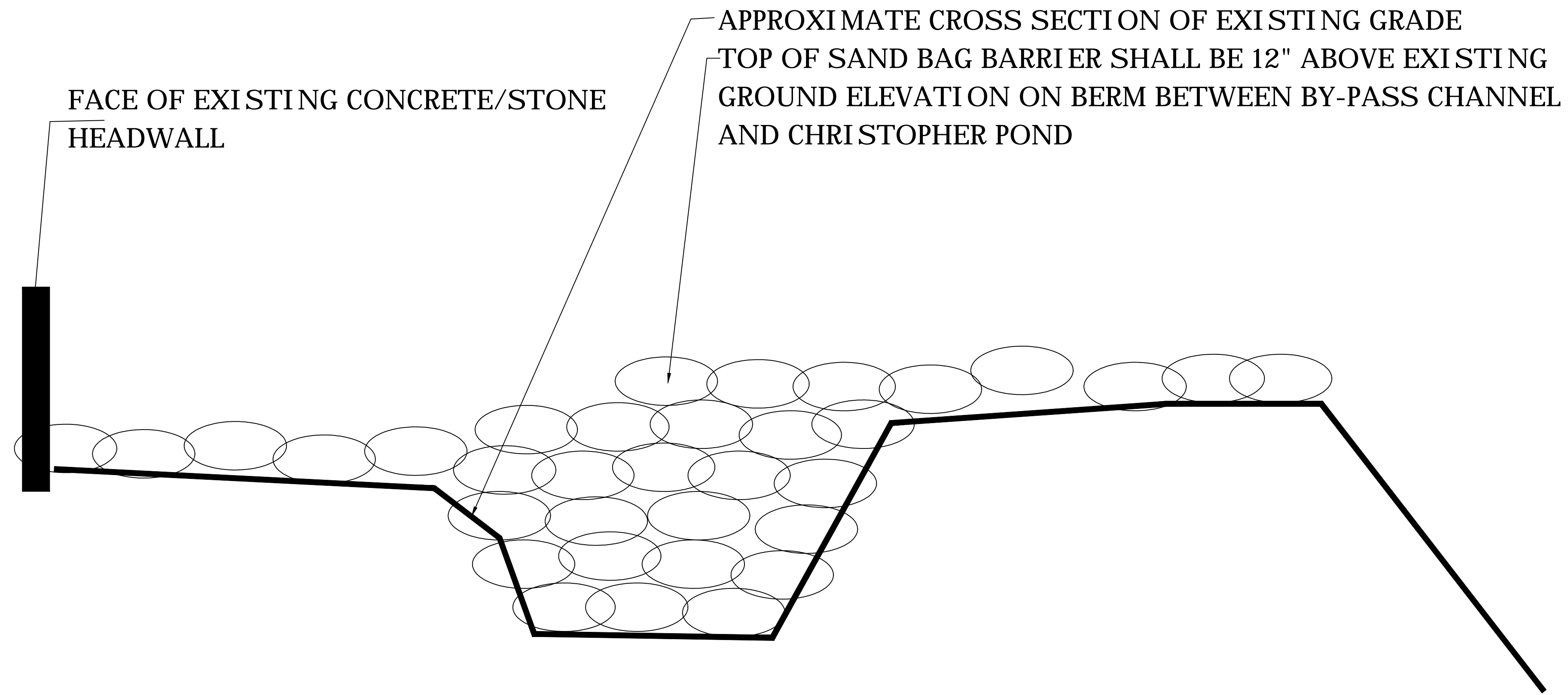


STORMWATER MANAGEMENT PLAN
 SHEET 3 OF 9

PROJECT #017-2022
 SCALE: 1" = 20'

DATE: 5/7/22, Rev. 6/5/22

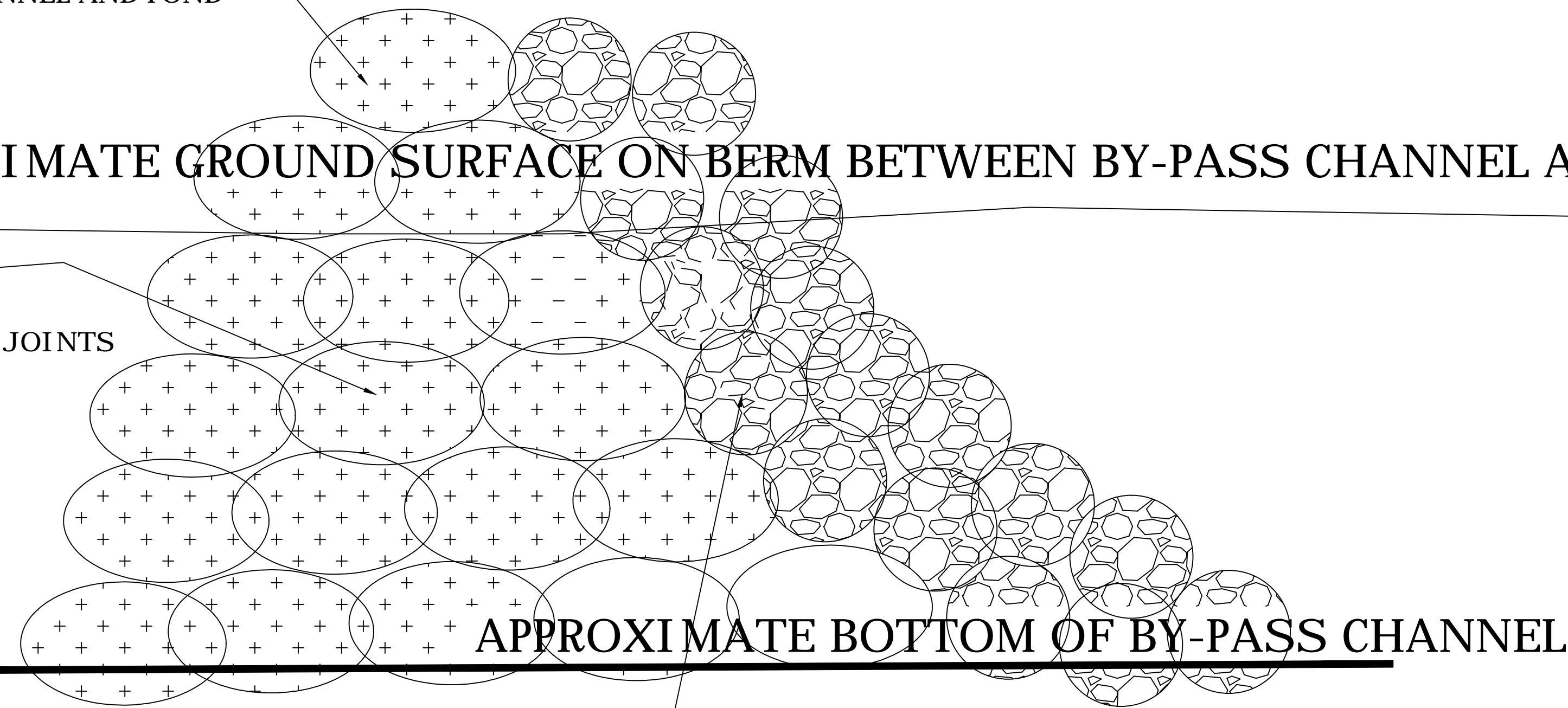
PREPARED FOR
 TOWN OF EAST HAMPTON
 CHRISTOPHER POND
 EAST HAMPTON - CONNECTICUT



TOP OF SAND BAG BARRIER SHALL BE 12" HIGHER THAN EXISTING GRADE ON BERM BETWEEN BY-PASS CHANNEL AND POND

APPROXIMATE GROUND SURFACE ON BERM BETWEEN BY-PASS CHANNEL AND CHRISTOPHER POND

TYPICAL CROSS SECTION OF SAND BAG BARRIER
 BOTTOM WIDTH = 36"
 SAND BAGS SHALL BE STAKED WITH OVERLAPPING JOINTS AND FITTED TIGHTLY TOGETHER.



NOTE: UPSTREAM FACE OF SAND BAGS SHALL BE 3:1 (HORIZONTAL TO VERTICAL)
 A 12" THICK LAYER OF NATIVE FIELD STONES SHALL BE PLACED ON UPSTREAM SIDE OF SAND BAGS TO REDUCE FLOW VELOCITIES - EXTENT OF FIELD STONES SHALL EXTEND FROM FACE OF EXISTING HEADWALL TO CENTER OF BERM ACROSS THE BY-PASS CHANNEL.

NOTE: AFTER THE BY-PASS CHANNEL HAS BEEN BLOCKED OFF BY THE SAND BAGS, THE TOP AND DOWNSTREAM SIDE OF THE SAND BAGS SHALL BE COVERED WITH A MINIMUM OF 6" OF TOPSOIL AND SEEDED WITH NEW ENGLAND CONSERVATION/WILDLIFE SEED MIX BY NEW ENGLAND WETLAND PLANTS (www.newp.com)



APPROXIMATE LOCATION OF "LIVE STAKING" OF
STREAM CHANNEL BANK - SEE NARRATIVE BY
HILLARY KENYON

WATTLE #3

WATTLE #2

WATTLE #1

EXISTING WELL

NOTE: REFER TO WRITTEN NARRATIVE BY HILLARY KENYON FOR
MORE INFORMATION ON THE "LIVE STAKING" ALONG THE
CHANNEL BANK AS SHOWN ON THIS PLAN.

WATTLE #1 LOCATION

WATTLE #2 LOCATION

WATTLE #3 LOCATION

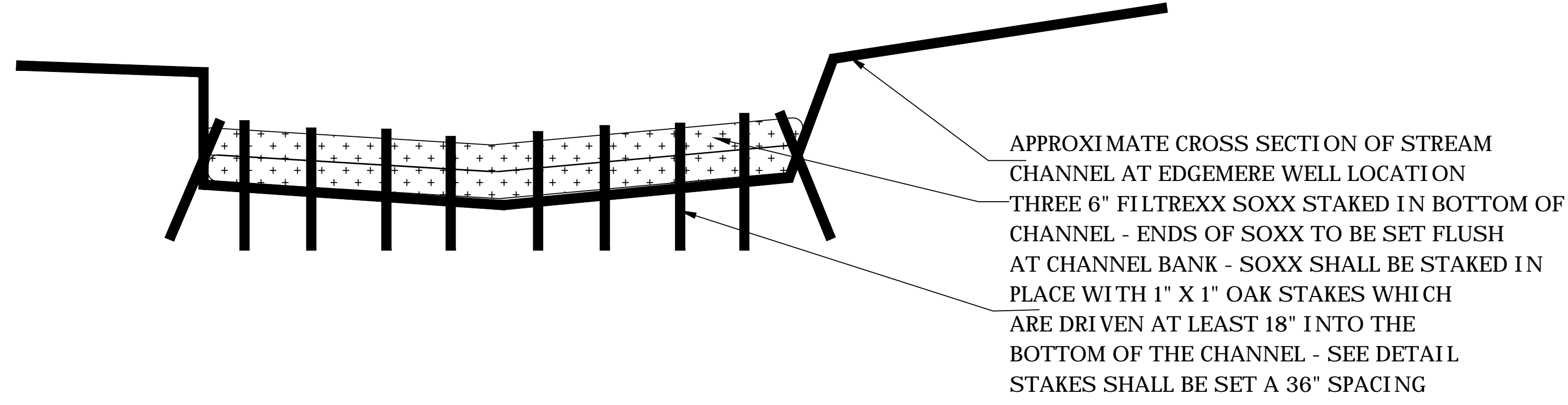
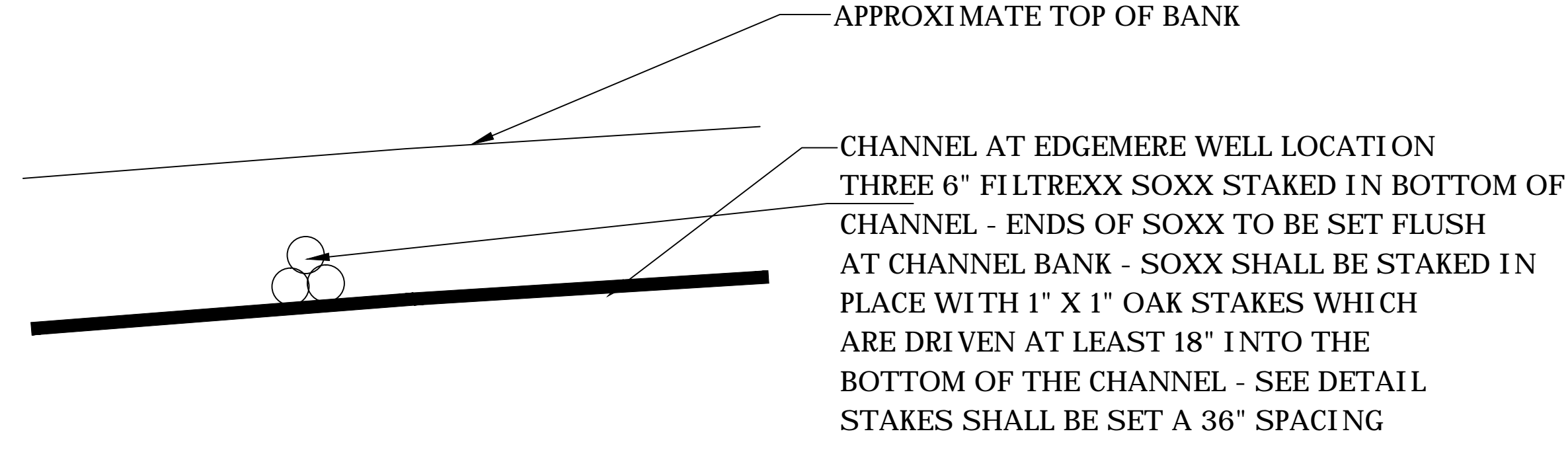


PREPARED FOR
TOWN OF EAST HAMPTON
EDGEMERE WATER SUPPLY WELLS
EAST HAMPTON - CONNECTICUT

STORMWATER MANAGEMENT PLAN
SHEET 5 OF 9
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TRINKAUS ENGINEERING, LLC
CIVIL ENGINEERS
114 HUNTERS RIDGE ROAD
SOUTHBURY, CONNECTICUT 06488
203-264-4558 (ph)
Email: strinkaus@earthlink.net
Website: www.trinkausengineering.com



TYPICAL CROSS SECTION OF FILTREXX
SOXX CROSSING
NOT TO SCALE

TRINKAUS ENGINEERING, LLC
 CIVIL ENGINEERS
 114 HUNTERS RIDGE ROAD
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STORMWATER MANAGEMENT PLAN
 SHEET 6 OF 9
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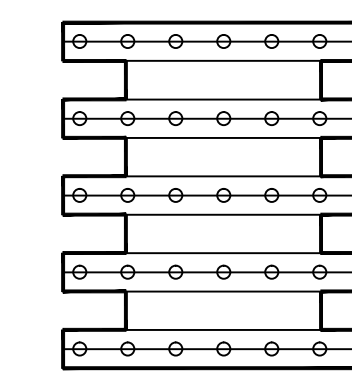
EXISTING FLARED END



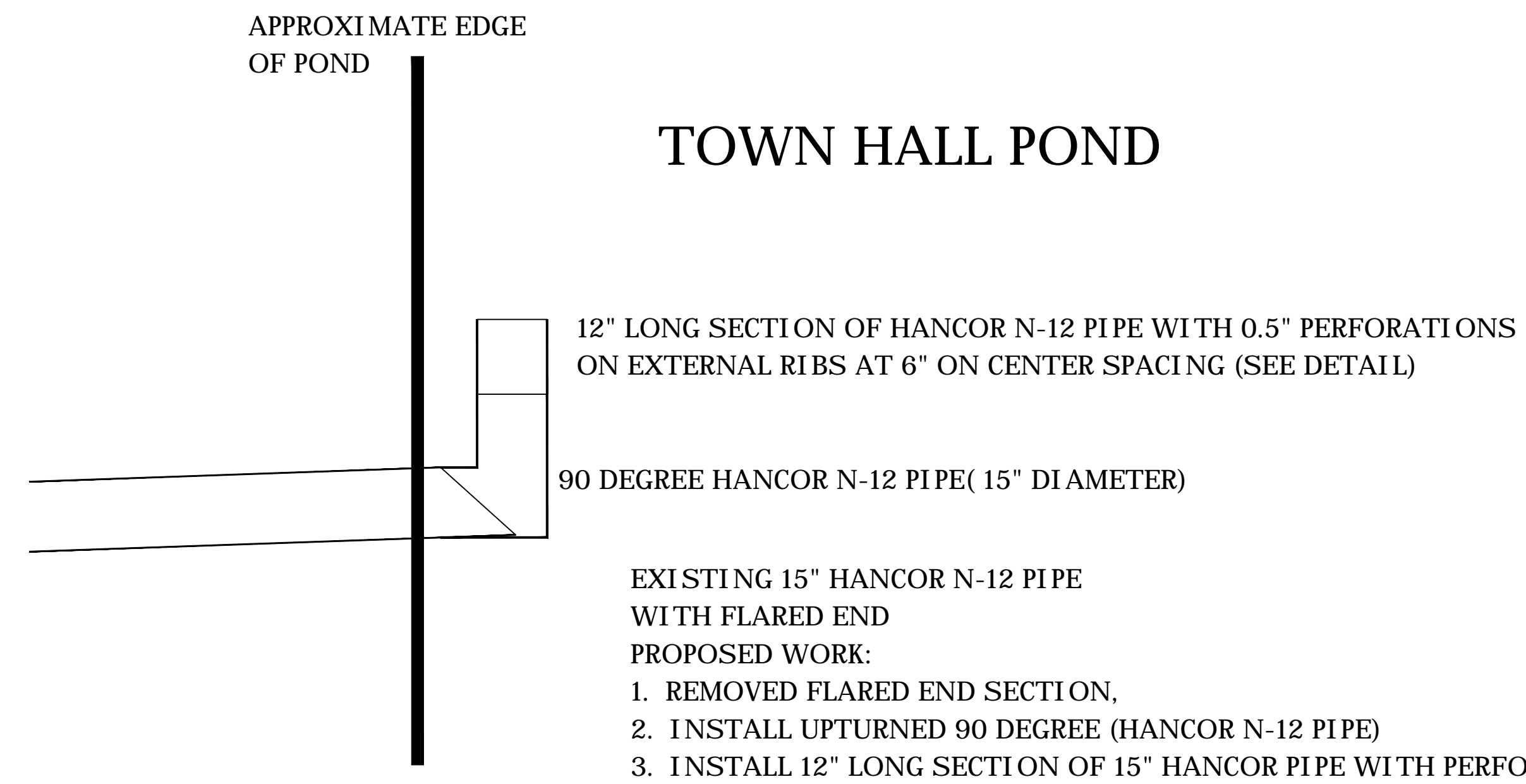
POND AND OUTLET PIPE #1



POND AND OUTLET PIPE #2

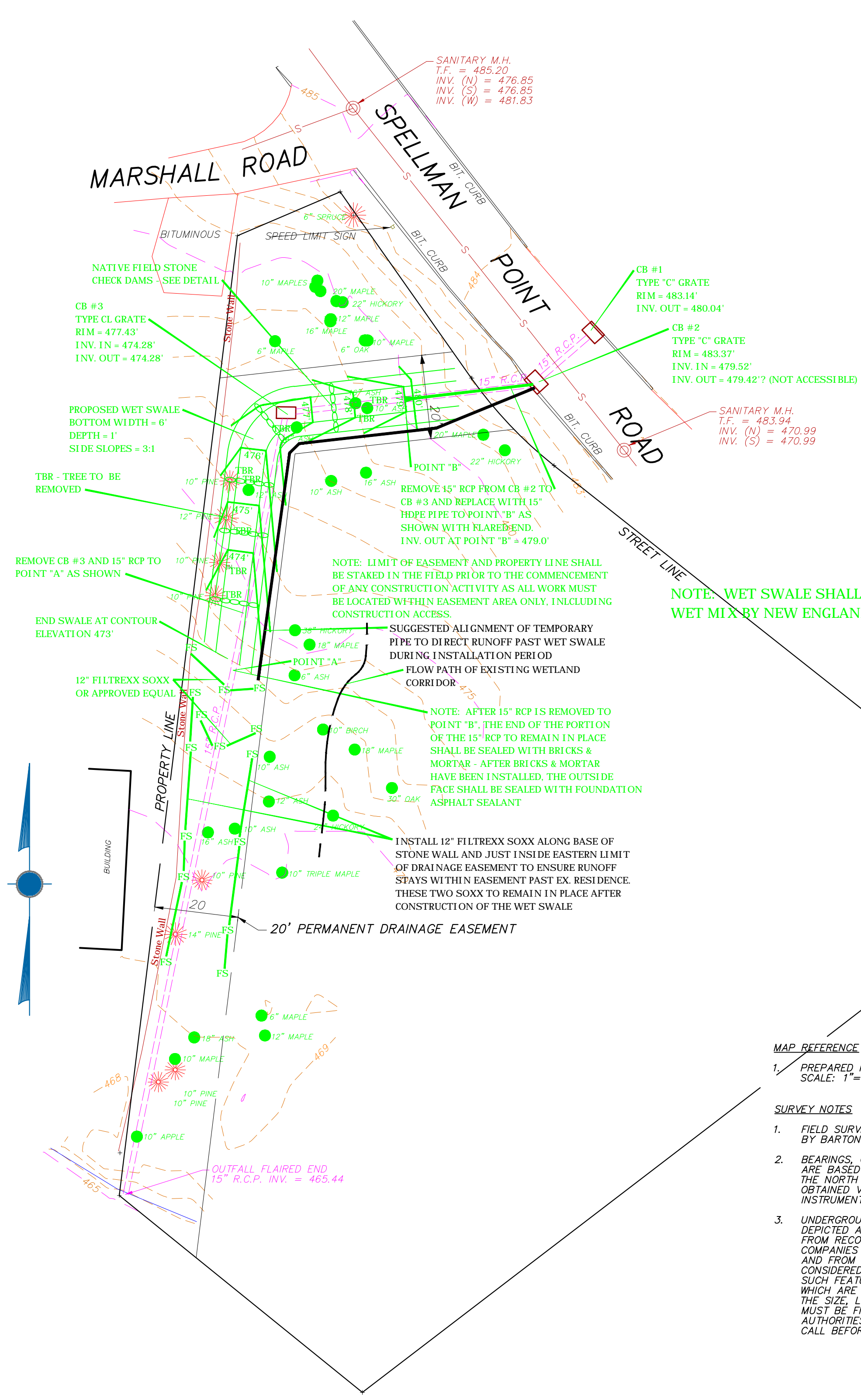


12" SECTION OF 15" DIAMETER OF HANCOR N-12 PIPE - 0.5" DRILLED HOLES ON OUTER RIBS AT 6" CENTER TO CENTER SPACING AROUND PERIMETER OF PIPE - SPACING MAY BE ADJUSTED BY CONTRACTOR IN THE FIELD.



NOTE: USE HANCOR GASKETED FITTING OR FERNCO FITTING WITH METAL BANKS FOR ALL PIPE JOINTS TO SEAL THE JOINTS AND PREVENT LEAKS

NOTE: CONTRACTOR TO REMOVE BRUSH BY HAND CUTTING AND LOOSE ORGANIC DEBRIS WITHIN 5' OF THE EXISTING OUTLET PIPE TO MINIMIZE THE POTENTIAL OF CLOGGING.



CONSTRUCTION SEQUENCE:

IT IS CRITICAL TO THE FUNCTION OF THE WET SWALE THAT THE WETLAND SEED MIXTURE BECOME FULLY ESTABLISHED AND STABLE PRIOR TO THE INTRODUCTION OF STORMWATER FROM THE TWO CATCH BASINS IN SPELLMAN POINT ROAD.

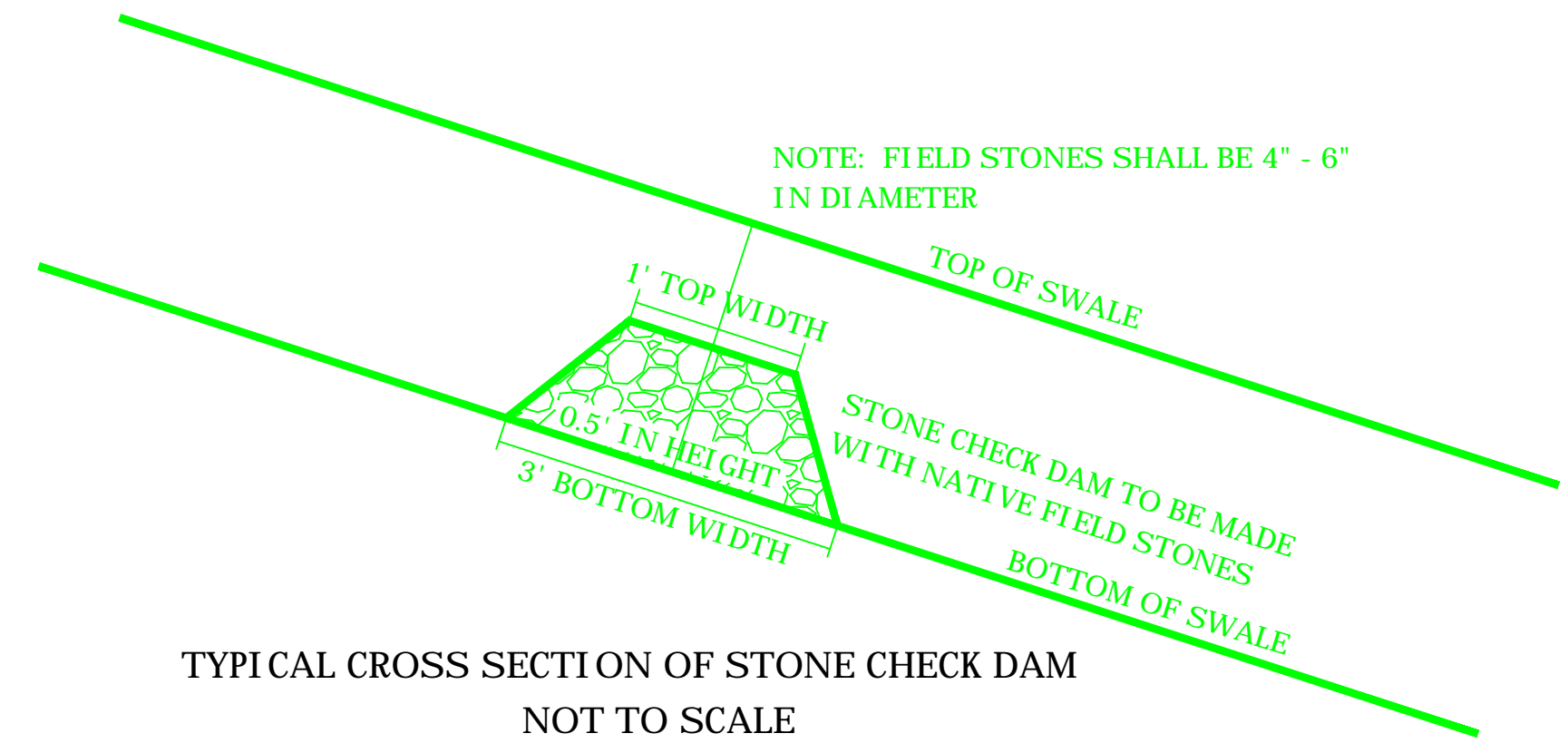
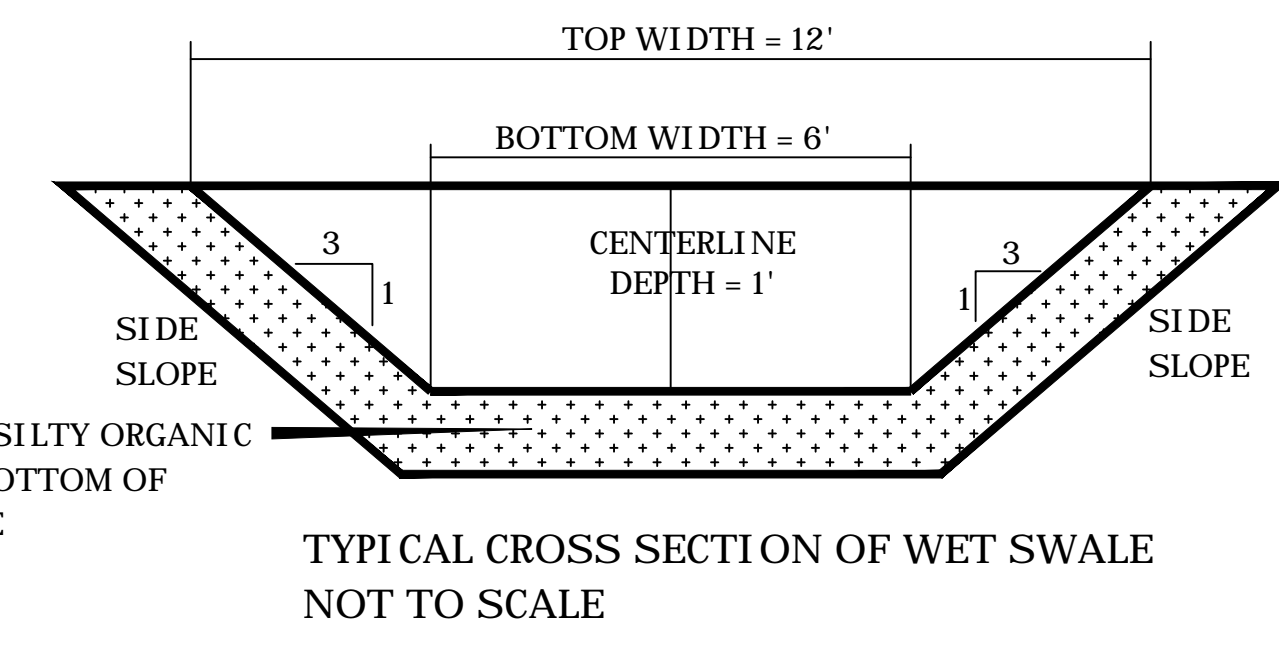
TO ACHIEVE THIS GOAL, A TEMPORARY 12" HDPE PIPE SHALL BE INSTALLED AT CB #2 AND LAID ON THE GROUND SURFACE OR SLIGHTLY INTO THE GROUND OUTSIDE THE LIMIT OF THE WET SWALE TO BYPASS ANY RUNOFF DIRECTED TO THE CATCH BASINS ON SPELLMAN POINT ROAD DURING THE CONSTRUCTION PERIOD OF THE SWALE.

PROPOSED CONSTRUCTION SEQUENCE:

- Anchor Engineering shall stake the limits of the existing 20' wide drainage easement from Spellman Point Road to a point at the lowest most Filtrexx Soxx shown on the site plan. The contractor must limit access and all work within the easement limits.
- Cut and remove trees and brush within the easement area as necessary. All woody debris shall be removed from the site. Contractor shall discuss disposal location with Matt Walsh of the Department of Public Works.
- The 15" RCP, Catch Basin #3 shall be removed from Point "A" to Point "B" as shown on the plan. This material shall be disposed of by the contractor off-site. Contractor shall coordinate with the Department of Public Works.
- The end of the 15" RCP at Point "B" shall be sealed off as noted on the plan.
- The contractor shall grade and shape the Wet Swale to the required subgrade elevation (6" below the proposed bottom of the Wet Swale). Topsoil with a high silt and organic content shall be placed in the Wet Swale to the specified finish grade.
- The field stone check dams shall be installed per the plan and in accord with the submitted detail.
- After the check dams have been installed, the bottom and side slopes of the wet swale shall be seeded with the New England Wetmix as specified.
- That portion of the Wet Swale from Point "B" to the first stone check dam shall be lined on the bottom and side slopes with native field stone (not quarried rock) to dissipate flow velocities from the 15" RCP.
- Once the vegetation has become established in the Wet Swale, then the temporary by-pass pipe can be removed and allow runoff to flow into the Wet Swale from the shortened 15" RCP.
- All erosion control measures shall remain in place after the installation of the Wet Swale is complete.

NOTE: WET SWALE SHALL BE SEED WITH NEW ENGLAND WET MIX BY NEW ENGLAND WETLAND PLANTS

- MAP REFERENCE**
- PREPARED FOR SPELLMAN ASSOCIATES LLC, EAST HAMPTON, CONN. SCALE: 1"=20'. DATE: 10-23-00. BY: MEGSON & HEAGLE.
- SURVEY NOTES**
- FIELD SURVEY SHOWN WAS PERFORMED ON THE GROUND BY BARTON AND LOGUDICE, LLC, INC. ON MARCH 30, 2022.
 - BEARINGS, COORDINATES, AND ELEVATIONS DEPICTED HEREON ARE BASED ON THE NORTH AMERICAN DATUM 1983 (NAD 83) AND THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88) AND WERE OBTAINED VIA RTK GPS PROCESSED THROUGH THE SUPERIOR INSTRUMENT RTK NETWORK.
 - UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENT AGENCIES, FROM PAROL TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE. THE EXISTENCE OF WHICH ARE UNKNOWN TO ANCHOR ENGINEERING SERVICES, INC., THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG: 1-(800) 922-4455



EXISTING WETLAND/INTERMITTENT WATERCOURSE JUST OUTSIDE LIMIT OF EASEMENT



VIEW OF EASEMENT AREA AND EXISTING HOUSE TO THE WEST OF THE EASEMENT

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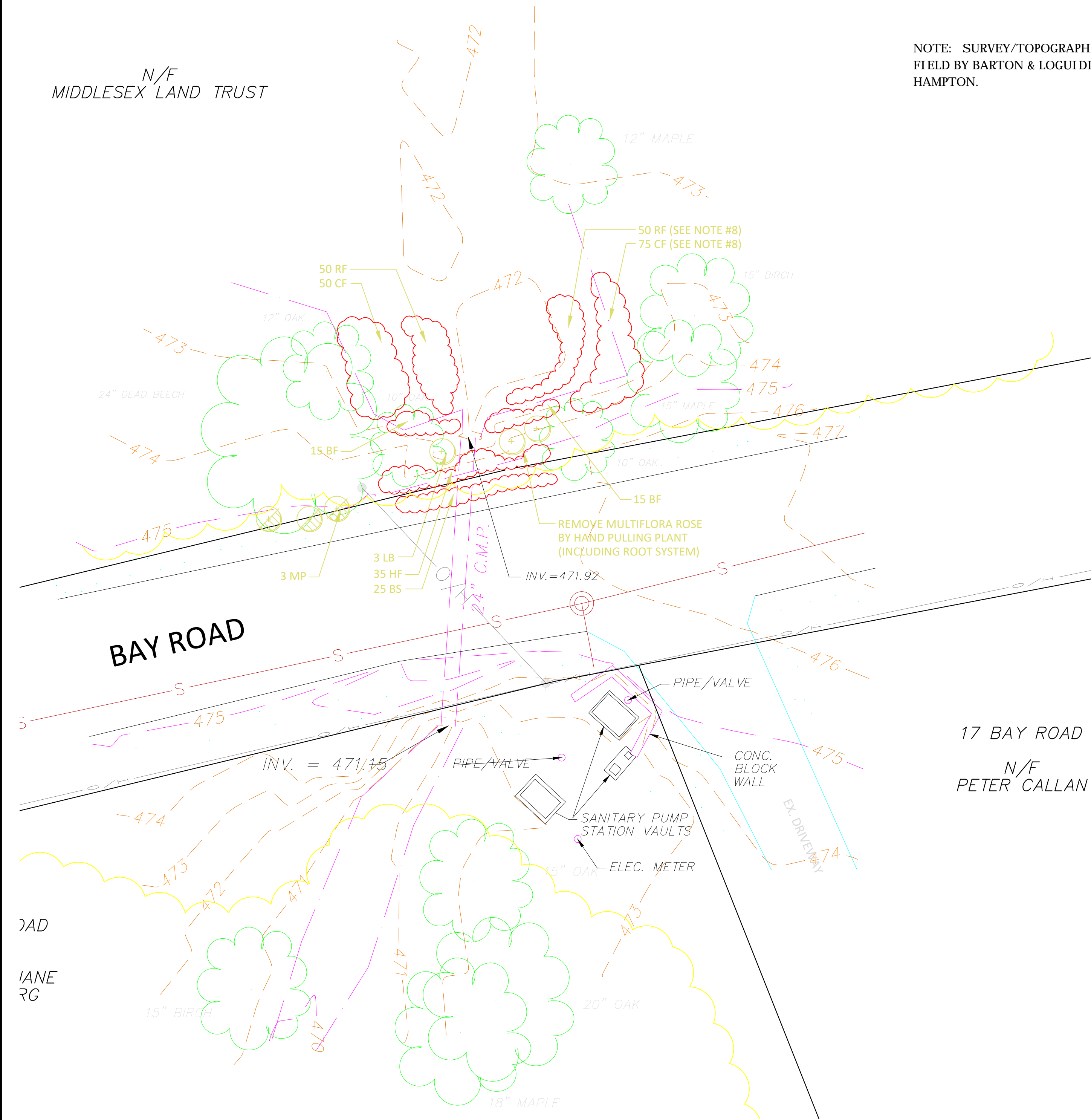
LOW IMPACT SUSTAINABLE DEVELOPMENT
 TRINKAUS ENGINEERING

STORMWATER MANAGEMENT PLAN
 SHEET 8 OF 9
 PROJECT #017-2022
 SCALE: 1" = 20'
 DATE: 5/7/22, Rev. 6/5/22

PREPARED FOR
 TOWN OF EAST HAMPTON
 SPELLMAN POINT ROAD
 EAST HAMPTON - CONNECTICUT

N/F
MIDDLESEX LAND TRUST

NOTE: SURVEY/TOPOGRAPHIC DATA WAS OBTAINED IN THE FIELD BY BARTON & LOGUIDICE, LLC FOR THE TOWN OF EAST HAMPTON.

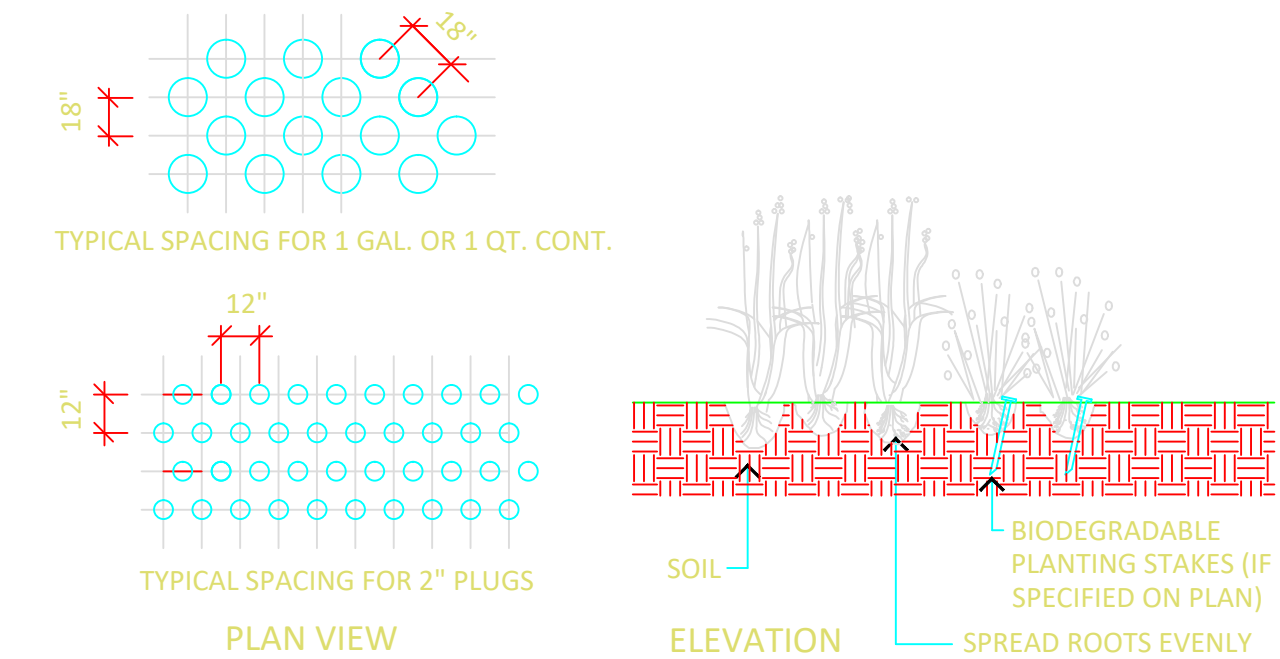


LEGEND

- PROPERTY LINE
- WETLAND LINE
- NONNATIVE INVASIVE SPECIES MANAGEMENT AREA
- EXISTING CONTOUR
- PROPOSED CONTOUR
- TREE LINE TO REMAIN (APPROX.)
- NEW DECIDUOUS SHADE TREE
- NEW DECIDUOUS SMALL TREE
- NEW SHRUB
- NEW SEEDED AREA (AS PER PLAN NOTES)

NOTES:

1. EXISTING AND PROPOSED SITE INFORMATION TAKEN FROM A DIGITAL AUTOCADD SITE PLAN SUPPLIED BY TRINKAUS ENGINEERING, LLC.
2. CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 TO HAVE UNDERGROUND UTILITY LINES MARKED BY THEM PRIOR TO START OF ANY EXCAVATION WORK.
3. EXACT LOCATION OF PROPOSED PLANTINGS AND SPECIES TYPES MAY VARY FROM THIS PLAN BASED ON ACTUAL FIELD CONDITIONS.
4. PLANT SPECIES SUBSTITUTIONS MAY BE MADE WITH THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT PRIOR TO PLANTING. SUBSTITUTED PLANTS SHALL BE AT AN EQUAL OR GREATER SIZE AS NOTED USING A SIMILAR TYPE PLANT.
5. PLANTING METHODS SHALL BE IN ACCORDANCE WITH THE "AMERICAN STANDARDS FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
6. THIS PLAN FOR PLANTING PURPOSES ONLY.
7. SPRAY NEW PLANTINGS IMMEDIATELY AFTER INSTALLATION WITH A WHITE-TAILED DEER REPELLENT AND CONTINUE AS NEEDED TO MAINTAIN PLANTS FREE OF SIGNIFICANT DEER BROWSING.
8. ROYAL AND CINNAMON FERNS TO BE PLANTED WHEN WATER LEVELS ARE LOW AND SHALL BE STAKED USING 4-6" LONG BIODEGRADABLE STAKES.



- NOTES:
1. WETLAND PLANTS ARE NOT TO BE FERTILIZED (UNLESS OTHERWISE SPECIFIED).
 2. ROOTS SHALL BE CAREFULLY SEPARATED AND EVENLY SEPARATED THROUGHOUT THE PLANTING HOLE.

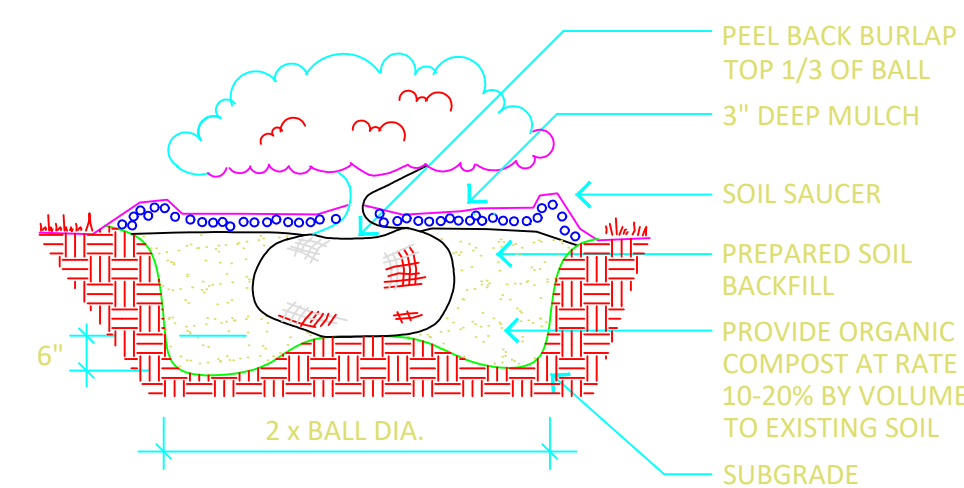
HERBACEOUS PLANTING DETAILS

SCALE: NOT TO SCALE

PLANT LIST

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
3	LB	LINDERA BENZOIN	SPICEBUSH	2-3' HT.	CONT.	
3	MP	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	2-3' HT.	CONT.	
35	HF	DENNSTAEDIA PUNCTILOBA	HAYSCENTED FERN	1 QT.		
30	BF	IRIS VERSICOLOR	BLUE FLAG IRIS	1 QT.		
125	CF	OSMUNDA CINNAMOMEA	CINNAMON FERN	#1 CONT.		STAKE PLANTS
100	RF	OSMUNDA REGALIS	ROYAL FERN	#1 CONT.		STAKE PLANTS
25	BS	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	1 QT.		

NOTE: HERBACEOUS PLANTS AVAILABLE AT PINELANDS NURSERY & SUPPLY (PINELANDSNURSERY.COM) AND NEW ENGLAND WETLANDS PLANTS, INC. (NEWPCOM).



SHRUB PLANTING DETAIL

SCALE: NOT TO SCALE

TRINKAUS ENGINEERING, LLC
 CIVIL ENGINEERS
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 SOUTHBURY, CONNECTICUT 06488
 203-264-4558 (ph)
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STORMWATER MANAGEMENT PLAN
 SHEET 9 OF 9
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 BAY ROAD
 EAST HAMPTON - CONNECTICUT



ENVIRONMENTAL LAND SOLUTIONS, LLC
 Landscape Architecture and Environmental Planning

8 KNIGHT STREET, SUITE 203
 NORWALK, CONNECTICUT 06851

Tel: (203) 855-7879 Fax: (203) 855-7836
 info@elsllc.net www.elsllc.net