I.E., FROM THE EAST AND SOUTHEAST.

2. PRIOR TO POND EXCAVATION, DEBRIS WITHIN THE AREA DESIGNATED ON THE PLAN SHALL BE REMOVED VIA EXCAVATOR OR BACKHOE AND MANUAL LABOR. ALL DEBRIS IS TO BE RESPONSIBLY HAULED OFF SITE TO AN APPROPRIATE RECEIVING FACILITY. RECEIPTS FOR DISPOSAL SHALL BE RETAINED.

3. PRIOR TO POND EXCAVATION, WORK LIMITS SHALL BE FIELD STAKED AND FINE-TUNED RELEVANT TO TREE CANOPY CLOSURE AND TREE WINDTHROW BY A COMPETENT BIOLOGIST (THE POND CONFIGURATION AND LIMITS SHOWN ON THE PLAN HAVE ACCOUNTED FOR MAXIMUM CANOPY CLOSURE AND FOR RETAINING LARGE, HEALTHY TREES WHILE MINIMIZING THE OPPORTUNITY FOR WINDTHROW).

4. NO WORK IS TO OCCUR ON THE WETLAND SIDE OF APPROVED AND STAKED EXCAVATION LIMITS. STONES, BRUSH, OR OTHER MATERIALS ARE NOT TO BE DEPOSITED BEYOND EXCAVATION LIMITS.

5. AT WORK LIMITS ALONG THE POND/WETLAND INTERFACE, THE POND SHALL BE EXCAVATED AS A CRISP EDGE. GRADING OR BERMING OF THE POND EDGE WILL NOT BE PERMITTED.

6. METHODS OF POND CREATION SHALL BE EXCAVATION ONLY, STARTING AT WESTERN, NORTHWESTERN, AND NORTHERN LIMITS AND PROGRESSING SEQUENTIALLY TOWARD UPLANDS SUCH THAT MACHINERY IS "BACKED OUT". ALL EXCAVATED MATERIAL IS TO BE REMOVED FROM THE POND. NO SPOILS ARE TO BE PLACED ON THE WETLAND SURFACE.

7. EQUIPMENT USED FOR EXCAVATION SHALL BE RESTRICTED TO EXCAVATOR, BACKHOE, GRADE-ALL, OR CLAMSHELL. BULLDOZERS ARE NOT PERMITTED.

8. HYDRIC "O" AND "A" HORIZON SOILS FREE OF DEBRIS ARE TO BE RETAINED FOR USE IN THE REPLICATION AREA. SOILS MAY BE STOCKPILED, BUT SHALL BE KEPT IN THE SHADE, SHALL BE KEPT MOIST, AND SHALL BE TARPED SUCH THAT SUNLIGHT DOES NOT PENETRATE.

9. THE POND SHALL BE EXCAVATED TO THE DEPTHS AND SIDE SLOPES SHOWN ON THE PLANS (THE SIDE-SLOPE GRADES ARE INTENDED TO MINIMIZE THE OPPORTUNITY FOR PHRAGMITES AND LYTHRUM INVASION).

10. THE CONCRETE PUMPHOUSE PAD IS TO BE INSTALLED IN ACCORDANCE WITH THE LOCATION DEPICTED ON THE PLANS. PROPERLY TRENCHED AND STAKED HAY BALES ARE TO BE INSTALLED AROUND THE PERIMETER OF THE PAD WORK AREA. CONCRETE IS NOT PERMITTED BEYOND THE PAD FOOTPRINT SHOWN.

11. IMMEDIATELY FOLLOWING FINAL GRADING, 4-6 INCHES OF LOAM SHALL BE EVENLY SPREAD ON THE POND EMBANKMENT (ALONG UPLANDS) AND SEEDED WITH A CONSERVATION GRASS SEED MIX. EROSION CONTROL BLANKET SHALL BE PINNED ON THE EMBANKMENT FROM JUST ABOVE THE WATERLINE TO ITS CREST, AND HAY MULCH SHALL BE EVENLY SPREAD ON ANY OTHER EXPOSED AREAS.

WETLAND REPLICATION NOTES

1. WETLAND REPLICATION SHALL OCCUR PRIOR TO WETLAND ACCESS DRIVE CONSTRUCTION.

2. MACHINERY ACCESS FOR EXCAVATION AND ALL OTHER REPLICATION ACTIVITIES IS TO OCCUR FROM AMARAL DRIVE AND/OR CHESTNUT STREET.

3. NO WORK IS TO OCCUR ON THE WETLAND SIDE OF APPROVED PROJECT LIMITS. PERIMETER HAY BALES ARE TO BE INSTALLED PRIOR TO EARTHWORK AND WILL SERVE AS WORK LIMITS. NO STONES, BRUSH, CONSTRUCTION DEBRIS, LITTER, OR OTHER MATERIALS ARE TO BE DEPOSITED ON THE WETLAND SIDE OF THE HAY BALES.

4. TREES CURRENTLY PRESENT ALONG THE WORK LIMITS AND WETLAND EDGE SHALL BE RETAINED.

5. THE EXCAVATED WETLAND FLOOR SHALL BE GRADED TO BLEND WITH THE UNDISTURBED WETLAND FLOOR.

6. THE WETLAND FLOOR SHALL BE OVER-EXCAVATED TO ACCOMMODATE 6 INCHES OF EVENLY SPREAD ORGANIC-MIX SOIL. ALL SOILS EXCAVATED AS PART OF THE PROJECT SHALL BE EITHER RE-USED ON SITE AS PART OF UPLAND NURSERY OPERATIONS OR SHALL BE RESPONSIBLY HAULED OFF SITE AND DEPOSITED IN AN APPROVED UPLAND LOCATION OUTSIDE OF WETLAND AREAS. ALL SYNTHETIC DEBRIS SHALL BE RESPONSIBLY HAULED OFF SITE TO AN APPROPRIATE RECEIVING FACILITY, AND RECEIPTS FOR SUCH DISPOSAL SHALL BE RETAINED.

7. THE WETLAND-REPLICATION SOIL MIX SHALL COMPRISE THE "O" AND "A" HORIZON SOILS STRIPPED FOR POND EXCAVATION. SHOULD THESE SOILS BE UNSUITABLE OR INSUFFICIENT IN QUANTITY, THEN ORGANIC-MIX SOIL SHALL COMPRISE LOAM BLENDED WITH PEAT MOSS AND/OR HUMUS AT A RATIO OF THREE PARTS MINERAL SOIL TO ONE PART PEAT/HUMUS. SIX INCHES OF LOAM SHALL BE SPREAD ON THE WETLAND SIDE SLOPES FOLLOWING FINAL SHAPING.

8. TREES AND SHRUBS SHALL BE PLANTED AS SHOWN ON THE PLAN.

9. THE WETLAND FLOOR AND LOWEST ONE FOOT (UP TO ELEVATION 53.0) OF THE SIDE SLOPES SHALL BE SEEDED WITH A HYDRIC GRASS/HERB SEED MIX.

10. WETLAND SIDE SLOPES (DOWN TO ELEVATION 52.0) AND ALL OTHER AREAS EXPOSED AS A RESULT OF WETLAND REPLICATION ACTIVITIES SHALL BE SEEDED WITH A CONSERVATION GRASS MIX. THE LOWEST ONE FOOT OF THE SIDE SLOPES SHALL BE SEEDED WITH BOTH SEED MIXES.

11. UPON COMPLETION OF ALL ITEMS LISTED ABOVE, HAY MULCH SHALL BE LIGHTLY SPREAD ON THE WETLAND FLOOR, SLOPES, AND ALL OTHER AREAS DISTURBED AS A RESULT OF REPLICATION ACTIVITIES. EROSION CONTROL BLANKET MAY BE SUBSTITUTED ON SLOPES.

12. SEED, SHRUBS, AND TREES SHALL BE WATERED AS NECESSARY TO ENSURE GERMINATION AND SURVIVAL.

PHRAGMITES-REMOVAL AND SITE-PREPARATION NOTES

1. SITE PREPARATION IS TO OCCUR ONLY COMMENSURATE WITH AREAS TO BE PLANTED. AREAS ARE NOT TO BE PREPARED IF THEY WILL NOT BE IMMEDIATELY PLANTED AND PROPERLY MAINTAINED THEREAFTER AS PART OF NURSERY OPERATIONS.

2. SITE PREPARATION IS TO OCCUR ONLY WITHIN THE PROJECT LIMITS SHOWN ON THE PLANS. NO WORK IS TO OCCUR BEYOND APPROVED LIMITS.

3. ALL VEGETATION REMOVED AS PART OF PREPARING THE WETLAND NURSERY SHALL BE REMOVED FROM THE WETLAND AND RESPONSIBLY DISPOSED OF AT AN UPLAND LOCATION.

4. PHRAGMITES REMOVAL SHALL OCCUR UNDER FROZEN CONDITIONS TO THE GREATEST EXTENT POSSIBLE. BASED ON PREVIOUSLY-OBSERVED CONDITIONS, IT IS ANTICIPATED THAT THE FROZEN RHIZOME MAT WILL LIFT FROM THE UNFROZEN SATURATED SOILS BELOW. ANY SOIL ATTACHED TO THE RHIZOME MAT SHALL BE MANUALLY REMOVED AND IS TO REMAIN IN THE SAME LOCATION WHERE LIFTED FROM.

5. IN THE EVENT THAT COMPLETE REMOVAL IS NOT OBTAINED, HERBICIDES SHALL BE APPLIED DURING THE GROWING SEASON ONLY AT MINIMAL CONCENTRATIONS, BY USING HERBICIDES CURRENTLY ACCEPTED FOR USE IN THE UTILITY CORRIDOR, ONLY BY A LICENSED APPLICATOR, AND ONLY IN THE SPECIFIC AREA REQUIRING TREATMENT.

6. THE TOPOGRAPHY OF THE WETLAND SHALL NOT BE ALTERED. GRADING OR EXCAVATION OF THE WETLAND FOR NURSERY PREPARATION IS NOT PERMITTED.

7. CONSISTENT WITH CURRENT USAGE BY THE UTILITY COMPANIES FOR ANNUAL MOWING OF THE UTILITY CORRIDOR, EQUIPMENT USED FOR PHRAGMITES REMOVAL AND SITE PREPARATION SHALL BE LOW GROUND PRESSURE. MACHINERY SHALL BE TRACK EXCAVATOR, WHICH SHALL CAREFULLY LIFT RHIZOME MAT AS DESCRIBED IN NOTE 4 ABOVE AND SHALL TRANSPORT RHIZOMES TO TRUCKS RESTRICTED TO THE WETLAND ACCESS DRIVE. THE USE OF BULLDOZERS IN THE WETLAND SHALL BE PROHIBITED. ⚠1

8. A CONTINUOUS LINE OF STAKED, UNTRENCHED HAY BALES IS TO BE INSTALLED AT PROJECT LIMITS PRIOR TO SITE PREPARATION AT ALL AREAS SUPPORTING SURFACE WATER OR SUPPORTING EVIDENCE OF SEASONAL INUNDATION.

9. DAILY ACCESS TO THE GIVEN AREA OF SITE PREPARATION IS TO OCCUR VIA THE PROPOSED ACCESS DRIVE AND THEN VIA A PERPENDICULAR DIRECTION TO MINIMIZE EQUIPMENT TRIPS ON WETLAND SUBSTRATES.

10. AT THE END OF EACH WORK DAY, OR WHEN NOT IN USE, EQUIPMENT SHALL BE STORED IN UPLANDS. MACHINERY IS NOT TO REMAIN PARKED IN THE WETLAND.

1. ALL UTILITY COMPANIES INVOLVED IN THE ROW CORRIDOR SHALL BE NOTIFIED OF ANTICIPATED PROJECT COMMENCEMENT PRIOR TO THE START OF WORK.

2. ACCESS DRIVE CONSTRUCTION IS TO OCCUR ONLY DURING A SEASON WHEN PHRAGMITES REMOVAL AND SITE PREPARATION WILL IMMEDIATELY FOLLOW.

3. WORK ASSOCIATED WITH ACCESS DRIVE IMPLEMENTATION IS TO OCCUR ONLY WITHIN THE 10-FOOT-WIDE CORRIDOR DESIGNATED ON THE PLANS.

4. PHRAGMITES IS TO BE REMOVED WITHIN THE FOOTPRINT OF THE ACCESS-DRIVE BED AS DESCRIBED UNDER PHRAGMITES-REMOVAL AND SITE-PREPARATION NOTES 2, 4, AND 6.

5. A 12-FOOT-WIDE GEOTEXTILE MEMBRANE IS TO BE CENTERED OVER THE ACCESS DRIVE AND LAID DIRECTLY ON THE WETLAND SUBSTRATES. THE REMAINING ONE FOOT ON EITHER SIDE IS TO BE FOLDED UPWARD AND STAKED WITH OAK STAKES AS STONE IS BEING SPREAD (TO CONTAIN THE STONE).

6. 1.5 INCHES OF PEA STONE IS TO BE CAREFULLY SPREAD ON THE MEMBRANE ONLY TO THE 10-FOOT WIDTH SPECIFIED. SIX INCHES OF GRADED SCREENED STONE AGGREGATE IS TO OVERLAY THE PEA STONE. CARE SHOULD BE TAKEN THAT STONE IS CONTAINED BY THE MEMBRANE. SEE CROSS SECTION THIS SHEET.

7. EQUIPMENT USED TO CONSTRUCT THE ACCESS DRIVE SHALL BE LOW-GROUND-PRESSURE EQUIPMENT. MACHINERY MUST REMAIN IN THE ALIGNMENT OF THE ACCESS-DRIVE FOOTPRINT. WHEN BACKBLADING TO SMOOTH THE FINAL SURFACE, CARE MUST BE EXERCISED THAT MATERIAL IS NOT FORCED BEYOND THE LIMITS OF THE MEMBRANE.

8. AT THE END OF EACH WORK DAY, OR WHEN NOT IN USE, EQUIPMENT SHALL BE STORED IN UPLANDS. MACHINERY IS NOT TO REMAIN PARKED ON THE ACCESS DRIVE.

1. INTRODUCED INTO THE WETLAND TO SUPPLEMENT EXISTING HYDRIC SOILS.

2. VEHICLE ACCESS REQUIRED TO TRANSPORT PLANT MATERIAL INTO, AND OUT OF, THE WETLAND NURSERY AREA SHALL OCCUR ONLY VIA THE ACCESS DRIVE. ACCESS REQUIRED FOR PLANTING, HARVESTING, AND GENERAL MAINTENANCE OF PLANTS SHALL OCCUR VIA FOOT.

3. PLANTINGS OF GIVEN SPECIES SHALL BE IN PLANTING BLOCKS AND/OR ROWS WITH DESIGNATED FOOTPATHS TO MINIMIZE UNCONTROLLED AND RANDOM FOOT TRAFFIC AND TO BETTER MAXIMIZE THE EFFECTIVENESS AND ORGANIZATION OF THE WETLAND AREA UTILIZED. SEE REPRESENTATIVE LAYOUT THIS SHEET.

4. HARVESTING OF HYDROPHYTES SHALL BE BY BARE ROOT METHOD TO MINIMIZE SOIL LOSS AND TO AVOID MODIFICATION OF WETLAND MICROTOPOGRAPHY. SOIL SHALL BE REMOVED FROM THE ROOTS AT THE POINT OF HARVEST. BALLING OF WETLAND-GROWN PLANTS WITH NATIVE WETLAND SOILS WILL NOT BE PERMITTED.

5. SPECIFIC LOCATIONS OF WETLAND NURSERY SPECIES WILL BE DETERMINED IN THE FIELD BASED ON HYDROLOGIC AND SUN/SHADE CHARACTERISTICS.

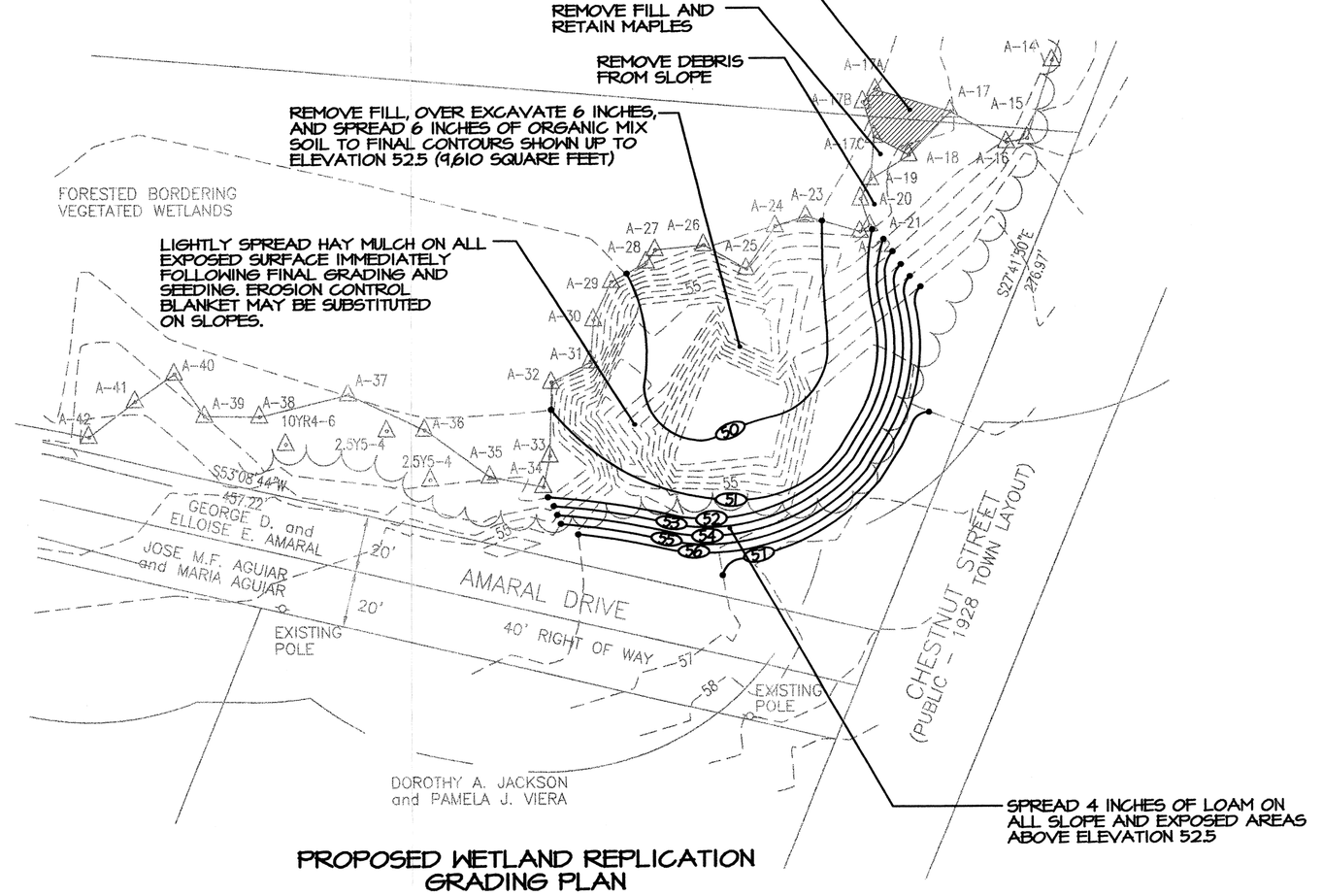
6. INVASION OF UNDESIRED PLANT SPECIES SHALL BE CONTROLLED VIA MANUAL CULLING AND VIA HERBICIDE APPLICATION ONLY AT MINIMAL CONCENTRATIONS, BY USING HERBICIDES CURRENTLY ACCEPTED FOR USE IN THE UTILITY CORRIDOR, ONLY BY A LICENSED APPLICATOR, AND ONLY WHEN REQUIRED. PESTICIDES WILL NOT BE USED.

7. ORGANIC FERTILIZERS SHALL BE APPLIED ONLY AS REQUIRED, ONLY TO THE MINIMUM REQUIRED, ONLY TO THE SITE-SPECIFIC AREA IN NEED OF TREATMENT, AND ONLY BY A COMPETENT APPLICATOR.

8. STOCKPILING OF PLANT MATERIAL AND CONTAINERS USED FOR HARVESTING AND TEMPORARY TRANSPORT WILL NOT BE PERMITTED ON HYDRIC SOILS. ANY TEMPORARY STOCKPILING IS TO OCCUR ON THE ACCESS ROAD, AND ONLY TO THE MINIMUM DURATION REQUIRED. LONG-TERM STORAGE AND STOCKPILING IS TO OCCUR IN UPLAND AREAS ONLY.

9. ALL FARM VEHICLES, TOOLS, AND OTHER NURSERY EQUIPMENT ARE TO BE STORED IN UPLANDS.

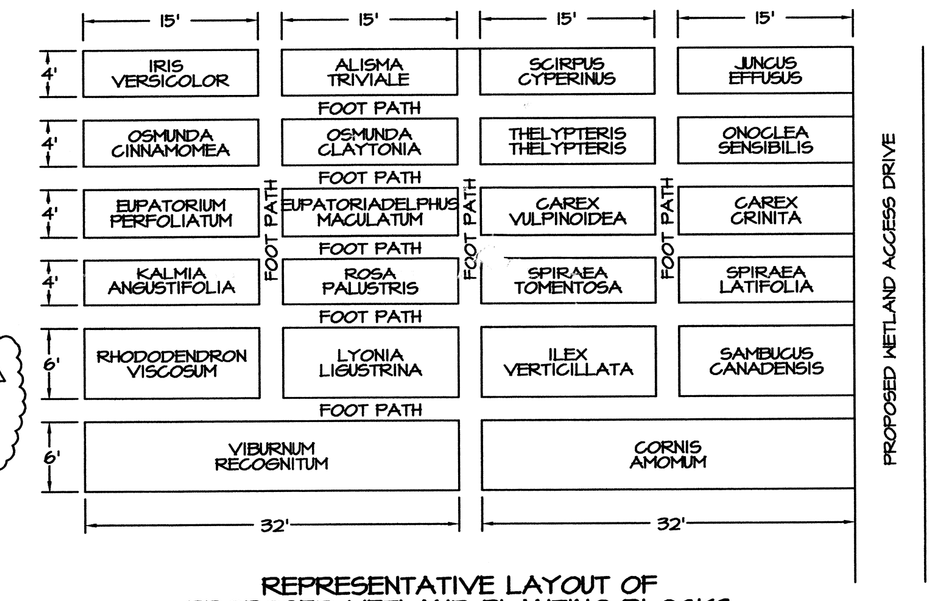
10. HARVESTS SHALL OCCUR SUCH THAT PLANT COVER REMAINS IN ANY GIVEN AREA TO THE MAXIMUM EXTENT FEASIBLE. WHERE FEASIBLE, HARVESTING IS TO OCCUR RANDOMLY IN A GIVEN BLOCK, AS OPPOSED TO BLOCK ROTATION. SHOULD HARVESTING NEAR THE END OF THE GROWING SEASON YIELD BLOCKS OR ROWS OF BARREN SOIL, STRAW MULCH SHALL BE APPLIED TO COVER THE EXPOSED AREA THROUGH THE WINTER.



PROPOSED WETLAND REPLICATION GRADING PLAN

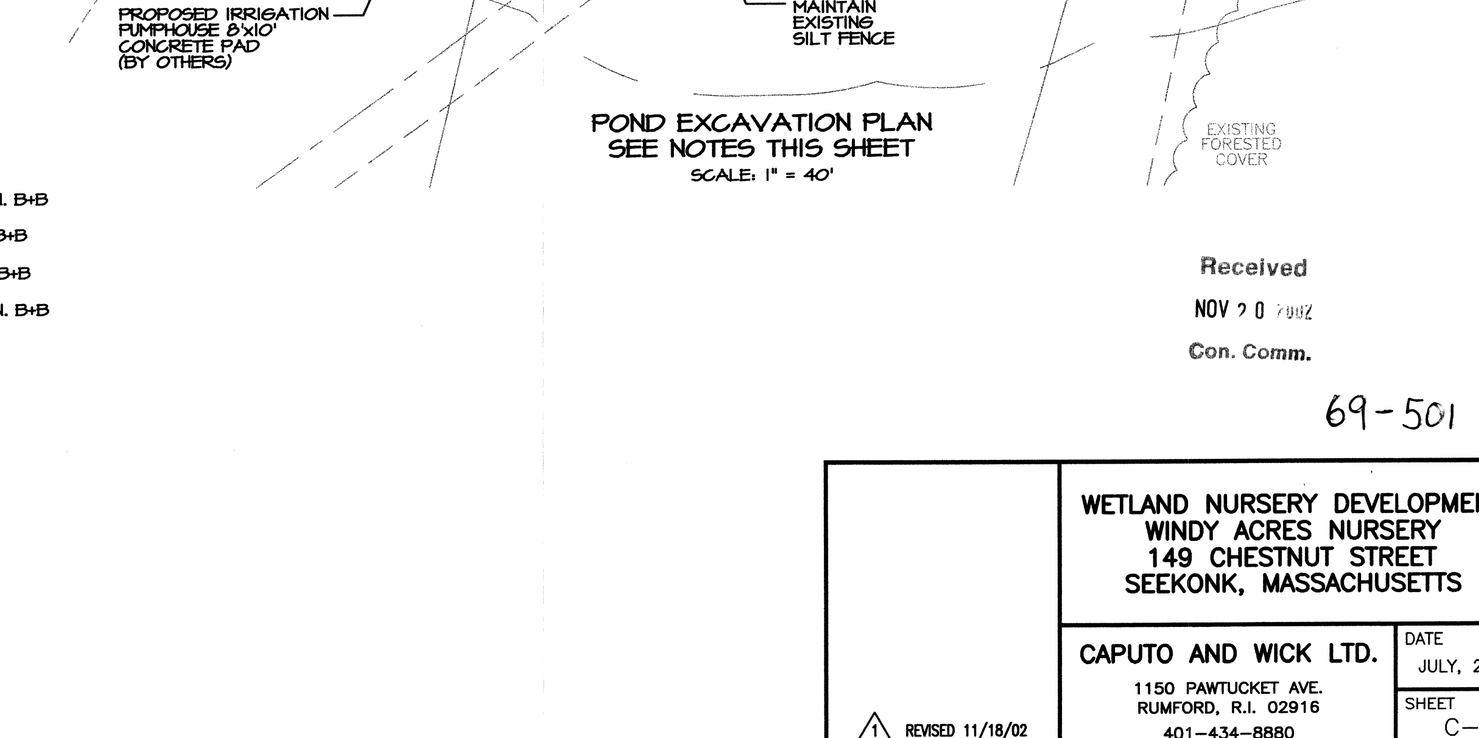
SCALE: 1" = 40'

SEE NOTES & PROPOSED WETLAND REPLICATION PLANTING PLAN (THIS SHEET)



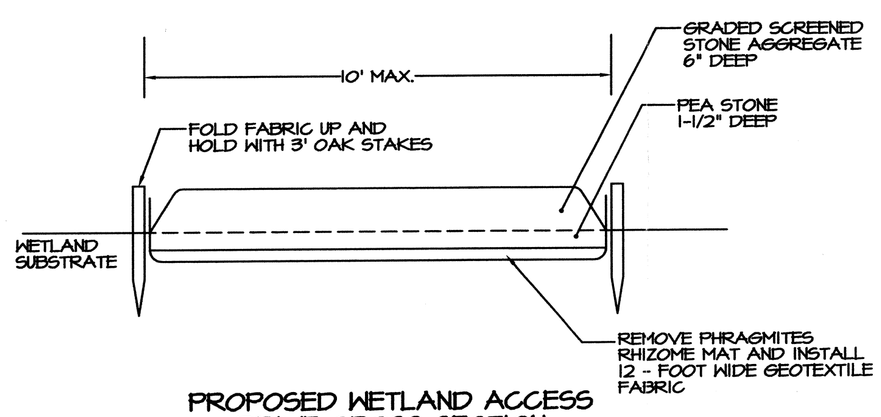
REPRESENTATIVE LAYOUT OF PROPOSED WETLAND PLANTING BLOCKS

SCALE: 1" = 10'



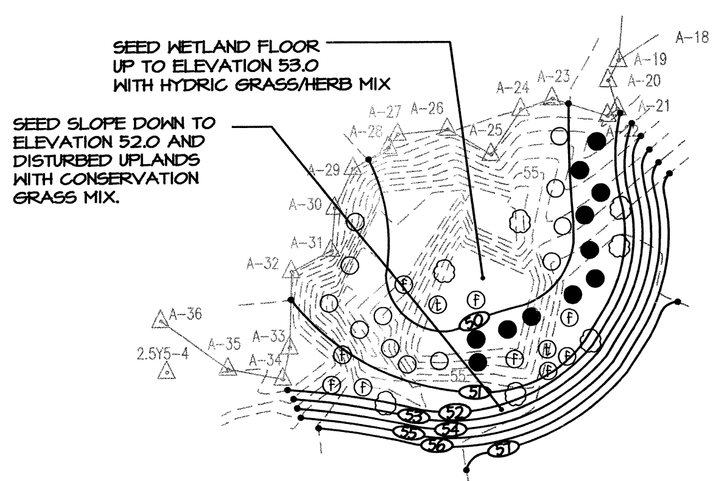
POND EXCAVATION PLAN SEE NOTES THIS SHEET

SCALE: 1" = 40'



PROPOSED WETLAND ACCESS DRIVE CROSS SECTION

NOT TO SCALE



7 RED MAPLE 1-1/2" CAL. B+B (ACER RUBRUM)
9 WINTERBERRY - FEMALE 3' MIN. B+B (ILEX VERTICILLATA)
2 WINTERBERRY - MALE 3' MIN. B+B (ILEX VERTICILLATA)
12 HIGHBUSH BLUEBERRY 3' MIN. B+B (VACCINIUM CORYMBOSUM)
11 NORTHERN ARROWWOOD 3' MIN. B+B (VIBURNUM RECOGNITUM)

PROPOSED WETLAND REPLICATION PLANTING PLAN

SCALE: 1" = 40'

Received
NOV 20 2002
Con. Comm.

69-501

⚠1 REVISED 11/18/02	WETLAND NURSERY DEVELOPMENT WINDY ACRES NURSERY 149 CHESTNUT STREET SEEKONK, MASSACHUSETTS	
	CAPUTO AND WICK LTD. 1150 PAWTUCKET AVE. RUMFORD, R.I. 02916 401-434-8880	DATE JULY, 2002 SHEET C-3