

**REPLICATION AREA MAINTENANCE AND MONITORING**

1. EROSION CONTROL BARRIERS SHALL BE MAINTAINED IN GOOD CONDITION THROUGHOUT THE PROJECT.
2. EXPOSED SOILS SHALL BE STABILIZED WITH VEGETATIVE COVER AS SOON AS FEASIBLE.
3. ACCESS TO THE REPLICATION AREA SHALL BE LIMITED TO ENSURE STABILIZATION OF THE AREA.
4. A WETLAND SPECIALIST SHALL BE ON SITE TO OVERSEE THE CRITICAL PHASES OF THE CONSTRUCTION AND PLANTING OF THE REPLICATION AREA. THE WETLAND SPECIALIST SHALL INSPECT THE EROSION CONTROL BARRIERS, OVERSEE THE COMPLETION OF THE BACKFILL AND ROUGH GRADING, VERIFY THE FINAL GRADES, OVERSEE THE PLANTING OF THE WETLAND SEED MIX AND INSPECTION OF THE AREA DURING DROUGHT OR AFTER HEAVY RAINS.
5. THE REPLICATION AREA SHALL BE MONITORED FOR TWO GROWING SEASONS AFTER THE COMPLETION OF THE PLANTINGS. MONITORING REPORTS DESCRIBING THE STATUS OF GROWTH SHALL BE SUBMITTED TO THE ACTON CONSERVATION COMMISSION IN JUNE AND SEPTEMBER. THE SECOND ANNUAL MONITORING REPORT WILL EVALUATE THE SUCCESS OF THE WETLAND REPLICATION.
6. THE CRITERIA FOR THE REPLICATION TO BE CONSIDERED SUCCESSFUL SHALL BE THE ESTABLISHMENT OF 75% VEGETATIVE COVER AT THE END OF THE SECOND GROWING SEASON. (310 CMR 10.55)

**RECOMMENDED REPLICATION AREA PLANTINGS:**

1. PLANTINGS MAY BE COMPLEMENTED WITH VEGETATIVE STOCK FROM AREA DISTURBED WITHIN THE WETLANDS AND WITH NEW ENGLAND WETMIX PER NEW ENGLAND WETLAND PLANT, INC.'S RECOMMENDATIONS.

**REPLICATION AREA CONSTRUCTION SEQUENCE**

1. A WETLAND SCIENTIST SHALL SUPERVISE THE CONSTRUCTION OF THE REPLICATION AREA.
2. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
3. EXCAVATION OF THE REPLICATION AREA SHALL BE COMPLETED PRIOR TO ANY DISTURBANCE WITHIN THE WETLAND AREA. WORK IN THE WETLAND SHALL BE DONE DURING THE DRY SEASON.
4. ONLY THE MINIMUM AREA NECESSARY IS TO BE CLEARED. THE EXACT EXTENT OF THE REPLICATION AREA IS TO BE CLEARED. THE LEAF LITTER IS TO BE HAND RAKED AND STOCKPILED FOR USE ON THE REPLICATION AREA.
5. ALL TREES LARGER THEN 10" dbh SHALL NOT BE CLEARED. GRADING SHALL BE MODIFIED WHERE NECESSARY TO MAINTAIN THEIR ROOT ZONE.
6. THE REPLICATION AREA SHALL BE ROUGH GRADED TO 12" BELOW THE FINISHED GRADE SPECIFIED ON THE PLAN AND BACKFILLED WITH EXCAVATED ORGANIC SOILS FROM THE WETLANDS DISTURBED. ALL LARGE BOULDERS AND STUMPS SHALL BE REMOVED FROM THE AREA.
7. EXCAVATED SOILS FROM THE DISTURBED WETLAND AREA SHALL BE BROADCAST OVER THE EXCAVATED REPLICATION AREA TO THE FINISHED GRADE SPECIFIED ON THE PLAN, PROVIDING A SUPPLY OF INDIGENOUS SEEDS, ROOTS, AND RHIZOMES FOR THE REPLICATION. IF ADDITIONAL SOIL IS NEEDED TO COVER THE REPLICATION AREA, LOAM AND TOPSOIL FROM THE EXCAVATED AREAS MAY BE MIXED INTO THE EXCAVATED WETLAND SOILS.
8. THE STOCKPILED LEAF LITTER SHALL BE PLACED ON THE REPLICATION AREA, AFTER PLANTINGS ARE SET AND WATERED IN PLACE.
9. ANY EVIDENCE OF EROSION OR SEDIMENTATION INTO THE WETLAND SHALL BE REMOVED IMMEDIATELY. ANY DEAD WETLAND REPLICATION PLANTINGS SHALL BE REMOVED AND REPLACED WHEN THE SEASON IS APPROPRIATE.

**SOIL EVALUATION SUMMARY**

SOIL EVALUATOR: BRUCE RINGWALL, GPR, INC.  
 SOIL EVALUATOR APPROVED ON: JUNE 9, 1995  
 EVALUATION PERFORMED: 10/02/15

Deep Observation Hole Log					
Hole # 1015-1 NB 21/70					
Depth from Surface (inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (MUNSELL)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0-24	Fill	layered gravel			
24-30	BA	fsl	2.5Y 2.5/1	@ ~12"	in fill
30-44	BA	fsl	5Y 5/2		ribbed
44-60	C1	ls	5Y 5/2		saturated
60-84	C2	ls	2.5Y 5/4		dry

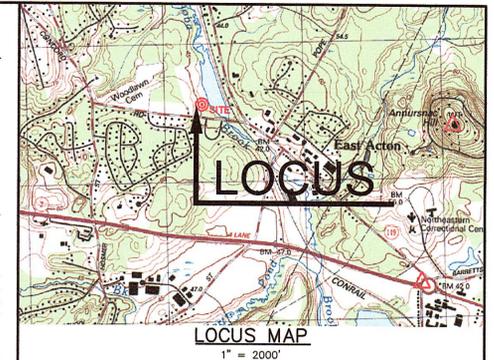
Parent Material (geologic) Glaciofluvial  
 Depth to Bedrock: >84"  
 Depth to Groundwater: Standing Water in the Hole None Weeping from Pit Face: 32"  
 Estimated Seasonal High Groundwater in the Hole 12"

**LEGEND**

- EXISTING
- 100.0 ELEVATION CONTOUR
  - 100.0 SPOT GRADE
  - PROPERTY LINE
  - BUILDING ENVELOPE
  - 10-YR FLOODPLAIN LIMIT
  - 100-YR FLOODPLAIN LIMIT
  - WETLAND EDGE WITH FLAG NO.
  - 25' NO-DISTURBANCE ZONE LIMIT
  - 100' WETLAND BUFFER ZONE LIMIT
  - SHORELINE
  - INTERMITTENT STREAM/DITCH
  - 200' RIVERFRONT ZONE LIMIT
  - EDGE OF PAVEMENT
  - GRAVEL/DIRT ROAD
  - FENCE
  - STONE WALL
  - WATER MAIN
  - WATER SERVICE
  - FOUNDATION DRAIN
  - FORCE MAIN
  - GRAVITY SEWER LINE
  - GAS LINE
  - BURIED POWER LINE
  - STORM DRAIN
  - CATCH BASIN
  - DRAIN MANHOLE
  - HAYBALE BARRIER
  - SILT FENCE BARRIER
  - RETAINING WALL
  - DEEP SOIL OBSERVATION HOLE
  - PERCOLATION TEST
  - SOIL BORING
  - GROUNDWATER MONITORING WELL
  - WELL
  - ELEVATION BENCHMARK
  - SURFACE RUNOFF DIRECTION
  - TRAFFIC FLOW DIRECTION
  - WATER SHUT-OFF VALVE
- PROPOSED
- 100.0 FG
  - WS
  - FD
  - SS
  - CB
  - DMH
  - 199-1
  - 199-A
  - SBI
  - GM1
  - 199-1
  - 199-A
  - SBI
  - GM1
  - 199-1
  - 199-A
  - SBI
  - GM1

**ABBREVIATIONS**

- TP TOP OF PAVEMENT
- TW TOP OF WALL
- FG FINISH GRADE
- FF FIRST FLOOR
- LL LOWER LEVEL
- BF BOTTOM OF FOOTING
- CLF CHAIN LINK FENCE
- CC CONCRETE CURB
- STCK STOCKADE FENCE
- R.A.P. RECYCLED ASPHALT PRODUCT
- FP FLOODPLAIN
- EL ELEVATION



**ELEVATION DATUM**

DATUM: NAVD 88

B.M. NO. 1

**ASSESSORS REFERENCE:**

ASSESSORS MAP: F4, LOT 34  
 G4, LOT 27

RECORD OWNER: TOWN OF ACTON  
 472 MAIN STREET  
 ACTON, MA 01720

**EXISTING CONDITIONS NOTES:**

1. EXISTING CONDITION INFORMATION BASED ON AN ON-THE-GROUND TOPOGRAPHIC SURVEY PERFORMED BY GOLDSMITH, PREST & RINGWALL, INC. DATED 6/10/09, 6/11/09, 10/24/12, 10/25/12, 10/29/12, 10/30/12, & 11/14/12
2. EDGE OF WETLAND DELINEATED BY B+C ASSOCIATES, INC. DATED xxxxxxxx 20xx.

**DRAWING ISSUED FOR:**

- CONCEPT
- CONSTRUCTION
- PERMIT
- CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION

**GPR** Engineering Solutions for Land & Structures

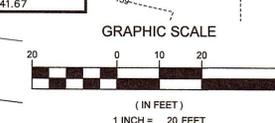
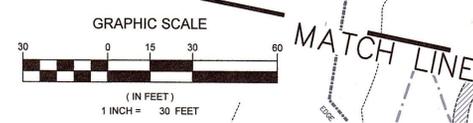
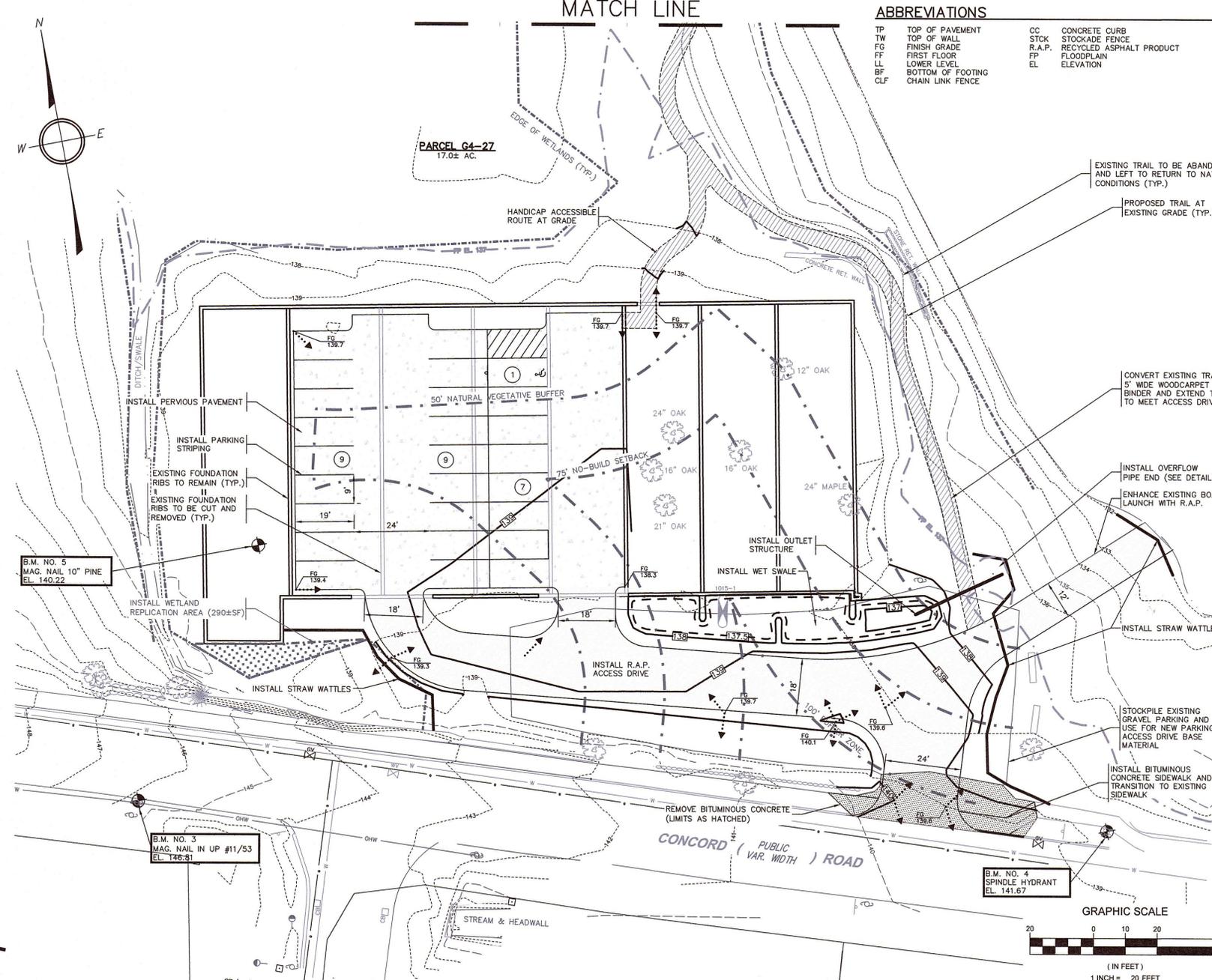
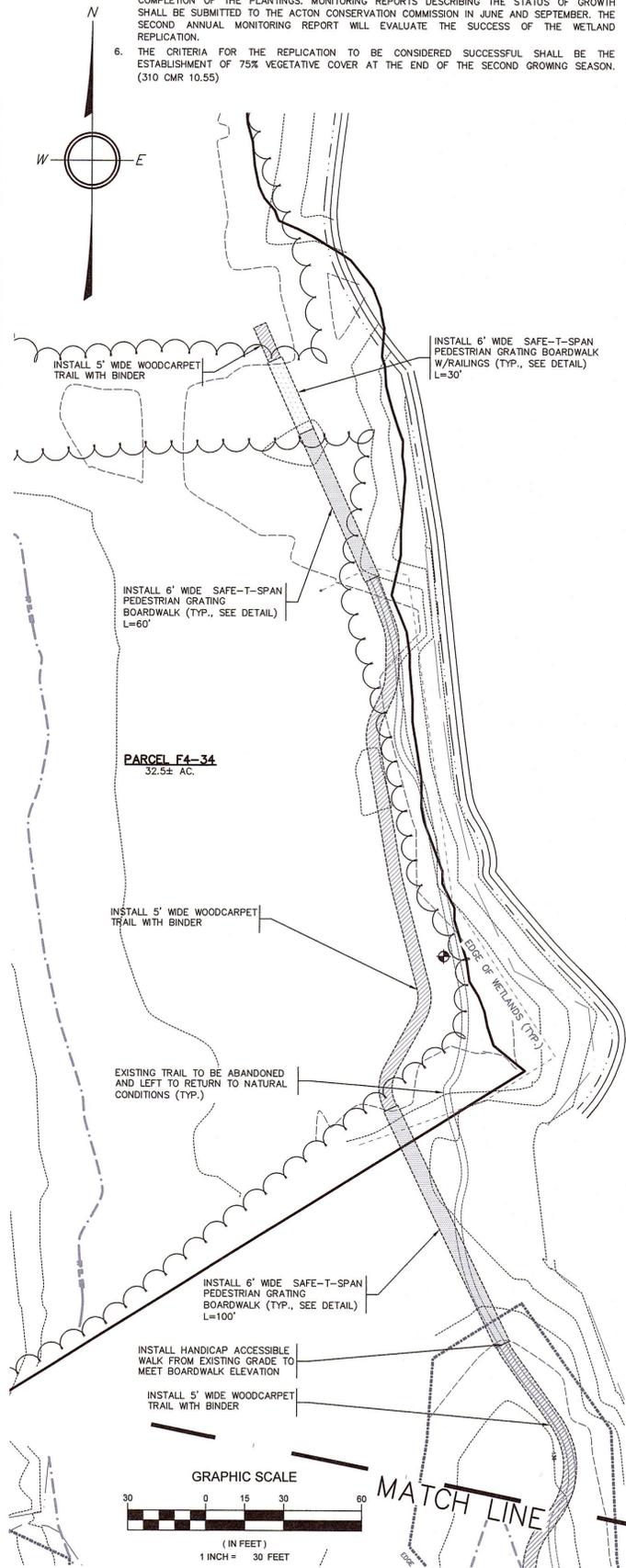
**GOLDSMITH, PREST & RINGWALL, INC.**  
 39 MAIN STREET, SUITE 301, AYER, MA 01432  
 CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING  
 VOICE: 978.772.1590 FAX: 978.772.1591  
 www.gpr-inc.com

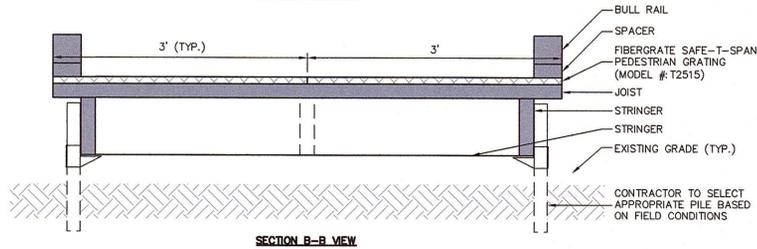
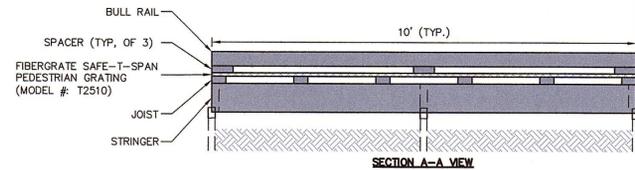
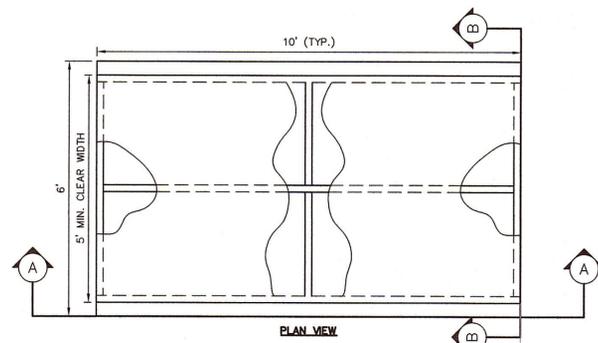
**NOTICE OF INTENT**

**MORRISON FARM SITE PLAN**

116-120 CONCORD ROAD  
 ACTON, MA

APPLICANT:  
 MORRISON FARM COMMITTEE  
 472 MAIN STREET  
 ACTON, MA 01720



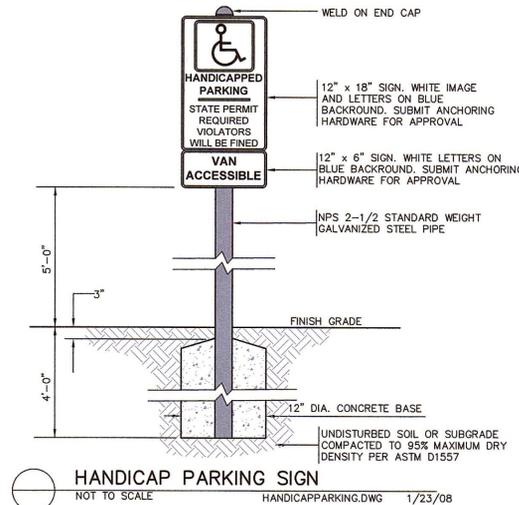


NOTES:  
 [1] CONTRACTOR SHALL PROVIDE WOOD SUPPORT FRAME AND FOOTING DESIGN

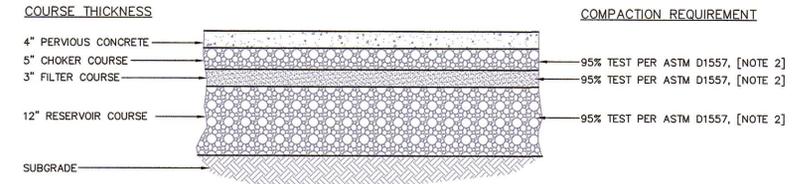


1" Deep T2510 (ADA Compliant)					1-1/2" Deep T2515 (ADA Compliant)				
# of Bars / Ft. of Width	Load Bar Depth	Open Area	Load Bar CornerRadius	Approximate Weight	# of Bars / Ft. of Width	Load Bar Depth	Open Area	Load Bar CornerRadius	Approximate Weight
6	1"	25%	2"	2.51 pcf	6	1-1/2"	25%	2"	2.82 pcf

Section Properties per Ft. of Width:  $A=2.11 \text{ ft}^2$   $I=0.27 \text{ ft}^4$   $S_x=0.79 \text{ in}^3$   $S_y=0.42 \text{ in}^3$  Average EI = 1,340,000 lb-in<sup>2</sup> (SPAN  $\geq 24'$ )  
 Section Properties per Ft. of Width:  $A=2.22 \text{ ft}^2$   $I=0.38 \text{ ft}^4$   $S_x=0.81 \text{ in}^3$   $S_y=0.52 \text{ in}^3$  Average EI = 4,130,000 lb-in<sup>2</sup> (SPAN  $\geq 24'$ )



HANDICAP PARKING SIGN  
 NOT TO SCALE  
 HANDICAPPARKING.DWG 1/23/08

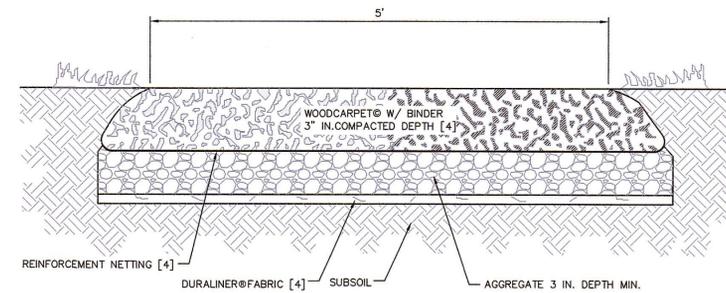


US STANDARD SIEVE SIZE INCHES/MM	PERCENT PASSING (%)			
	CHOKER COURSE (AASHTO NO. 57/NO. 67)	FILTER COURSE (MANUFACTURED SAND/MODIFIED NHDOT 304.1)	RESERVOIR COURSE (AASHTO NO. 3)	CHOKER COURSE ALTERNATIVE (AASHTO NO. 5)
6/150	-	-	-	-
2.5/63	-	-	100	-
2/50	-	-	90-100	100
1.5/37.5	100	-	35-70	90-100
1/25	95-100	-	0-15	20-55
.75/19	-	-	-	0-10
.5/12.5	25-60	-	0-5	0-5
3/8/9.5	-	-	-	-
#4/4.75	0-10	25-70	-	-
#8/2.36	0-5	0-6*	-	-

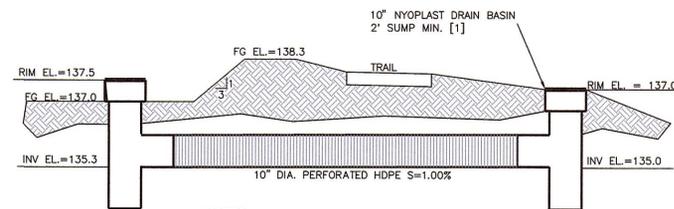
\* PREFERABLY LESS THAN 4% FINES



MAXIMUM ACCESSIBILITY OPTION  
 ADA COMPLIANT  
 APPLICATION: OUTDOOR PATHS, TRAILS AND WALKWAYS.



NOTES:  
 [1] INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.  
 [2] DO NOT SCALE DRAWINGS.  
 [3] THIS DRAWING IS TO BE USED IN CONJUNCTION WITH 069-002A.  
 [4] CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT [www.ZEAGER.com](http://www.ZEAGER.com) REFERENCE NUMBER 069-002.



NOTES:  
 1. SECURE CAST IRON DRAIN COVER TO DRAIN BASIN WITH A MIN. OF 6 STAINLESS STEEL SCREWS OR BOLTS.



DRAWING ISSUED FOR:

- CONCEPT
- CONSTRUCTION RECORD
- PERMIT
- CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.



PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION

**GPR** Engineering Solutions for Land & Structures

**GOLDSMITH, PREST & RINGWALL, INC.**  
 39 MAIN STREET, SUITE 301, AYER, MA 01432  
 CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING  
 VOICE: 978.772.1590 FAX: 978.772.1591  
[www.gpr-inc.com](http://www.gpr-inc.com)

NOTICE OF INTENT

DETAIL SHEET

116-120 CONCORD ROAD  
 ACTON, MA

OWNER:  
 MORRISON FARM COMMITTEE  
 472 MAIN STREET  
 ACTON, MA 01720

**GENERAL NOTES**

- LOCATIONS OF EXISTING UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS SHOWN HEREON ARE APPROXIMATE ONLY. ALL UTILITIES/OBSTRUCTIONS/SYSTEMS MAY NOT BE SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS, WHETHER OR NOT SHOWN HEREON.
- UNLESS OTHERWISE SHOWN, ALL NEW UTILITIES SHALL BE UNDERGROUND.
- BURIED UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THEIR RESPECTIVE COMPANY SPECIFICATIONS.
- CONSTRUCTION LAYOUT OF BUILDING AND SITE IMPROVEMENTS SHALL BE PERFORMED BY A LICENSED PROFESSIONAL LAND SURVEYOR. LOCATIONS OF EXISTING FEATURES OR PROPOSED IMPROVEMENTS DERIVED BY SCALING DRAWINGS MAY NOT BE ACCURATE. PROPERTY LINES SHOWN HEREON ARE APPROXIMATE. SEE PLAN REFERENCE HEREON.
- SAFETY MEASURES, CONSTRUCTION METHODS, AND CONTROL OF WORK SHALL BE RESPONSIBILITY OF CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY EXISTING UTILITY OR STRUCTURE DAMAGED DURING CONSTRUCTION THAT ARE NOT DESIGNATED FOR DEMOLITION AND/OR REMOVAL HEREON. DAMAGED UTILITY OR STRUCTURE SHALL BE REPAIRED TO THE SATISFACTION OF THEIR RESPECTIVE OWNERS.
- ANY INTENDED REVISION OF THE HORIZONTAL AND/OR VERTICAL LOCATION OF IMPROVEMENTS TO BE CONSTRUCTED AS SHOWN HEREON SHALL BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO IMPLEMENTATION.
- CONTRACTOR SHALL NOTIFY ENGINEER UPON COMMENCEMENT OF CONSTRUCTION IN ORDER TO ENSURE THAT REQUIRED INSPECTIONS ARE PERFORMED IN A TIMELY AND EFFICIENT MANNER.
- CONTRACTOR SHALL PROMPTLY NOTIFY ENGINEER UPON DISCOVERY OF ANY UNFORESEEN SURFACE OR SUBSURFACE CONDITIONS THAT MAY IMPACT SITE CONSTRUCTION.
- FINISH RIM ELEVATIONS SHOULD MATCH PAVEMENT, GRADING OR LANDSCAPING, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- WHERE EXISTING UTILITY LINES/STRUCTURES ARE TO BE CUT/BROKEN DOWN/ABANDONED, LINES/STRUCTURES SHALL BE PLUGGED/CAPPED/FILLED IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS.
- EROSION CONTROL MEASURES, SUCH AS SILT FENCE OR HAY BALES AS MAY BE SHOWN HEREON, SHALL BE INSTALLED BEFORE EARTH DISTURBANCE OCCURS WITHIN BUFFER ZONE, AND SHALL SERVE AS THE LIMIT OF WORK.
- WHERE THE WORD "INSTALL" IS USED HEREIN, IT IS INTENDED TO DIRECT CONTRACTOR TO "FURNISH, INSTALL, AND PLACE IN OPERATION" THE COMPONENT REFERRED TO.
- LIMITS OF WORK SHALL BE STAKED IN THE FIELD PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL STORM DRAIN PIPE TO BE SMOOTH INTERIOR HDP PIPE, 2.0 PSI GASKETED JOINT, UNLESS OTHERWISE NOTED.
- WHERE SHOWN, CONSTRUCTION NOTES ARE INTENDED TO SUMMARIZE AND CLARIFY MAJOR ITEMS OF WORK. THESE NOTES SHOULD NOT BE CONSTRUED AS AN EXHAUSTIVE LISTING OF ALL WORK REQUIRED. CONTRACTOR SHOULD CONTACT ENGINEER WHEN FURTHER CLARIFICATION OF DEPICTED WORK IS DESIRED.
- CONSTRUCTION OF FIRE AND DOMESTIC WATER SUPPLY IMPROVEMENTS SHALL CONFORM TO CITY OF GLOUCESTER REQUIREMENTS.
- WHERE DIMENSIONS INVOLVE CURB, DIMENSIONS ARE TO FACE OF CURB. WHERE SLOPED GRANITE CURB OR CAPE COD BERM SPECIFIED, FACE OF CURB IS EDGE OF FINISH PAVEMENT AT TOE OF CURB.
- NO DEBRIS, JUNK, RUBBISH OR OTHER NON-BIODEGRADABLE MATERIALS, FILL CONTAINING HAZARDOUS MATERIALS OR WASTES, OR STUMPS SHALL BE BURIED ON ANY LAND ON THIS SITE, OR LEFT ON ANY LOT OR ON THE STREET RIGHT OF WAY.
- EXISTING CONDITION INFORMATION BASED ON AN ON-THE-GROUND TOPOGRAPHIC AND BOUNDARY SURVEY PERFORMED BY GOLDSMITH, PREST & RINGWALL, INC. DATED ??.

**REGULATORY NOTES**

- CONTRACTOR SHALL CONTACT DIG-SAFE FOR UNDERGROUND UTILITY MARKING AT 711 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL GIVE TWENTY-FOUR (24)-HOUR NOTICE TO PERTINENT TOWN DEPARTMENTS BEFORE COMMENCING ANY WORK IN THE FIELD.
- CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.
- CONTRACTOR SHALL BE AWARE OF ALL CONSTRUCTION REQUIREMENTS, CONDITIONS, AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES PRIOR TO COMMENCEMENT OF ANY WORK.
- ALL WORK OUTSIDE OF BUILDING THAT IS LESS THAN 10 FEET FROM THE INSIDE FACE OF BUILDING FOUNDATION SHALL CONFORM WITH THE UNIFORM STATE PLUMBING CODE OF MASSACHUSETTS, 248 CMR 2.00.
- GENERAL COMPLIANCE WITH 28 CFR PART 36 -- 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND 521 CMR PART C, EXTERIOR OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD REGULATIONS IS INTENDED. CONTRACTOR SHALL VERIFY COMPLIANCE DURING CONSTRUCTION AND SHALL NOTIFY THE OWNER OF ANY NON-COMPLIANCE ISSUES AS SOON AS DISCOVERED.

**EROSION AND SEDIMENT CONTROL REQUIREMENTS**

**PART 1 - GENERAL**

- 1.01 SUMMARY
- FURNISH, INSTALL, AND MAINTAIN TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS, BUT NOT NECESSARILY LIMITED TO, HAY BALE AND SILT FENCE BARRIERS, RIPRAP, DIVERSION CHANNELS AND BERMS, CHECK DAMS, STRATEGICALLY LOCATED STOCKPILES, SEDIMENT BASINS, MULCH, AND SEED MIX (HEREINAFTER "CONTROL MEASURES") ADEQUATE TO PREVENT THE CONVEYANCE OF EROSION PRODUCTS (E.G. SOIL, MULCH, SOD) OFF SITE, OR INTO ENVIRONMENTALLY SENSITIVE AREAS, OR INTO AREAS WHERE WORK WILL BE ADVERSELY IMPACTED. ENVIRONMENTALLY SENSITIVE AREAS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, WETLANDS, TRIBUTARIES TO WETLANDS, WETLAND BUFFER ZONES, INTERMITTENT AND PERENNIAL STREAMS / RIVERS, AND THEIR ATTENDANT BUFFER ZONES.
  - REFER TO DRAWINGS FOR LOCATION AND DETAILS OF CONTROL MEASURES REQUIRED TO COMMENCE WORK. THESE CONTROL MEASURES WILL BE ADEQUATE ONLY FOR VEGETATION CLEARING. THE DRAWINGS ARE NOT INTENDED TO GRAPHICALLY DEPICT ALL CONTROL MEASURES THAT WILL BE REQUIRED TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A.
  - DEVELOP AND EMPLOY CONTROL MEASURES THROUGHOUT THE DURATION OF PROJECT, OVER ALL AREAS DISTURBED OR UNDISTURBED BY CONSTRUCTION, AS NECESSARY TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A.
  - DEVELOP AND EMPLOY TEMPORARY CONTROL MEASURES AS NECESSARY TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A, WHILE ALLOWING WORK TO PROCEED IN AN EFFICIENT, COST EFFECTIVE MANNER.
  - DEVELOP, EMPLOY AND MAINTAIN CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE SITE IS PERMANENTLY STABILIZED BY ESTABLISHED VEGETATION, FINISH LANDSCAPE MATERIALS, PAVED SURFACES, AND/OR ROOF AREA.
  - ONCE THE SITE IS PERMANENTLY STABILIZED AND CERTIFIED AS SUCH BY ENGINEER, REMOVE TEMPORARY CONTROL MEASURES WHILE PROTECTING STABILIZED SURFACES.
- 1.02 SUBMITTALS
- SUBMIT PRODUCT DATA, WARRANTY, AND TEST REPORTS AS INDICATED ON THE DRAWINGS.
- 1.03 QUALITY ASSURANCE
- COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS FROM ACCEPTABLE MANUFACTURERS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
  - CONFORM TO CONDITIONS OF APPROVAL ISSUED BY REGULATORY AGENCIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, LOCAL PLANNING BOARD, CONSERVATION COMMISSION, BOARD OF SELECTMEN, BOARD OF HEALTH, PUBLIC WORKS / HIGHWAY DEPARTMENT, STATE ENVIRONMENTAL PROTECTION DEPARTMENT, AND U.S. GOVERNMENT, ENVIRONMENTAL PROTECTION AGENCY. WHERE CONDITIONS OF REGULATORY APPROVAL DIFFER FROM REQUIREMENTS CONTAINED HEREIN OR ON THE DRAWINGS, COMPLY WITH THE MORE STRINGENT REQUIREMENT.

**PART 2 - PRODUCTS**

- 2.01 MATERIALS
- HAY BALES: DRY GRASS OR STRAW, MACHINE BOUND WITH JUTE OR WIRE, APPROXIMATE SIZE EACH BALE 42" x 16" x 16".
  - SILT FENCE: NON-WOVEN, UV-RESISTANT, POLYPROPYLENE FABRIC, FLOW RATED AT 10 GPM/SF MINIMUM, GRAB TENSILE RATED AT 124 POUNDS MINIMUM, WITH INTEGRAL STAKE LOOPS, AND HARDWOOD STAKES. USE NO. 2130 BY AMOCO FABRICS & FIBERS, OR APPROVED EQUAL.
  - MULCH: ORGANICS INCLUDING HAY, PROCESSED PINE / HEMLOCK TWIGS AND NEEDLES.
  - SEED MIXES: PERENNIAL RYEGRASS, KENTUCKY BLUEGRASS, AND / OR FINE FESCUE, DISEASE RESISTANT. NON-MAINTAINED AREA OPTION - ANNUAL RYEGRASS COMBINED WITH MEDIUM RED CLOVER.
  - EXCELSIOR BLANKET: CURLED WOOD FIBER ON PHOTODEGRADABLE EXTRUDED PLASTIC MATRIX, 80% OF FIBERS 6-INCHES LONG OR LONGER, WEIGHT 0.975 POUNDS / SF; CONTAINING NO CHEMICAL ADDITIVES. USE CURLEX I BLANKET BY AMERICAN EXCELSIOR COMPANY, OR APPROVED EQUAL.
  - ROCK RIPRAP: SOUND, ANGULAR, 6-INCH MINUS PROCESSED ROCK, BLAST ROCK, OR TAILINGS.
  - CRUSHED STONE: SOUND, ANGULAR, 2-INCH MINUS PROCESSED CRUSHED STONE

**PART 3 - EXECUTION**

- 3.01 THROUGHOUT CONSTRUCTION
- DEVELOP WORK SEQUENCE SO AS TO LIMIT DRAINAGE AREA THAT IS TRIBUTARY TO DISTURBED AREAS. DEVELOP, EMPLOY, AND MAINTAIN CONTROL MEASURES SUCH AS DIVERSION CHANNELS AND BERMS, STRATEGICALLY LOCATED STOCKPILES, AND SEDIMENT BASINS TO SUBDIVIDE DRAINAGE AREAS INTO SMALL, MANAGEABLE SUBAREAS, THEREBY MINIMIZING RUNOFF AND THE POTENTIAL FOR EROSION.
  - MAINTAIN BARRIER AT LIMIT OF WORK AND PROTECT EXISTING VEGETATION / FACILITIES OUTSIDE OF LIMIT OF WORK.
  - MAINTAIN SPARE MATERIAL STOCKPILES FOR IMMEDIATE EMPLOYMENT / REPAIR / EXPANSION OF CONTROL MEASURES. AT A MINIMUM, SUCH MATERIALS SHALL INCLUDE HAY BALES, SILT FENCE AND STAKES, AND CRUSHED STONE.
  - INSPECT AND MAINTAIN EFFECTIVENESS OF CONTROL MEASURES BY REPAIRING AS NECESSARY TO ENSURE INTENDED FUNCTION; BY SUPPLEMENTING AS NECESSARY FOR ADEQUATE EXTENT; BY REMOVING TRAPPED PRODUCTS OF EROSION AS NECESSARY TO MAINTAIN EFFECTIVE TRAP VOLUME.
  - LIMIT EXTENT OF WORK AREA SO THAT ALL DISTURBED AREAS CAN BE STABILIZED WITH CONTROL MEASURES WITHIN A 24-HOUR PERIOD.
  - INSTALL CONTROL MEASURES AS SOON AS PRACTICABLE AFTER EACH MANAGEABLE PORTION OF EARTHWORK IS COMPLETE. EMPLOY TEMPORARY MEASURES AS NECESSARY TO STABILIZE DISTURBED AREAS, EVEN WHERE SUBSEQUENT CONSTRUCTION OPERATIONS MAY REQUIRE RE-DISTURBANCE.
  - WHEN INTENSE RAINFALL IS EXPECTED, CONSIDER, DEVELOP, AND EMPLOY REINFORCING CONTROL MEASURES PRIOR TO THE RAINFALL EVENT TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A. IF NECESSARY, EMPLOY TEMPORARY CONTROL MEASURES ON MATERIAL STOCKPILES TO COUNTERACT POTENTIAL SEDIMENT TRANSPORT DURING INTENSE RAINFALL.
  - WHEN VEHICLE REFUELING IS REQUIRED ON SITE, CONDUCT REFUELING OPERATIONS OUTSIDE OF ENVIRONMENTALLY SENSITIVE AREAS.
  - PROPERLY DISPOSE OF DEBRIS, SOLID WASTE, TRASH, AND CONSTRUCTION WASTE / BYPRODUCTS OFF SITE.
  - SWEEP ON-SITE PAVED AREAS AND OFF-SITE STREETS AS NECESSARY TO PREVENT SILT AND DEBRIS ORIGINATING ON SITE FROM ENTERING CLOSED DRAINAGE SYSTEMS AND / OR ENVIRONMENTALLY SENSITIVE AREAS.

**3.02 SITE PREPARATION AND ACCESS**

- WALK SITE AND IDENTIFY LOCATIONS OF LIMIT OF WORK AND ENVIRONMENTALLY SENSITIVE AREAS. ESTABLISH CONSTRUCTION STAGING AREA, LOCATED BEYOND ENVIRONMENTALLY SENSITIVE AREAS.
- INSTALL CONTROL MEASURES AS SHOWN ON THE DRAWINGS, INCLUDING THOSE DEFINING THE LIMIT OF WORK.
- LIMIT VEHICULAR TRAFFIC TO AND FROM SITE TO MINIMIZE TRANSPORT OF SEDIMENT.

**3.03 CLEARING, GRUBBING, AND STRIPPING**

- SCHEDULE GRUBBING AND STRIPPING TO OCCUR IMMEDIATELY PRIOR TO EARTH DISTURBANCE, DEPENDING ON SITE AREA, CONSIDER MULTIPLE GRUBBING PHASES, SEQUENCED TO TAKE ADVANTAGE OF THE EROSION PREVENTION POTENTIAL OF EXISTING VEGETATIVE COVER.
- MINIMIZE THE AREA OF EXISTING VEGETATION REMOVED WHEREVER POSSIBLE.
- LOCATE AND SIZE STOCKPILES TO MINIMIZE EROSION POTENTIAL, TAKING ADVANTAGE OF TERRAIN SLOPE AND ASPECT, WHERE APPROPRIATE.
- PROTECT VEGETATION, INCLUDING ROOT SYSTEMS, BEYOND LIMIT OF CLEARING.
- PROCESS TIMBER, STUMPS, SLASH, AND BRUSH SO AS TO PROTECT ENVIRONMENTALLY SENSITIVE AREAS AND INSTALLED CONTROL MEASURES. PROPERLY DISPOSE OF EXCESS OFF SITE. BURIAL OF STUMPS ON SITE IS PROHIBITED.

**3.04 EXCAVATION FOR BUILDING FOUNDATIONS AND UTILITIES**

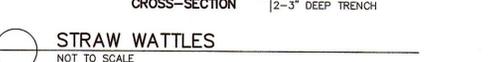
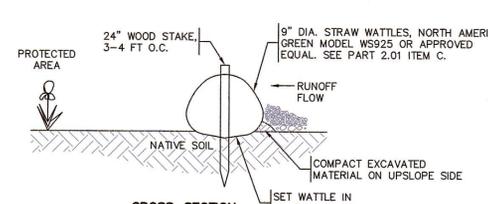
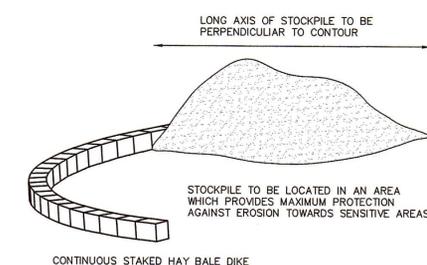
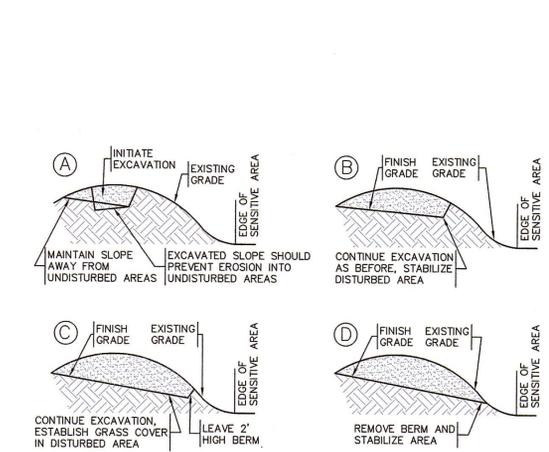
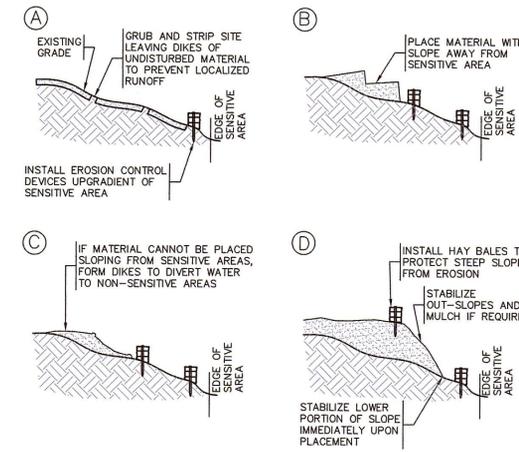
- SCHEDULE AND INSTALL CONTROL MEASURES ADEQUATE TO HANDLE DISCHARGES AND TRAP SEDIMENT FROM FOOTING SUMP AND WELL POINT PUMPS PRIOR TO EXCAVATION.
- ARMOR SUMP PUMP DISCHARGE LOCATIONS TO PREVENT EROSION AT POINT OF DISCHARGE AND AREAS DOWNSTREAM.
- IF FOUNDATION EXCAVATIONS GRADE TO DAYLIGHT ON THE LOW SIDE, DEVELOP AND INSTALL CONTROL MEASURES TO HANDLE SURFACE AND GROUNDWATER FLOW FROM EXCAVATION LOW POINT.
- STACKPILE EXCAVATED MATERIALS TO BAFFLE OVERLAND RUNOFF, AVOIDING THE CREATION OF LENGTHY PATHS OF CONCENTRATED RUNOFF.
- BACKFILL UTILITY TRENCHES AS SOON AS PRACTICABLE TO PREVENT FLOODING, SLOUGHING, POTENTIAL OVERFLOW, AND REPETITIVE EARTH DISTURBANCE.

**3.05 SITE GRADING**

- WHERE APPLICABLE, FOLLOW EXCAVATION AND FILL PRACTICES SHOWN ON DRAWINGS TO LOCALIZE AND MINIMIZE EROSION.
- MONITOR SEDIMENT VOLUME IN TEMPORARY SEDIMENT BASINS AND AT DIVERSION BERMS AND CHECK DAMS, IN ALL AREAS EXCEPT THOSE THAT DO NOT PRESENT POTENTIAL PROBLEMS WITH REGARD TO FUTURE SOIL STABILITY, DRAINAGE, OR BEARING CAPACITY. REMOVE AND PROPERLY DISPOSE OF TRAPPED SEDIMENT BEFORE BRINGING SITE TO FINAL SUBGRADE.

**3.06 STORMWATER MANAGEMENT SYSTEM**

- THE STORMWATER MANAGEMENT SYSTEM INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, ALL PERMANENT DETENTION / RETENTION BASINS, DISCHARGE STRUCTURES / WEIRS, CULVERTS, OPEN CHANNELS, CURBS, GUTTERS, PAVED SWALES, CATCH BASINS, DRAIN MANHOLES, DRAINAGE PIPES, ROOF DRAIN MANIFOLDS, WATER QUALITY SWALES, SEPARATORS, AND SIMILAR STORMWATER RUNOFF CONVEYANCE, TREATMENT, AND STORAGE FACILITIES.
  - INSTALL STORMWATER MANAGEMENT SYSTEM COMPONENTS STARTING AT THE DOWNSTREAM END AND PROCEED UPSTREAM, WHERE POSSIBLE, COMPLETE INSTALLATION OF PERMANENT DETENTION / RETENTION BASINS PRIOR TO BEGINNING WORK ON UPSTREAM SYSTEM COMPONENTS.
  - INSTALL CONTROL MEASURES AT FINISHED UPSTREAM AND DOWNSTREAM PIPE ENDS AS SOON AS POSSIBLE AFTER COMPLETION OF PIPE RUN. SUCH MEASURES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, RIPRAP, CHECK DAMS, HAY BALE / SILT FENCE BARRIERS, AND VELOCITY DISSIPATORS.
  - AT THE END OF EACH DAY OR WHEN RAINFALL IS EXPECTED, PLUG UPSTREAM END OF PIPES / DAM OPEN CHANNELS OR OTHERWISE REDIRECT POTENTIAL RUNOFF AND PREVENT FLOW FROM ENTERING PARTIALLY COMPLETED SYSTEM / SYSTEM COMPONENTS.
  - WHERE PORTIONS OF A NEW SYSTEM ARE TO BE ACTIVATED PRIOR TO COMPLETION OF THE ENTIRE SYSTEM, EMPLOY CONTROL MEASURES TO PREVENT SILT AND DEBRIS FROM ENTERING THE SYSTEM. EMPLOY SILT SACKS OR FABRIC ON CATCH BASIN INLETS, AND PIPE AND CULVERT OPENINGS. EMPLOY CHECK DAMS AND TEMPORARY SEDIMENT BASINS UPSTREAM OF AND ALONG OPEN CHANNELS, SWALES, AND DITCHES TO TRAP SEDIMENT UPGRADIENT OF ENVIRONMENTALLY SENSITIVE AREAS.
  - REMOVE TRAPPED SEDIMENT AND DEBRIS FROM ALL SYSTEM COMPONENTS AFTER COMPLETION OF INSTALLATION, AND AGAIN AFTER THE ENTIRE SITE IS PERMANENTLY STABILIZED BY ESTABLISHED VEGETATION, FINISH LANDSCAPE MATERIALS, PAVED SURFACES, AND/OR ROOF AREA. REMOVE TRAPPED SEDIMENT AND DEBRIS FROM DETENTION / RETENTION BASIN BOTTOMS SO THAT FINISH BOTTOM MATERIALS / INFILTRATION FUNCTION CONFORM TO DESIGN.
- 3.07 LANDSCAPING
- COMPLETE LANDSCAPING AS SOON AS POSSIBLE AFTER COMPLETION OF FINAL SUBGRADE.
  - IMMEDIATELY AFTER PLACEMENT OF TOPSOIL, STABILIZE WITH CONTROL MEASURES INCLUDING, BUT NOT NECESSARILY LIMITED TO, SEED MIX, MULCH, AND / OR BLANKET.



**DRAWING ISSUED FOR:**

- CONCEPT  CONSTRUCTION  
 PERMIT  CONSTRUCTION RECORD



THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION

**GPR** Engineering Solutions for Land & Structures

**GOLDSMITH, PREST & RINGWALL, INC.**  
39 MAIN STREET, SUITE 301, AYER, MA 01432  
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING  
VOICE: 978.772.1580 FAX: 978.772.1591  
www.gpr-inc.com

**NOTICE OF INTENT**

**EROSION AND SEDIMENT CONTROL, NOTES AND DETAILS**

116-120 CONCORD ROAD  
ACTON, MA

OWNER:  
MORRISON FARM COMMITTEE  
472 MAIN STREET  
ACTON, MA 01720