

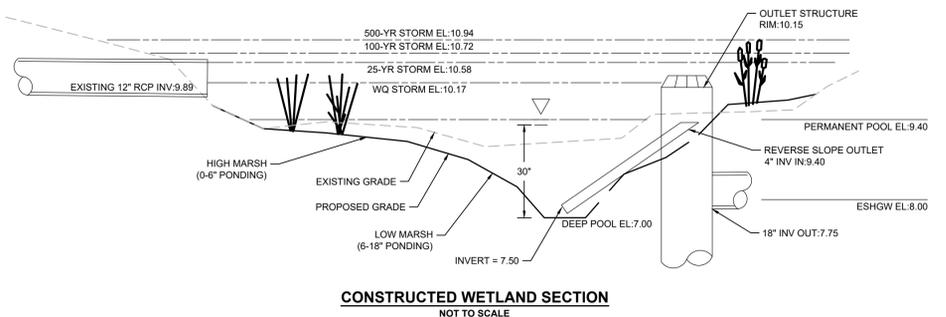
last modified: 06/11/24 printed: 06/20/24 by kk H:\Projects\2022\22108 APCC Yarmouth\Drawings\LAKE RD22108A LAKE RD WEST ST.dwg

SOIL TEST PIT DATA
 PERFORMED BY M. LEHMAN
 HORSLEY WITTEN GROUP, INC
 JANUARY 3, 2024

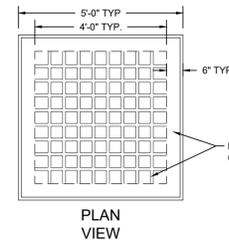
TP 2

0"	12.0
A	10YR 2/2 LOAMY SAND
9"	11.3
B	10YR 4/4 LOAMY MEDIUM SAND
33"	9.3
C	10YR 4/6 COARSE SAND
54"	7.5

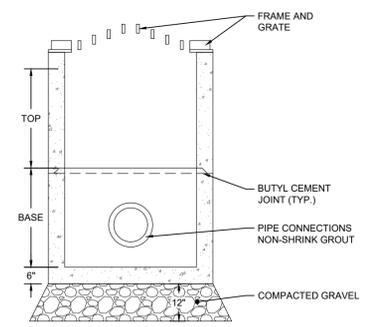
MOTTLING @ EL 8.0
 SEEPAGE @ EL 7.5



CONSTRUCTED WETLAND SECTION
 NOT TO SCALE

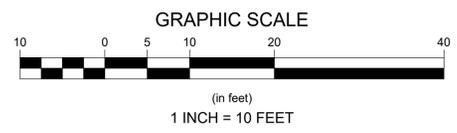
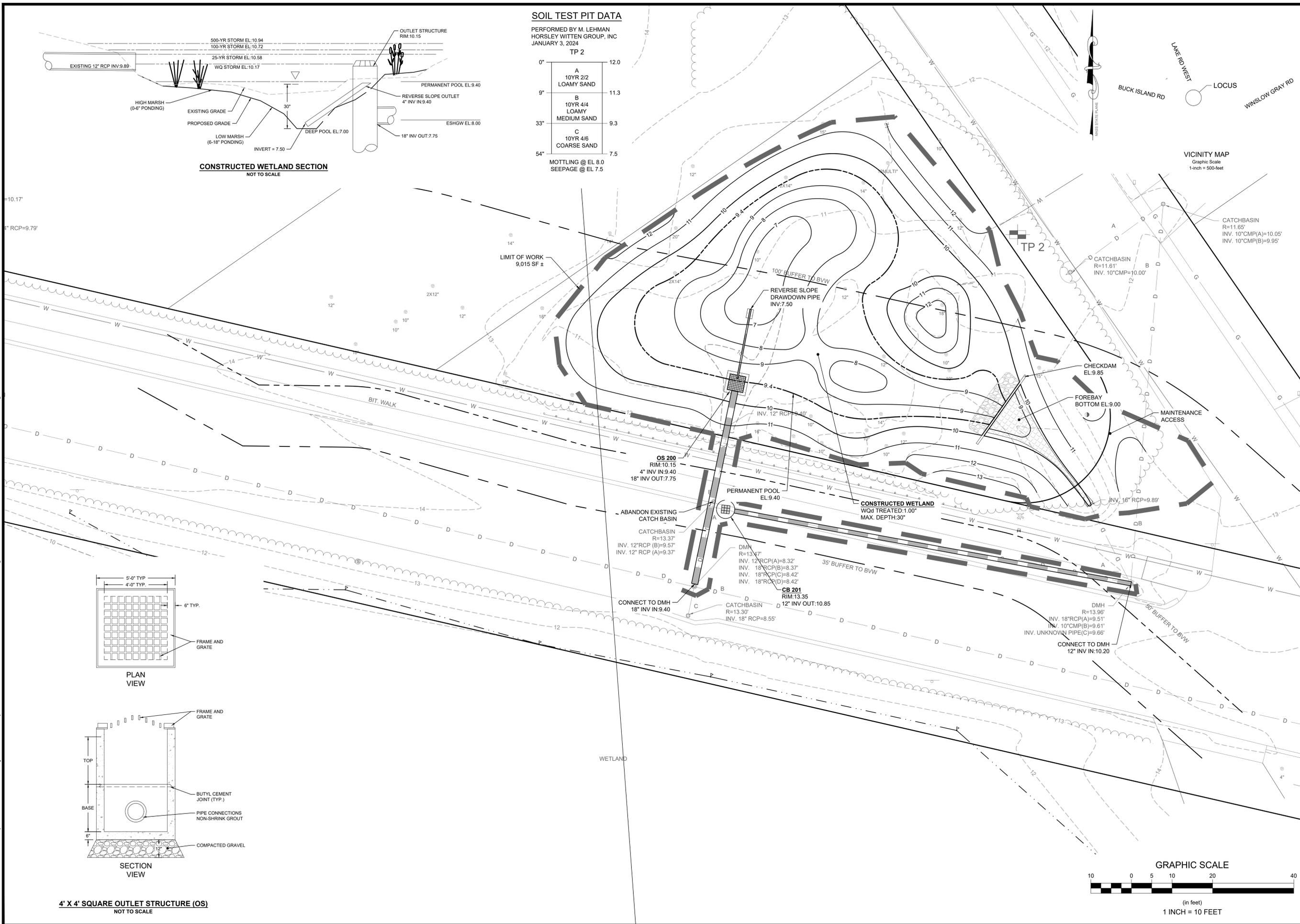


PLAN VIEW



SECTION VIEW

4' X 4' SQUARE OUTLET STRUCTURE (OS)
 NOT TO SCALE



Revisions

Rev	Date	By	Appr	Description
1				
2				
3				
4				
5				

Horsley Witten Group, Inc.
 Sustainable Environmental Solutions
 www.horsleywitten.com
 90 Route 6A
 Sandwich, MA 02563
 508-833-6600 voice
 508-833-3150 fax

Checked By: MCL
 Designated By: MCL
 Date: MARCH 2024

**LAKE ROAD WEST
 STORMWATER RETROFIT DESIGN AND
 IMPLEMENTATION PROJECT - 25% DESIGN
 YARMOUTH, MASSACHUSETTS**

Plan Title: LAKE RD WEST (SOUTH) SITE PLAN

Prepared For:
Town of Yarmouth DPW
 74 Town Brook Road
 West Yarmouth, MA
 02873
 Phone: (508) 398-2231
 ext. 1250
 Fax: ---

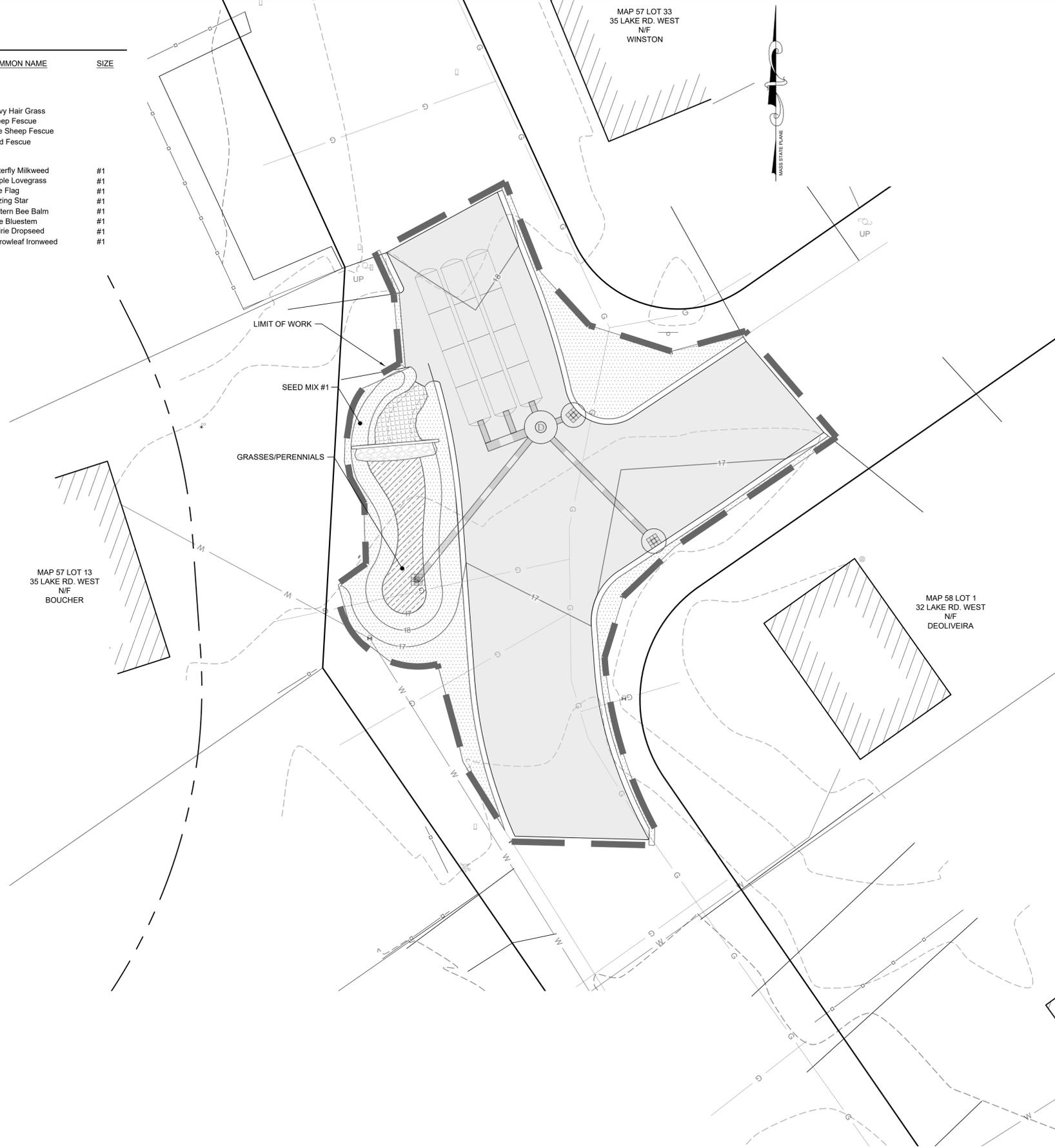
Survey Provided By:
Horsley Witten Group, Inc.
 90 Route 6A
 Sandwich, MA 02563
 Phone: 508-833-6600
 Fax: 508-833-3150
 Dated: November 27, 2023

**DRAFT
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 CONSTRUCTION**

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PLANT SCHEDULE LAKE RD NORTH

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE
GROUND COVERS				
	1,280 sf	SEED MIX 1: LAVOIE HARMONY MIX Deschampsia flexuosa Festuca ovina Festuca ovina glauca Festuca trachyphylla	Wavy Hair Grass Sheep Fescue Blue Sheep Fescue Hard Fescue	
	182 sf	GRASSES/PERENNIALS Asclepias tuberosa Eragrostis spectabilis Iris versicolor Liatris spicata Monarda bradburiana Schizachyrium scoparium Sporobolus heterolepis Vernonia lettermannii	Butterfly Milkweed Purple Lovegrass Blue Flag Blazing Star Eastern Bee Balm Little Bluestem Prairie Dropseed Narrowleaf Ironweed	#1 #1 #1 #1 #1 #1 #1 #1



<p>Revisions</p> <table border="1"> <thead> <tr> <th>Rev</th> <th>Date</th> <th>By</th> <th>Description</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		Rev	Date	By	Description																																								
Rev	Date	By	Description																																										
<p>Horsley Witten Group, Inc. Sustainable Environmental Solutions 90 Route 6A, Unit 1 Sandwich, MA 02563 508-833-6600 phone 508-833-3150 fax</p>																																													
<p>Drawn By: KJK</p>	<p>Checked By: MBE</p>																																												
<p>Designed By: KJENSE</p>	<p>Date: MARCH 2024</p>																																												
<p>LAKE ROAD WEST STORMWATER RETROFIT DESIGN AND IMPLEMENTATION PROJECT - 25% DESIGN YARMOUTH, MASSACHUSETTS</p>																																													
<p>LAKE RD WEST (NORTH) PLANTING PLAN</p>																																													
<p>Prepared For: Town of Yarmouth DPW 74 Town Brook Road West Yarmouth, MA 02873 Phone: (508) 388-2231 ext. 1250 Fax: ----</p>																																													
<p>Survey Provided By: Horsley Witten Group, Inc. 90 Route 6A Sandwich, MA 02563 Phone: 508-833-6600 Fax: 508-833-3150 Dated: November 27, 2023</p>																																													
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GENERAL PLANTING NOTES:

- 1. THE FOLLOWING NOTES ARE PROVIDED AS GENERAL PLANTING GUIDELINES ONLY. THOROUGHLY REVIEW THE PROJECT SPECIFICATIONS FOR ALL LANDSCAPE REQUIREMENTS PRIOR TO THE COMMENCEMENT OF ANY LANDSCAPE WORK. SUBMIT IN WRITING TO THE LANDSCAPE ARCHITECT ANY QUESTIONS OR CLARIFICATIONS REQUIRED AT A MINIMUM OF 30 DAYS PRIOR TO ORDERING ANY MATERIALS OR BEGINNING ANY LANDSCAPE CONSTRUCTION.
2. SUBMIT TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL ALL REQUIRED LANDSCAPE SUBMITTALS AS DESCRIBED IN THE SPECIFICATIONS INCLUDING A PLANT LIST WITH PLANT SIZE AND QUANTITIES TO BE ORDERED PRIOR TO DELIVERY TO THE PROJECT SITE.
3. FURNISH AND INSTALL ALL PLANTS AS SHOWN ON THE DRAWINGS AND IN THE SIZE AND QUANTITIES SPECIFIED ON THE PLANTING SCHEDULE. PLANT SUBSTITUTION SELECTION MUST BE APPROVED BY BIOLOGIST OR LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
4. ALL PLANTS TO COMPLY WITH APPLICABLE REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK" LATEST EDITION, PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION INC.
5. PLANTS TO BE GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS. USE HEALTHY NURSERY GROWN PLANTS THAT HAVE A WELL DEVELOPED ROOT SYSTEM. PLANTS MUST BE FREE OF DISEASE, INSECTS, EGGS OR LARVAE.
6. INSTALL PLANTS WITHIN ONE (1) WEEK OF PURCHASE. IF PLANTS ARE TO BE STORED AT THE SITE PRIOR TO PLANTING, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THEY ARE PROPERLY MAINTAINED, WATERED, AND REMAIN HEALTHY.
7. PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT. SUBMIT TO THE LANDSCAPE ARCHITECT IN WRITING THE PROPOSED PLANTING SCHEDULE. OBTAIN APPROVAL OF PLANTING SCHEDULE FROM THE LANDSCAPE ARCHITECT PRIOR TO PERFORMING ANY WORK.
8. SEASONS FOR PLANTING:
SPRING: DECIDUOUS: APRIL 1 TO JUNE 15
EVERGREEN: APRIL 1 TO JUNE 15
PERENNIALS: APRIL 15 TO JUNE 1
GROUNDCOVERS: APRIL 15 TO JUNE 1
FALL: DECIDUOUS: SEPTEMBER 15 TO NOVEMBER 15
EVERGREEN: SEPTEMBER 15 TO NOVEMBER 15
PERENNIALS: SEPTEMBER 15 TO NOVEMBER 15
GROUNDCOVERS: SEPTEMBER 15 TO NOVEMBER 15
9. PLANTING UNDER FROZEN CONDITIONS WILL NOT BE PERMITTED. PLANTING BEFORE OR AFTER THE ABOVE REFERENCED PLANTING DATES WILL INCREASE THE LIKELIHOOD OF PLANT ESTABLISHMENT FAILURE. ANY DEVIATION FROM THE ABOVE REFERENCED PLANTING DATES IS UNDERTAKEN AT SOLE RISK OF THE CONTRACTOR AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ANY ADDITIONAL MAINTENANCE AND WATERING WHICH MAY BE REQUIRED TO ENSURE SATISFACTORY PLANT ESTABLISHMENT.
10. FURNISH ONE YEAR MANUFACTURER WARRANTY FOR TREES, PLANTS, AND GROUND COVER AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. EXCEPTIONS ARE DEFECTS RESULTING FROM LACK OF ADEQUATE MAINTENANCE, NEGLIGENCE OR ABUSE BY OWNER, OR ABNORMAL WEATHER CONDITIONS UNUSUAL FOR WARRANTY PERIOD. THE DATE OF FINAL ACCEPTANCE OF ALL COMPLETED PLANTING WORK ESTABLISHES THE END OF INSTALLATION AND INITIAL MAINTENANCE PERIOD AND THE COMMENCEMENT OF THE GUARANTEE PERIOD.
11. ALL TREES WITHIN 5'-0" OF WALKWAYS AND SIDEWALKS TO HAVE A 6'-8" STANDARD BRANCHING HEIGHT.
12. INSPECT ALL AREAS TO BE PLANTED OR SEEDED PRIOR TO STARTING ANY LANDSCAPE WORK. REPORT ANY DEFECTS SUCH AS INCORRECT GRADING, INCORRECT SUBGRADE ELEVATIONS OR DRAINAGE PROBLEMS, ETC. TO THE LANDSCAPE ARCHITECT AND ENGINEER PRIOR TO BEGINNING WORK. COMMENCEMENT OF WORK INDICATES ACCEPTANCE OF SUBGRADE AREAS TO BE PLANTED, AND THE LANDSCAPE CONTRACTOR ASSUMES RESPONSIBILITY FOR ALL LANDSCAPE WORK.
13. PROVIDE PROPER PREPARATION OF ALL PROPOSED PLANTED AND SEEDED AREAS PER THE NOTES AND SPECIFICATIONS.
14. ALL PLANT LAYOUT AND ACTUAL PLANTING LOCATIONS ARE TO BE FIELD VERIFIED BY LANDSCAPE ARCHITECT PRIOR TO PLANTING. NOTIFY THE LANDSCAPE ARCHITECT AT A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO SCHEDULING ANY FIELD INSPECTIONS.
15. BALL AND BURLAP: REMOVE BURLAP AND WIRE BASKETS FROM TOPS OF BALLS AND FROM TOP HALF OF ROOTBALL AS INDICATED ON DRAWINGS. REMOVE PALLETS, IF ANY, BEFORE SETTING.
16. POTTED PLANTS: REMOVE THE PLANT FROM THE POT AND LOOSEN OR SCORE THE ROOTS BEFORE PLANTING TO PROMOTE OUTWARDS ROOT GROWTH INTO THE SOIL.
17. PLUGS: PLANT UPRIGHT AND NOT AT AN ANGLE. DIG PLANTING HOLES LARGE ENOUGH AND DEEP ENOUGH TO ACCOMMODATE THE ENTIRE ROOT MASS. PLANT PLUGS WITH NO TWISTED OR BALLED ROOTS AND WITH NO ROOTS EXPOSED ABOVE THE GRADE LINE. HAND PACK THE SOIL AROUND THE ENTIRE PLUG ROOT MASS.
18. DIG THE THE PLANTING HOLE TO THE SAME DEPTH AS THE ROOT BALL AND TWO TO THREE TIMES WIDER. SCORE ALL SIDES OF THE HOLE, PLACE THE PLANT IN THE HOLE SO THE TOP OF ROOT BALL IS EVEN WITH SOIL SURFACE. FILL THE HOLE HALF WAY AND THEN ADD WATER ALLOWING IT TO SEEP INTO BACK FILLED MATERIAL. BE SURE TO REMOVE ALL AIR POCKETS FROM BACK FILLED SOIL. DO NOT SPREAD SOIL ON TOP OF THE ROOTBALL. IF SOIL IS EXTREMELY POOR, REPLACE BACK FILL WITH GOOD QUALITY TOP SOIL. AMEND THE SOIL, AS NECESSARY.
19. CREATE A 2" TO 4" BERM AROUND THE EDGE OF PLANTING HOLE WITH REMAINING SOIL TO RETAIN WATER.
20. REMOVE ALL PLANT TAGS AND FLAGS FROM THE PLANTS.
21. MULCH ALL PLANTING BEDS AS INDICATED ON DRAWINGS. UNLESS NOTED OTHERWISE, ALL PLANTS TO RECEIVE 2-3 INCHES OF MULCH. DO NOT PILE OR MOUND MULCH AROUND THE PLANT STEMS OR TRUNK.
22. TRIM BROKEN AND DEAD BRANCHES FROM TREES AND SHRUBS AFTER PLANTING. NEVER CUT A LEADER.
23. MINIMIZE THE USE OF FERTILIZERS AS REQUIRED FOR PLANT ESTABLISHMENT, SEE SPECIFICATIONS. DO NOT USE NITROGEN CONTAINING FERTILIZERS, PESTICIDES OR CHEMICALS DURING PLANTING AND MAINTENANCE OF THE LANDSCAPING OR LAWN AREAS. ADDITIONALLY, DO NOT USE PESTICIDES OR HERBICIDES CONTAINING INORGANIC COMPOUNDS (IOC) AS LISTED IN THE MASSACHUSETTS DRINKING WATER REGULATION (310 CMR 22.06), OR SYNTHETIC ORGANIC COMPOUNDS (SOC) OR VOLATILE ORGANIC COMPOUNDS (VOC) AS LISTED IN THE MASSACHUSETTS DRINKING WATER REGULATION (310 CMR 22.07).

GENERAL SEEDING NOTES:

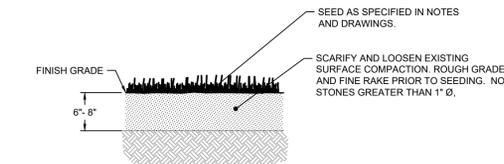
- 1. SEND A REPRESENTATIVE SAMPLE OF THE TOPSOIL TO A TESTING LABORATORY FOR STANDARD SOIL ANALYSIS AS DESCRIBED IN THE SPECIFICATIONS. SUBMIT TO THE LANDSCAPE ARCHITECT AND ENGINEER TEST RESULTS WITH RECOMMENDED SOIL TREATMENTS TO PROMOTE PLANT AND GRASS GROWTH. CORRECT DEFICIENCIES IN THE LOAM AND STOCKPILED TOPSOIL AS DIRECTED BY THE TESTING AGENCY.
2. ALL AREAS THAT ARE DISTURBED AND/OR GRADED DURING CONSTRUCTION ARE TO BE BROUGHT TO FINISHED GRADE WITH AT LEAST 4" MINIMUM DEPTH OF GOOD QUALITY LOAM AND SEEDED WITH A QUICK GERMINATING GRASS SEED SUCH AS NEW ENGLAND EROSION CONTROL RESTORATION MIX OR AS SPECIFIED ON THE PLANS.
3. PRIOR TO THE PLACEMENT OF TOP SOIL, LOOSEN THE SUBGRADE OF ALL PROPOSED SEEDING AREAS TO A DEPTH OF 6" AND RAKE TO REMOVE STONES LARGER THAN 1 INCH, STICKS, ROOTS, RUBBISH AND OTHER EXTRANEIOUS MATTER AND LEGALLY DISPOSE TO AN OFF SITE LOCATION.
4. DO NOT SPREAD TOPSOIL IF THE SUBGRADE IS FROZEN, EXCESSIVELY WET, COMPACTED OR NOT PROPERLY PREPARED PER THE NOTES AND SPECIFICATIONS.
5. SEE SPECIFICATIONS FOR SEASONAL REQUIREMENTS FOR SEEDING.

WATERING NOTES:

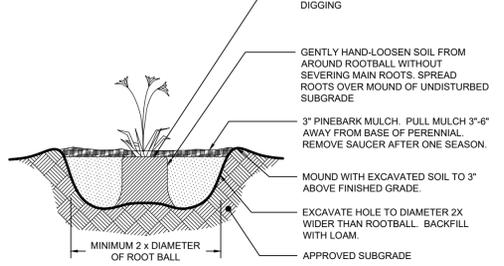
- 1. PROVIDE PROPER PLANT CARE, MAINTENANCE AND WATERING ON SITE UNTIL SUCH TIME AS THE LANDSCAPING IS ACCEPTED BY THE PROPERTY OWNER AS SATISFACTORY PER THE SPECIFICATIONS OR AS DETERMINED BY ANY WRITTEN AGREEMENTS BETWEEN THE CONTRACTOR AND PROPERTY OWNER.
2. ESTABLISH AN APPROPRIATE WATERING SCHEDULE FOR ALL PLANT MATERIAL BASED UPON PLANT SPECIES REQUIREMENTS AND SITE CONDITIONS. PROVIDE SCHEDULE IN WRITING TO THE LANDSCAPE ARCHITECT AND OWNER FOR REVIEW AND APPROVAL. ADHERE TO THE APPROVED SCHEDULE UNTIL PLANTS ARE FULLY ESTABLISHED.
3. AT A MINIMUM THE NEWLY SEEDER AREA SHOULD BE WATERED DAILY UNTIL ESTABLISHMENT AND THEN 2-3 TIMES A WEEK. IF AN IRRIGATION SYSTEM IS NOT PROVIDED, A TEMPORARY IRRIGATION SYSTEM OR HANDHELD GARDEN HOSE SHALL BE USED FOR WATERING SEEDER AREAS. THE AREA MUST BE MAINTAINED CONSISTENTLY MOIST FOR THE BEST GERMINATION RESULTS. ADDITIONAL WATERING MAY BE REQUIRED IF PLANTING AND SEEDING OCCUR OUTSIDE OF THE RECOMMENDED PLANTING SEASONS.

PLANTING LAYOUT NOTES

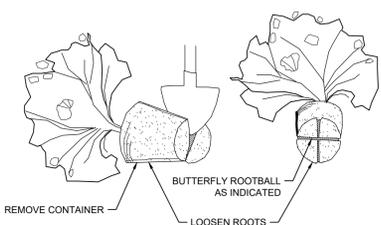
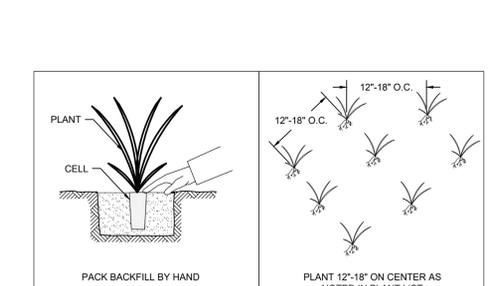
- 1. FOR AREAS WITH MIXED PERENNIALS AND/OR GRASSES (SHOWN AS HATCHED AREAS ON PLANS), DO NOT PLANT IN A PATTERN OR WITH LARGE AREAS OF THE SAME SPECIES. RANDOMLY PLANT AS INDICATED ON THE PLANTING PLANS INTO SMALL GROUPINGS OF THE SAME SPECIES TO CREATE A MORE NATURALISTIC APPEARANCE. PLANT THE SAME PLANT SPECIES IN GROUPS OF 3-7 AND NOT LARGER THAN 7, DEPENDING ON THE OVERALL NUMBER OF PLANTINGS.



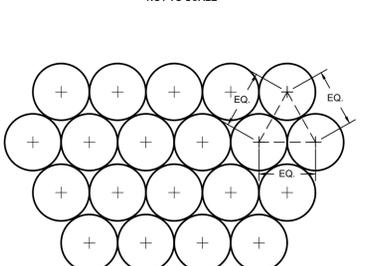
RESTORATION SEEDING NOT TO SCALE



PERENNIAL PLUG PLANTING NOT TO SCALE



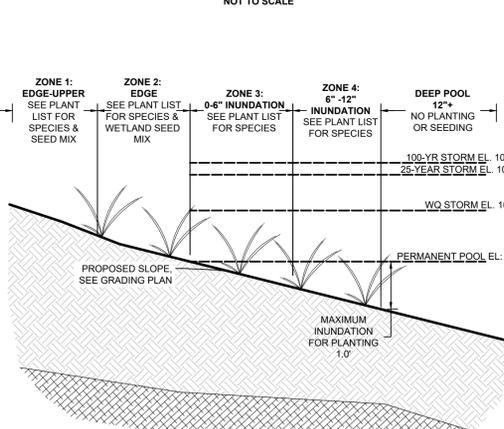
CONTAINER PLANT ROOTBALL TREATMENT NOT TO SCALE



USE EQUIDISTANT TRIANGULAR SPACING FOR PLANTS - FOR ACTUAL SPACING SEE PLANS OR PLANTING SCHEDULE

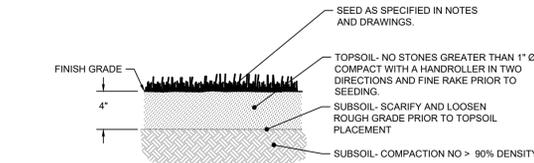
PLANTING SPACING NOT TO SCALE

PERENNIAL PLUG PLANTING NOT TO SCALE



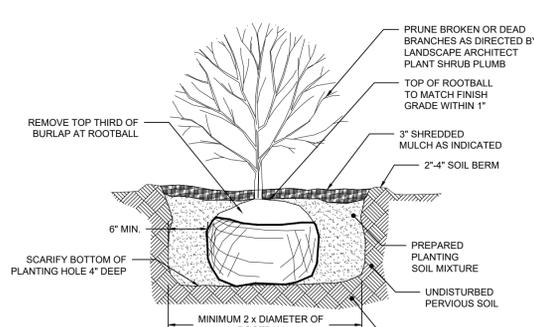
NOTES: 1. ALL PLANTS TO BE FIELD LOCATED BASED ON INUNDATION LEVEL AFTER EDGE OF CONSTRUCTED WETLAND HAS BEEN GRADED.

PLANTING SECTION (INUNDATION LEVEL) NOT TO SCALE

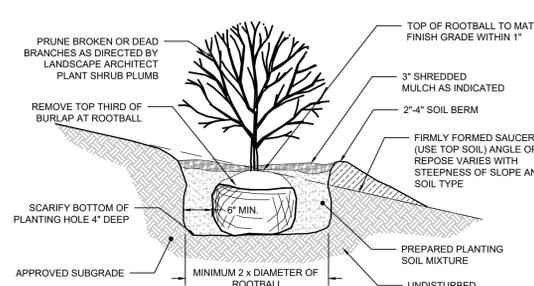


NOTES: 1. SEE LANDSCAPE GRADING SPECIFICATIONS FOR TOPSOIL REQUIREMENTS. 2. CONFIRM SUBGRADES ARE CORRECT AND POSITIVE DRAINAGE IS MAINTAINED PRIOR TO PLACEMENT OF TOPSOIL. 3. NOTIFY ENGINEER/LANDSCAPE ARCHITECT FOR REVIEW OF SUBGRADE PRIOR TO PLACEMENT OF THE TOPSOIL.

LOAM AND SEED NOT TO SCALE

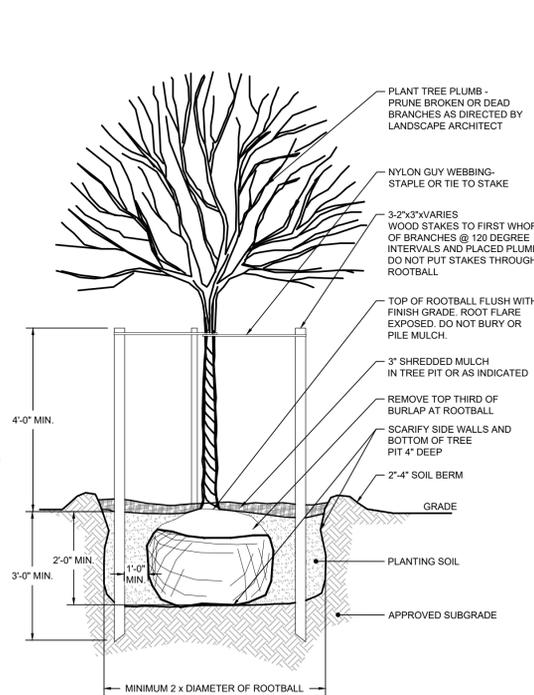


SHRUB PLANTING NOT TO SCALE

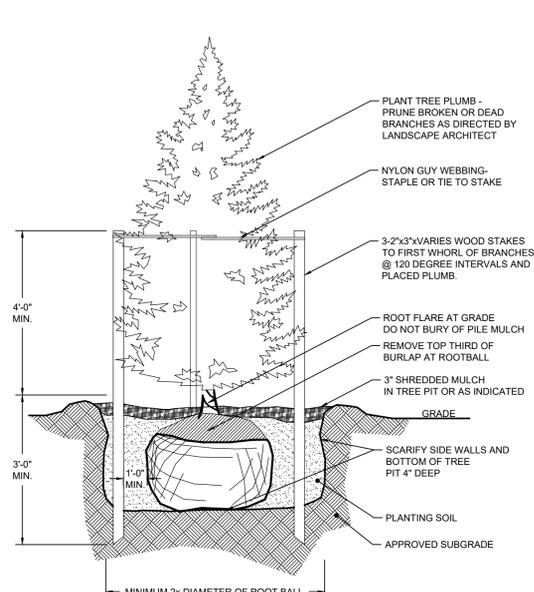


NOTES: 1. PLANTING BACKFILL: 1/3 LOAM, 1/3 SAND, 1/3 PEAT, BY VOLUME. 2. WHEN PLANTING ON SLOPE MODIFY SLOPE AS SHOWN.

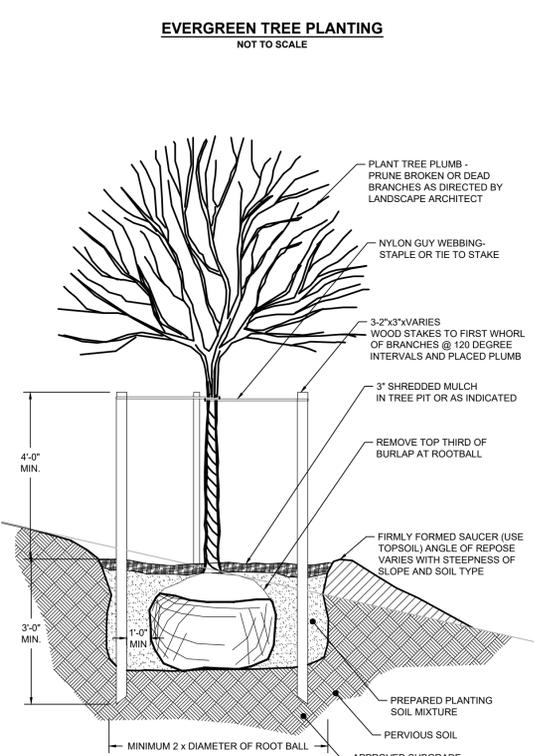
SHRUB PLANTING ON SLOPE NOT TO SCALE



DECIDUOUS TREE PLANTING NOT TO SCALE



EVERGREEN TREE PLANTING NOT TO SCALE



TREE PLANTING ON SLOPE NOT TO SCALE

Revisions table with columns for Date, By, Appr, Description.

Company information for Horsley Witten Group, Inc. including address, phone, and email.

LAKE ROAD WEST STORMWATER RETROFIT DESIGN AND IMPLEMENTATION PROJECT - 25% DESIGN YARMOUTH, MASSACHUSETTS LAKE RD WEST PLANTING DETAILS

Project information for Town of Yarmouth DPW, including address and contact details.

Survey provided by Horsley Witten Group, Inc. with registration information.

DRAFT NOT FOR CONSTRUCTION