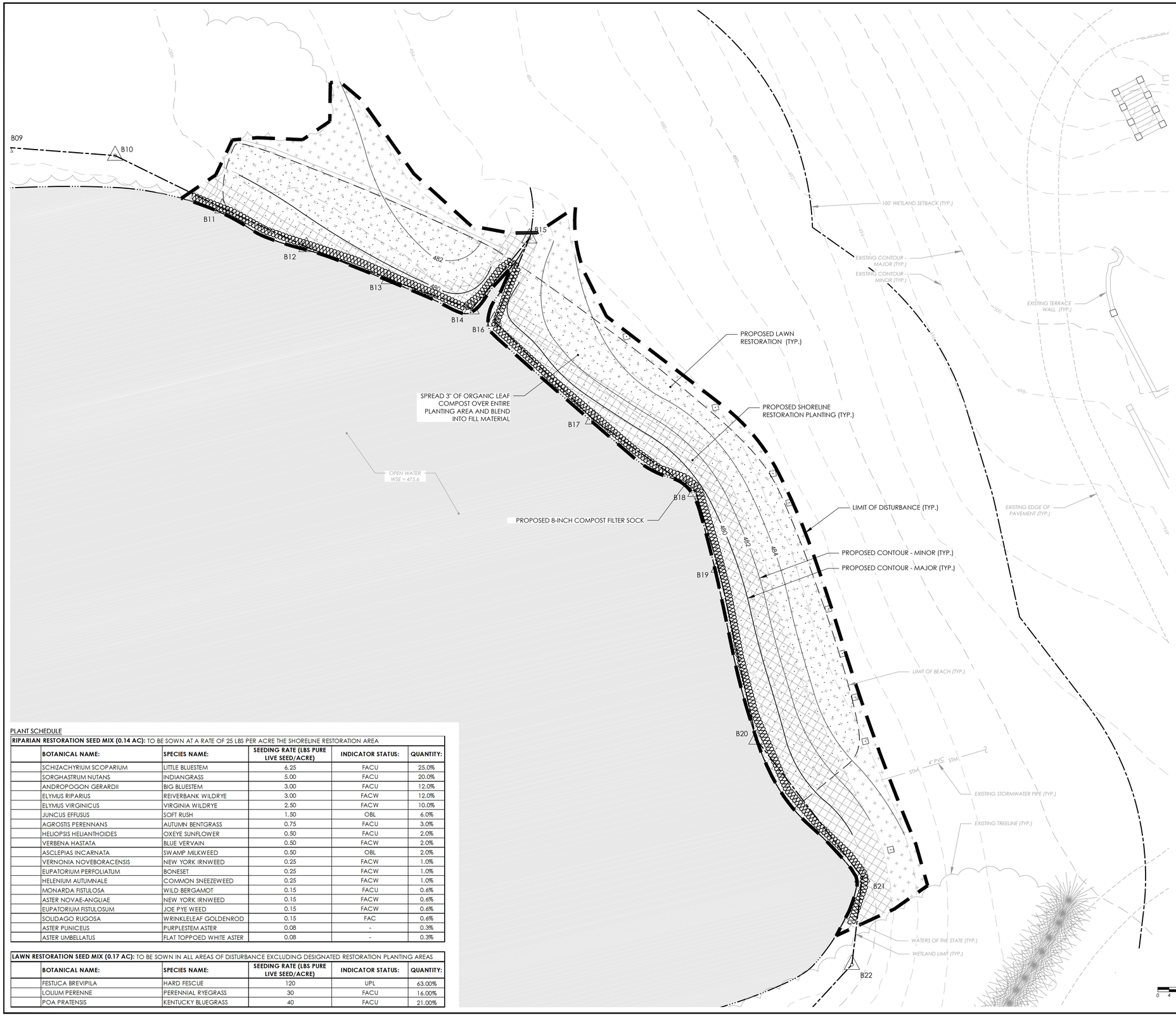


LEGEND

- LIMIT OF DISTURBANCE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONTOUR - MAJOR
- EXISTING CONTOUR - MINOR
- PROPOSED CONTOUR - MAJOR
- PROPOSED CONTOUR - MINOR
- PROPOSED COMPOST FILTER SOCK
- WETLAND LIMIT (B17)
- POND LIMIT
- 100-FT. WETLAND BUFFER
- STM — EXISTING STORM SEWER LINE
- EXISTING TREELINE
- BEACH INSTALLATION LIMIT
- SHORELINE RESTORATION AREA
- LAWN RESTORATION
- EXISTING TREE

NOTE:
FILL MATERIAL USED TO RECREATE THE SHORELINE SHALL MATCH NATIVE MATERIAL REMOVED DURING INITIAL BEACH CONSTRUCTION. 3" OF LEAF COMPOST SHALL THEN BE APPLIED OVER ENTIRE PLANTING AREA AND BLENDED INTO THE FILL MATERIAL

PLANT SCHEDULE

RIPARIAN RESTORATION SEED MIX (0.14 AC): TO BE SOWN AT A RATE OF 25 LBS PER ACRE THE SHORELINE RESTORATION AREA

	BOTANICAL NAME:	SPECIES NAME:	SEEDING RATE (LBS PURE LIVE SEED/ACRE)	INDICATOR STATUS:	QUANTITY:
	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	6.25	FACU	25.0%
	SORGHASTRUM NUTANS	INDIANGRASS	5.00	FACU	20.0%
	ANDROPOGON GERARDII	BIG BLUESTEM	3.00	FACU	12.0%
	ELYMUS RIPARIUS	REIVERBANK WILDRYE	3.00	FACW	12.0%
	ELYMUS VIRGINICUS	VIRGINIA WILDRYE	2.50	FACW	10.0%
	JUNCUS EFFUSUS	SOFT RUSH	1.50	OBL	6.0%
	AGROSTIS PERENNANS	AUTUMN BENTGRASS	0.75	FACU	3.0%
	HELIOPSIS HELIANTHOIDES	OXEYE SUNFLOWER	0.50	FACU	2.0%
	VERBENA HASTATA	BLUE VERVAIN	0.50	FACW	2.0%
	ASCLEPIAS INCARNATA	SWAMP MILKWEED	0.50	OBL	2.0%
	VERNONIA NOVEBORACENSIS	NEW YORK IRNWEED	0.25	FACW	1.0%
	EUPATORIUM PERFOLIATUM	BONESET	0.25	FACW	1.0%
	HELENIUM AUTUMNALE	COMMON SNEEZEWEED	0.25	FACW	1.0%
	MONARDA FISTULOSA	WILD BERGAMOT	0.15	FACU	0.6%
	ASTER NOVAE-ANGLIAE	NEW YORK IRNWEED	0.15	FACW	0.6%
	EUPATORIUM FISTULOSUM	JOE PYE WEED	0.15	FACW	0.6%
	SOLIDAGO RUGOSA	WRINKLELEAF GOLDENROD	0.15	FAC	0.6%
	ASTER PUNICEUS	PURPLESTEM ASTER	0.08	-	0.3%
	ASTER UMBELLATUS	FLAT TOPPOED WHITE ASTER	0.08	-	0.3%

LAWN RESTORATION SEED MIX (0.17 AC): TO BE SOWN IN ALL AREAS OF DISTURBANCE EXCLUDING DESIGNATED RESTORATION PLANTING AREAS

	BOTANICAL NAME:	SPECIES NAME:	SEEDING RATE (LBS PURE LIVE SEED/ACRE)	INDICATOR STATUS:	QUANTITY:
	FESTUCA BREVIPILA	HARD FESCUE	120	UPL	63.00%
	LOLIUM PERENNE	PERENNIAL RYEGRASS	30	FACU	16.00%
	POA PRATENSIS	KENTUCKY BLUEGRASS	40	FACU	21.00%

GRAPHIC SCALE
0 4 8 12 16 32 48 64 FEET
SCALE: 1" = 16'

CALL BEFORE YOU DIG!
NEW YORK LAW REQUIRES
2 FULL WORKING DAYS NOTICE
PRIOR TO CONSTRUCTION - STOP CALL
CALL BEFORE YOU DIG, INC.
REFERENCE NEW YORK STATE LAW
INDUSTRIAL CODE 53
1-800-962-7962

PROJECT NOTES

1. TAX MAP IDENTIFICATION NUMBER: SECTION 90.06 BLOCK 1 LOT 13.1 TOTAL AREA OF SUBJECT PARCEL: 17.903± ACRES.
2. BOUNDARY AND PLANIMETRIC INFORMATION BASED UPON FIELD SURVEY AS PERFORMED BY ENGINEERING & SURVEYING PROPERTIES, PC.
3. THE TOPOGRAPHY SHOWN HEREON WAS COMPILED BY ENGINEERING & SURVEYING PROPERTIES PC, FROM USGS 1M HYDRO-FLATTENED DIGITAL ELEVATION MODELS (DEMS) AS DERIVED FROM 2012 SOURCE LIDAR. THE DEMS WERE PROVIDED BY NYS.GIS.GOV AND CORRESPOND TO ACTUAL SURVEY OBSERVATIONS TAKEN IN THE FIELD. CONTOURS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988.
4. OWNER/APPLICANT: ROSE LODGE, LLC
5. 83 SOMERSTOWN ROAD
6. OSSINING, NY 10562
7. THE WETLANDS WERE DELINEATED BY PETER TORGERSEN ON NOVEMBER 2, 2021 AND GPS LOCATED BY ENGINEERING & SURVEYING PROPERTIES, PC ON NOVEMBER 12, 2021.

DATE	DESCRIPTION

REVISIONS

STATE OF NEW YORK CERTIFICATE OF REGISTRATION NO.: 0007304

STATE OF NEW YORK
GEOFFREY MARK GOLL
087516
LICENSED PROFESSIONAL ENGINEER

7/5/2022
DATE

PRINCETON HYDRO
SCIENCE ENGINEERING DESIGN
35 CLARK STREET, SUITE 200
TRENTON, NEW JERSEY 08611
PHONE: 908.237.5660
PRINCETONHYDRO.COM

PROJECT NAME/LOCATION:

REGULATORY COMPLIANCE
AND DESIGN
83 SOMERSTOWN ROAD
OSSINING, WESTCHESTER COUNTY, NY

DRAWING NAME:

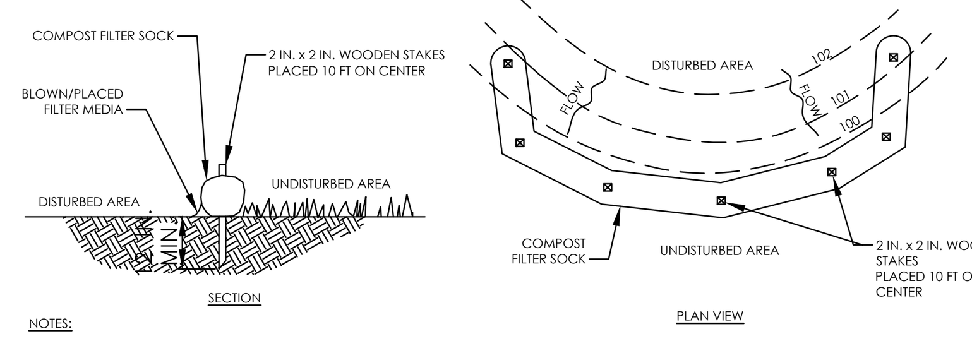
MITIGATION PLAN

DATE:	7/1/2022
PROJECT NO.:	2080.001
SCALE:	AS SHOWN
DRAWN BY:	CAS
CHECKED BY:	DS, GG

SHEET NO.

1 OF 2

	STEP	CONSTRUCTION SEQUENCE, SEDIMENT MANAGEMENT AND WATER HANDLING PLAN	DURATION WORK DAYS:
MOBILIZATION, EROSION & SEDIMENT CONTROL	1	INSTALL ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES TO THE EXTENT PRACTICABLE. STAGE EQUIPMENT AND MATERIALS IN DESIGNATED AREAS. TEMPORARY CONSTRUCTION ACCESS WAY DOWN SLOPE TO BE STABILIZED WITH WOOD CHIPS OR SIMILAR MEANS AND IN-STREAM ACCESS WAY TO TRAVERSE EXISTING STABLE COBBLE/BOULDER SUBSTRATE. CLEAR ALL CONSTRUCTION ACCESS PATHS ONLY AS NECESSARY FOR EQUIPMENT. AVOID UNNECESSARY DISTURBANCE TO MATURE TREES. CONTRACTOR SHALL MONITOR WEATHER FORECASTS. PRIOR TO ANY EVENT THAT MAY CAUSE EROSION OR SEDIMENTATION OR FLOODING, THE CONTRACTOR SHALL FURTHER STABILIZE THE SITE AS NEEDED AND MOVE EQUIPMENT AND MATERIALS TO UPLAND AREAS.	1
REGRADING	2	REGRADE THE SITE IN THE FOOTPRINT OF THE DISTURBANCE TO RECREATE THE PRE-EXISTING GRADES AS SPECIFIED.	2
RESTORE SITE	3	SEED AND STABILIZE AS NECESSARY TO RETURN ALL DISTURBED AREAS TO ORIGINAL PRECONSTRUCTION CONDITIONS.	1
DEMOBILIZATION	4	CONDUCT FINAL WALK THROUGH WITH ENGINEER OF RECORD AND CLIENT. COMPLETE ALL ITEMS ON FINAL WALK THROUGH CHECKLIST. ONCE SITE HAS BEEN STABILIZED, REMOVE TEMPORARY EROSION & SEDIMENTATION CONTROLS. DEMOBILIZE EQUIPMENT.	1
		TOTAL ESTIIMATED WORK DAYS:	5
NOTE: DURATION OF CONSTRUCTION MAY BE PROLONGED DUE TO WET WEATHER AND HIGH FLOW EVENTS			



NOTES:

1. COMPOST FILTER SOCKS WILL BE PLACED ON THE CONTOUR WITH BOTH TERMINAL ENDS OF THE SOCK EXTENDED 8 FEET UPSLOPE AT A 45 DEGREE ANGLE TO PREVENT BYPASS FLOW.
2. DIAMETERS DESIGNED FOR USE SHALL BE 12" – 32" EXCEPT THAT 8" DIAMETER SOCKS MAY BE USED FOR RESIDENTIAL LOTS TO CONTROL AREAS LESS THAN 0.25 ACRES.
3. THE FLAT DIMENSION OF THE SOCK SHALL BE AT LEAST 1.5 TIMES THE NOMINAL DIAMETER.
4. THE MAXIMUM SLOPE LENGTH (IN FEET) ABOVE A COMPOST FILTER SOCK SHALL NOT EXCEED THE FOLLOWING LIMITS:

DIAMETER (IN)	SLOPE %						
	2	5	10	20	25	33	50
8	225*	200	100	50	20	-	-
12	250	225	125	65	50	40	25
18	275	250	150	70	55	45	30
24	350	275	200	130	100	60	35
32	450	325	275	150	120	75	50
*LENGTH IN FEET							

5. THE COMPOST INFILL SHALL BE WELL DECOMPOSED (MATURED AT LEAST 3 MONTHS), WEED-FREE, ORGANIC MATTER. IT SHALL BE AEROBICALLY COMPOSTED, POSSESS NO OBJECTIONABLE ODORS, AND CONTAIN LESS THAN 1%, BY DRY WEIGHT, OF MANMADE FOREIGN MATTER. THE PHYSICAL PARAMETERS OF THE COMPOST SHALL MEET THE STANDARDS LISTED IN TABLE 5.2 - COMPOST STANDARDS TABLE. NOTE: ALL BIOSOLIDS COMPOST PRODUCED IN NEW YORK STATE (OR APPROVED FOR IMPORTATION) MUST MEET NYS DEC'S 6 NYCRR PART 360 (SOLID WASTE MANAGEMENT FACILITIES) REQUIREMENTS. THE PART 360 REQUIREMENTS ARE EQUAL TO OR MORE STRINGENT THAN 40 CFR PART 503 WHICH ENSURE SAFE STANDARDS FOR PATHOGEN REDUCTION AND HEAVY METALS CONTENT. WHEN USING COMPOST FILTER SOCKS ADJACENT TO SURFACE WATER, THE COMPOST SHOULD HAVE A LOW NUTRIENT VALUE.
6. THE COMPOST FILTER SOCK FABRIC MATERIAL SHALL MEET STANDARDS OF TABLE 5.1.
7. COMPOST FILTER SOCKS SHALL BE ANCHORED IN EARTH WITH 2"X 2" WOODEN STAKES DRIVEN 12" INTO THE SOIL ON 10 FOOT CENTERS ON THE CENTERLINE OF THE SOCK. ON UNEVEN TERRAIN, EFFECTIVE GROUND CONTACT CAN BE ENHANCED BY THE PLACEMENT OF A FILLET OF FILTER MEDIA ON THE DISTURBED AREA SIDE OF THE COMPOST SOCK.
8. ALL SPECIFIC CONSTRUCTION DETAILS AND MATERIAL SPECIFICATIONS SHALL APPEAR ON THE EROSION AND SEDIMENT CONTROL CONSTRUCTIONS DRAWINGS WHEN COMPOST FILTER SOCKS ARE INCLUDED IN THE PLAN.
9. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
10. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED OF IN ACCORDANCE WITH THE PLAN.
11. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED IN THE MANNER REQUIRED BY THE MANUFACTURER OR REPLACED WITHIN 24 HOURS OF INSPECTION NOTIFICATION.
12. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE FILTER SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
13. UPON STABILIZATION OF THE AREA CONTRIBUTORY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED IN ACCORDANCE WITH THE STABILIZATION PLAN. FOR REMOVAL THE MESH CAN BE CUT AND THE COMPOST SPREAD AS AN ADDITIONAL MULCH TO ACT AS A SOIL SUPPLEMENT.

TABLE 5.1: COMPOST FILTER SOCK MINIMUM SPECIFICATIONS TABLE

	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLINE (MFPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTODEGRADABLE	PHOTODEGRADABLE	BIODEGRADABLE	PHOTODEGRADABLE	PHOTODEGRADABLE
SOCK DIAMETERS (IN)	12, 18	12, 18, 24, 32	12, 18, 24, 32	12, 18, 24, 32	12, 18, 24, 32
MESH OPENING (IN)	3/8	3/8	3/8	3/8	1/8
TENSILE STRENGTH (PSI)		26	26	44	202
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR	23% AT 1000 HR		100% AT 1000 HR	100% AT 1000 HR
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS

TABLE 5.2: COMPOST STANDARDS TABLE

ORGANIC MATTER CONTENT	25%-100% (DRY WEIGHT)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	6.0-8.0
MOISTURE CONTENT	30%-60%
PARTICLE SIZE	100% PASSING A 1" SCREEN AND 10-50% PASSING A 3/8" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 DS/M (MMHOS/CM) MAXIMUM

1 COMPOST FILTER SOCK DETAIL
NOT TO SCALE

NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL

STANDARDS AND SPECIFICATIONS FOR PROTECTING VEGETATION DURING CONSTRUCTION

1. DEFINITION & SCOPE
   1.1. THE PROTECTION OF TREES, SHRUBS, GROUND COVER AND OTHER VEGETATION FROM DAMAGE BY CONSTRUCTION EQUIPMENT. IN ORDER TO PRESERVE EXISTING VEGETATION DETERMINED TO BE IMPORTANT FOR SOIL EROSION CONTROL, WATER QUALITY PROTECTION, SHADE, SCREENING, BUFFERS, WILDLIFE HABITAT, WETLAND PROTECTION, AND OTHER VALUES.

2. CONDITIONS WHERE PRACTICES APPLIES
   2.1. ON PLANNED CONSTRUCTION SITES WHERE VALUED VEGETATION EXISTS AND NEEDS TO BE PRESERVED.

3. DESIGN CRITERIA
   3.1. PLANNING CONSIDERATIONS
   3.1.1. INVENTORY:
   3.1.1.1. PROPERTY BOUNDARIES, TOPOGRAPHY, VEGETATION AND SOILS INFORMATION SHOULD BE GATHERED. IDENTIFY POTENTIALLY HIGH EROSION AREAS, AREAS WITH TREE WINDTHROW POTENTIAL, ETC. A VEGETATIVE COVER TYPE MAP SHOULD BE MADE ON A COPY OF A TOPOGRAPHIC MAP WHICH SHOWS OTHER NATURAL AND MANMADE FEATURES. VEGETATION THAT IS DESIRABLE TO PRESERVE BECAUSE OF ITS VALUE FOR SCREENING, SHADE, CRITICAL EROSION CONTROL, ENDANGERED SPECIES, AESTHETICS, ETC., SHOULD BE IDENTIFIED AND MARKED ON THE MAP.
   3.1.1.2. BASED UPON THIS DATA, GENERAL STATEMENTS SHOULD BE PREPARED ABOUT THE PRESENT CONDITION, POTENTIAL PROBLEM AREAS, AND UNIQUE FEATURES OF THE PROPERTY.
   3.1.2. PLANNING:
   3.1.2.1. AFTER ENGINEERING PLANS (PLOT MAPS) ARE PREPARED, ANOTHER FIELD REVIEW SHOULD TAKE PLACE AND RECOMMENDATIONS MADE FOR THE VEGETATION TO BE MINOR ADJUSTMENTS IN LOCATION OF ROADS, DWELLINGS, AND UTILITIES MAY BE NEEDED. CONSTRUCTION ON STEEP SLOPES, ERODIBLE SOILS, WETLANDS, AND STREAMS SHOULD BE AVOIDED. CLEARING LIMITS SHOULD BE DELINEATED (SEE STANDARDS AND SPECIFICATIONS FOR LAND GRADING).
   3.1.2.2. AREAS TO BE SEEDED AND PLANTED SHOULD BE IDENTIFIED. REMAINING VEGETATION SHOULD BLEND WITH THEIR SURROUNDINGS AND/OR PROVIDE SPECIAL FUNCTION SUCH AS A FILTER STRIP, BUFFER ZONE, OR SCREEN. TREES AND SHRUBS OF SPECIAL SEASONAL INTEREST, SUCH AS FLOWERING DOGWOOD, RED MAPLE, STRIPED MAPLE, SERVICEBERRY, OR SHADBUSH, AND VALUABLE POTENTIAL SHADE TREES SHOULD BE IDENTIFIED AND MARKED FOR SPECIAL PROTECTIVE TREATMENT AS APPROPRIATE.
   3.1.2.3. TREES TO BE CUT SHOULD BE MARKED ON THE PLANS. IF TIMBER CAN BE REMOVED FOR SALABLE PRODUCTS, A FORESTER SHOULD BE CONSULTED FOR MARKETING ADVICE.
   3.1.2.4. TREES THAT MAY BECOME A HAZARD TO PEOPLE, PERSONAL PROPERTY, OR UTILITIES SHOULD BE REMOVED. THESE INCLUDE TREES THAT ARE WEAK-WOODED, DISEASE-PRONE, SUBJECT TO WINDTHROW, OR THOSE THAT HAVE SEVERELY DAMAGED ROOT SYSTEMS. THE VIGOR OF REMAINING TREES MAY BE IMPROVED BY A SELECTIVE THINNING. A FORESTER SHOULD BE CONSULTED FOR IMPLEMENTING THIS PRACTICE.

4. MEASURES TO PROTECT VEGETATION
   4.1. LIMIT SOIL PLACEMENT OVER EXISTING TREE AND SHRUB ROOTS TO A MAXIMUM OF 3 INCHES. SOILS WITH LOAMY TEXTURE AND GOOD STRUCTURE SHOULD BE USED.
   4.2. USE RETAINING WALLS AND TERRACES TO PROTECT ROOTS OF TREES AND SHRUBS WHEN GRADES ARE LOWERED. LOWERED GRADES SHOULD START NO CLOSER THAN THE DRIPLINE OF THE FOR NARROW-CANOPIED TREES AND SHRUBS, THE STEM DIAMETER IN INCHES IS CONVERTED TO FEET AND DOUBLED, SUCH THAT A 10 INCH TREE SHOULD BE PROTECTED TO 20 FEET.
   4.3. TRENCHING ACROSS TREE ROOT SYSTEMS SHOULD BE THE SAME MINIMUM DISTANCE FROM THE TRUNK, AS IN 4.2. TUNNELS UNDER ROOT SYSTEMS FOR UNDERGROUND UTILITIES SHOULD START 18 INCHES OR DEEPER BELOW THE NORMAL GROUND SURFACE. TREE RO OTS WHICH MUST BE SEVERED SHOULD BE CUT CLEAN. BACKFILL MATERIAL THAT WILL BE IN CONTACT WITH THE ROOTS SHOULD BE TOPSOIL OR A PREPARED PLANTING SOIL MIXTURE.
   4.4. CONSTRUCT STURDY FENCES, OR BARRIERS, OF WOOD, STEEL, OR OTHER PROTECTIVE MATERIAL AROUND VALUABLE VEGETATION FOR PROTECTION FROM CONSTRUCTION EQUIPMENT. PLACE BARRIERS FAR ENOUGH AWAY FROM TREES, BUT NOT LESS THAN THE SPECIFICATIONS IN 4.2, SO THAT TALL EQUIPMENT SUCH AS BACKHOES AND DUMP TRUCKS DO NOT CONTACT TREE BRANCHES.
   4.5. CONSTRUCTION LIMITS SHOULD BE IDENTIFIED AND CLEARLY MARKED TO EXCLUDE EQUIPMENT.
   4.6. AVOID SPILLS OF OIL/GAS AND OTHER CONTAMINANTS.
   4.7. OBSTRUCTIVE AND BROKEN BRANCHES SHOULD BE PRUNED PROPERLY. THE BRANCH COLLAR ON ALL BRANCHES WHETHER LIVING OR DEAD SHOULD NOT BE DAMAGED. THE 3 OR 4 CUT METHOD SHOULD BE USED ON ALL BRANCHES LARGER THAN TWO INCHES AT THE CUT. FIRST CUT ABOUT ONE-THIRD THE WAY THROUGH THE UNDERSIDE OF THE LIMB (ABOUT 6-12 INCHES FROM THE TREE TRUNK). THEN (APPROXIMATELY AN INCH FURTHER OUT) MAKE A SECOND CUT THROUGH THE LIMB FROM THE UPPER SIDE. WHEN THE BRANCH IS REMOVED, THERE IS NO SPLINTERING OF THE MAIN TREE TRUNK. REMOVE THE IF THE BRANCH IS LARGER THAN 5-6 INCHES IN DIAMETER, USE THE FOUR CUT SYSTEM. CUTS 1 AND 2 REMAIN THE SAME AND CUT 3 SHOULD BE FROM THE UNDERSIDE OF THE LIMB, ON THE OUTSIDE OF THE BRANCH COLLAR. CUT 4 SHOULD BE FROM THE TOP AND IN ALIGNMENT WITH THE 3RD CUT. CUT 3 SHOULD BE 1/4 TO 1/3 THE WAY THROUGH THE LIMB. THIS WILL PREVENT THE BARK FROM PEELING DOWN THE TRUNK. DO NOT PAINT THE CUT SURFACE.
   4.8. PENALTIES FOR DAMAGE TO VALUABLE TREES, SHRUBS, AND HERBACEOUS PLANTS SHOULD BE CLEARLY SPELLED OUT IN THE CONTRACT.

5. PROTECTING TREES IN HEAVY USE AREAS
   5.1. THE COMPACTION OF SOIL OVER THE ROOTS OF TREES AND SHRUBS BY THE TRAMPLING OF RECREATIONISTS, VEHICULAR TRAFFIC, ETC., REDUCES OXYGEN, WATER, AN D NUTRIENT UPTAKE BY FEEDER ROOTS. THIS WEAKENS AND MAY EVENTUALLY KILL THE PLANTS. TABLE 2.6 RATES THE "SUSCEPTIBILITY OF TREE SPECIES TO COMPACTION." WHERE HEAVY COMPACTION IS ANTICIPATED, APPLY AND MAINTAIN A 3 TO 4 INCH LAYER OF UNDECAYED WOOD CHIPS OR 2 INCHES OF NO. 2 WASHED, CRUSHED GRAVEL. IN ADDITION, USE OF A WOODEN OR PLASTIC MAT MAY BE USED TO LESSEN COMPACTION, IF APPLICABLE.

STANDARDS AND SPECIFICATIONS FOR SITE POLLUTION PREVENTION

1. DEFINITION & SCOPE
   1.1. A COLLECTION OF MANAGEMENT PRACTICES INTENDED TO CONTROL NON-SEDIMENT POLLUTANTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES TO PREVENT THE GENERATION OF POLLUTANTS DUE TO IMPROPER HANDLING, STORAGE, AND SPILLS AND PREVENT THE MOVEMENT OF TOXIC SUBSTANCES FROM THE SITE INTO SURFACE WATERS.

2. CONDITIONS WHERE PRACTICE APPLIES
   2.1. ON ALL CONSTRUCTION SITES WHERE THE EARTH DISTURBANCE EXCEEDS 5,000 SQUARE FEET, AND INVOLVES THE USE OF FERTILIZERS, PESTICIDES, PETROLEUM BASED CHEMICALS, FUELS AND LUBRICANTS, AS WELL AS SEALERS, PAINTS, CLEARED WOODY VEGETATION, GARBAGE, AND SANITARY WASTES.

3. DESIGN CRITERIA
   3.1. THE VARIETY OF POLLUTANTS ON A PARTICULAR SITE AND THE SEVERITY OF THEIR IMPACTS DEPEND ON FACTORS SUCH AS THE NATURE OF THE CONSTRUCTION ACTIVITY, THE PHYSICAL CHARACTERISTICS OF THE CONSTRUCTION SITE, AND THE PROXIMITY OF WATER BODIES AND CONVEYANCES TO THE POLLUTANT SOURCE.
   3.1.1. ALL STATE AND FEDERAL REGULATIONS SHALL BE FOLLOWED FOR THE STORAGE, HANDLING, APPLICATION, USAGE, AND DISPOSAL OF PESTICIDES, FERTILIZERS, AND PETROLEUM PRODUCTS.
   3.0.1. VEHICLE AND CONSTRUCTION EQUIPMENT STAGING AND MAINTENANCE AREAS WILL BE LOCATED AWAY FROM ALL DRAINAGE WAYS WITH THEIR PARKING AREAS GRADED SO THE RUNOFF FROM THESE AREAS IS COLLECTED, CONTAINED AND TREATED PRIOR TO DISCHARGE FROM THE SITE.
   3.0.2. PROVIDE SANITARY FACILITIES FOR ON-SITE PERSONNEL.
   3.0.3. STORE, COVER, AND ISOLATE CONSTRUCTION MATERIALS INCLUDING TOPSOIL, AND CHEMICALS, TO PREVENT RUNOFF OF POLLUTANTS AND CONTAMINATION OF GROUNDWATER AND SURFACE WATERS.
   3.0.4. DEVELOP AND IMPLEMENT A SPILL PREVENTION AND CONTROL PLAN. THE PLAN SHOULD INCLUDE NYSDEC'S SPILL REPORTING AND INITIAL NOTIFICATION REQUIREMENTS.
   3.0.5. PROVIDE ADEQUATE DISPOSAL FOR SOLID WASTE INCLUDING WOODY DEBRIS, STUMPS, AND OTHER CONSTRUCTION WASTE AND INCLUDE THESE METHODS AND DIRECTIONS IN THE CONSTRUCTION DETAILS ON THE SITE CONSTRUCTION DRAWINGS. FILL, WOODY DEBRIS, STUMPS AND CONSTRUCTION WASTE SHALL NOT BE PLACED IN REGULATED WETLANDS, STREAMS OR OTHER SURFACE WATERS.
   3.0.6. DISTRIBUTE OR POST INFORMATIONAL MATERIAL REGARDING PROPER HANDLING, SPILL RESPONSE, SPILL KIT LOCATION, AND EMERGENCY ACTIONS TO BE TAKEN, TO ALL CONSTRUCTION PERSONNEL.
   3.0.7. REFUELING EQUIPMENT SHALL BE LOCATED AT LEAST 100 FEET FROM ALL WETLANDS, STREAMS AND OTHER SURFACE WATERS.

NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, CONTINUED

STANDARDS AND SPECIFICATIONS FOR LAND GRADING

1. DEFINITION & SCOPE
   1.1. PERMANENT RESHAPING OF THE EXISTING LAND SURFACE BY GRADING IN ACCORDANCE WITH AN ENGINEERING TOPOGRAPHIC PLAN AND SPECIFICATION TO PROVIDE FOR EROSION CONTROL AND VEGETATIVE ESTABLISHMENT ON DISTURBED, RESHAPED AREAS.

2. DESIGN CRITERIA
   2.1. THE GRADING PLAN SHOULD BE BASED UPON THE INCORPORATION OF BUILDING DESIGNS AND STREET LAYOUTS THAT FIT AND UTILIZE EXISTING TOPOGRAPHY AND DESIRABLE NATURAL SURROUNDING TO AVOID EXTREME GRADE MODIFICATIONS. INFORMATION SUBMITTED MUST PROVIDE SUFFICIENT TOPOGRAPHIC SURVEYS AND SOIL INVESTIGATIONS TO DETERMINE LIMITATIONS THAT MUST BE IMPOSED ON THE GRADING OPERATION RELATED TO SLOPE STABILITY, EFFECT ON ADJACENT PROPERTIES AND DRAINAGE PATTERNS, MEASURES FOR DRAINAGE AND WATER REMOVAL, AND VEGETATIVE TREATMENT, ETC. MANY MUNICIPALITIES AND COUNTIES HAVE REGULATIONS AND DESIGN PROCEDURES ALREADY ESTABLISHED FOR LAND GRADING AND CUT AND FILL SLOPES. WHERE THESE REQUIREMENTS EXIST, THEY SHALL BE FOLLOWED. THE PLAN MUST SHOW EXISTING AND PROPOSED CONTOURS OF THE AREA(S) TO BE GRADED. THE PLAN SHALL ALSO INCLUDE PRACTICES FOR EROSION CONTROL, SLOPE STABILIZATION, SAFE DISPOSAL OF RUNOFF WATER AND DRAINAGE, SUCH AS WATERWAYS, LINED DITCHES, REVERSE SLOPE BENCHES (INCLUDE GRADE AND CROSS SECTION), GRADE STABILIZATION STRUCTURES, RETAINING WALLS, AND SURFACE AND SUBSURFACE DRAINS. THE PLAN SHALL ALSO INCLUDE PHASING OF THESE PRACTICES. THE FOLLOWING SHALL BE INCORPORATED INTO THE PLAN:
   2.1.1. PROVISIONS SHALL BE MADE TO SAFELY CONVEY SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS, OR TO STABLE WATER COURSES TO ENSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS; SEE STANDARDS AND SPECIFICATIONS FOR GRASSED WATERWAY, DIVERSION, OR GRADE STABILIZATION STRUCTURE.
   2.1.2. CUT AND FILL SLOPES THAT ARE TO BE STABILIZED WITH GRASSES SHALL NOT BE STEEPER THAN 2:1. WHEN SLOPES EXCEED 2:1, SPECIAL DESIGN AND STABILIZATION CONSIDERATION ARE REQUIRED AND SHALL BE ADEQUATELY SHOWN ON THE PLANS. (NOTE: WHERE THE SLOPE IS TO BE MOWED, THE SLOPE SHOULD BE NO STEEPER THAN 3:1, ALTHOUGH 4:1 IS PREFERRED BECAUSE OF SAFETY FACTORS RELATED TO MOWING STEEP SLOPES.)
   2.1.3. REVERSE SLOPE BENCHES OR DIVERSION SHALL BE PROVIDED WHENEVER THE VERTICAL INTERVAL (HEIGHT) OF ANY 2:1 SLOPE EXCEEDS 20 FEET; FOR 3:1 SLOPE IT SHALL BE INCREASED TO 30 FEET AND FOR 4:1 TO 40 FEET. BENCHES SHALL BE LOCATED TO DIVIDE THE SLOPE FACE AS EQUALLY AS POSSIBLE AND SHALL CONVEY THE WATER TO A STABLE OUTLET. SOILS, SEEPS, ROCK OUTCROPS, ETC., SHALL ALSO BE TAKEN INTO CONSIDERATION WHEN DESIGNING BENCHES.
   2.1.3.1. BENCHES SHALL BE A MINIMUM OF SIX FEET WIDE TO PROVIDE FOR EASE OF MAINTENANCE.
   2.1.3.2. BENCHES SHALL BE DESIGNED WITH A REVERSE SLOPE OF 6:1 OR FLATTER TO THE TOE OF THE UPPER SLOPE AND WITH A MINIMUM OF ONE FOOT IN DEPTH. BENCH GRADIENT TO THE OUTLET SHALL BE BETWEEN 2 PERCENT AND 3 PERCENT, UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS.
   2.1.3.3. THE FLOW LENGTH WITHIN A BENCH SHALL NOT EXCEED 800 FEET UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS; SEE STANDARD AND SPECIFICATIONS FOR DIVERSION.
   2.1.4. SURFACE WATER SHALL BE DIVERTED FROM THE FACE OF ALL CUT AND/OR FILL SLOPES BY THE USE OF DIVERSIONS, DITCHES AND SWALES OR CONVEYED DOWNSLOPE BY THE USE OF A DESIGNED STRUCTURE, EXCEPT WHERE:
   2.1.4.1. THE FACE OF THE SLOPE IS OR SHALL BE STABILIZED AND THE FACE OF ALL GRADED SLOPES SHALL BE PROTECTED FROM SURFACE RUNOFF UNTIL THEY ARE STABILIZED.
   2.1.4.2. THE FACE OF THE SLOPE SHALL NOT BE SUBJECT TO ANY CONCENTRATED FLOWS OF SURFACE WATER SUCH AS FROM NATURAL DRAINAGE WAYS, GRADED DITCHES, DOWNSPOUTS, ETC.
   2.1.4.3. THE FACE OF THE SLOPE WILL BE PROTECTED BY ANCHORED STABILIZATION MATTING, SOD, GRAVEL, RIPRAP, OR OTHER STABILIZATION METHOD.
   2.1.5. CUT SLOPES OCCURRING IN RIPABLE ROCK SHALL BE SERRATED. THE SERRATIONS SHALL BE MADE WITH CONVENTIONAL EQUIPMENT AS THE EXCAVATION IS MADE. EACH STEP OR SERRATION SHALL BE CONSTRUCTED ON THE CONTOUR AND WILL HAVE STEPS CUT AT NOMINAL TWO-FOOT INTERVALS WITH NOMINAL THREE-FOOT HORIZONTAL SHELVES. THESE STEPS WILL VARY DEPENDING ON THE SLOPE RATIO OR THE CUT SLOPE. THE NOMINAL SLOPE LINE IS 1 ½: 1. THESE STEPS WILL WEATHER AND ACT TO HOLD MOISTURE, LIME, FERTILIZER, AND SEED THUS PRODUCING A MUCH QUICKER AND LONGER-LIVED VEGETATIVE COVER AND BETTER SLOPE STABILIZATION. OVERLAND FLOW SHALL BE DIVERTED FROM THE TOP OF ALL SERRATED CUT SLOPES AND CARRIED TO A SUITABLE OUTLET.
   2.1.6. SUBSURFACE DRAINAGE SHALL BE PROVIDED WHERE NECESSARY TO INTERCEPT SEEPAGE THAT WOULD OTHERWISE ADVERSELY AFFECT SLOPE STABILITY OR CREATE EXCESSIVELY WET SITE CONDITIONS.
   2.1.7. SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATELY PROTECTING SUCH PROPERTIES AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE, OR OTHER RELATED DAMAGES.
   2.1.8. FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER OBJECTIONABLE MATERIAL. IT SHOULD BE FREE OF STONES OVER TWO (2) INCHES IN DIAMETER WHERE COMPACTED BY HAND OR MECHANICAL TAMPERS OR OVER EIGHT (8) INCHES IN DIAMETER WHERE COMPACTED BY ROLLERS OR OTHER EQUIPMENT. FROZEN MATERIAL SHALL NOT BE PLACED IN THE FILL NOR SHALL THE FILL MATERIAL BE PLACED ON A FROZEN FOUNDATION.
   2.1.9. STOCKPILES, BORROW AREAS, AND SPOIL SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATIONS.
   2.1.10. ALL DISTURBED AREAS SHALL BE STABILIZED STRUCTURALLY OR VEGETATIVELY IN COMPLIANCE WITH THE PERMANENT CONSTRUCTION AREA PLANTING STANDARD.

3. CONSTRUCTION SPECIFICATIONS
   3.1. ALL GRADED OR DISTURBED AREAS, INCLUDING SLOPES, SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN UNTIL THEY ARE ADEQUATELY STABILIZED.
   3.2. ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN AND THESE STANDARDS.
   3.3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNT NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS.
   3.4. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, OR OTHER OBJECTIONABLE MATERIAL.
   3.5. AREAS THAT ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF FOUR INCHES PRIOR TO PLACEMENT OF TOPSOIL.
   3.6. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE, OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES. ALL FILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
   3.7. EXCEPT FOR APPROVED LANDFILLS OR NONSTRUCTURAL FILLS, FILL MATERIAL SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH, OR PREVENT, CONSTRUCTION OF SATISFACTORY FILLS.
   3.8. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL SLOPES OR STRUCTURAL FILLS.
   3.9. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
   3.10. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
   3.11. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHODS.
   3.12. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
   3.13. STOCKPILES, BORROW AREAS, AND SPOIL AREAS SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATIONS.

STANDARDS AND SPECIFICATIONS FOR MULCHING

1. DEFINITION AND SCOPE
   1.1. APPLYING COARSE PLANT RESIDUE OR CHIPS, OR OTHER SUITABLE MATERIALS, TO COVER THE SOIL SURFACE TO PROVIDE INITIAL EROSION CONTROL WHILE A SEEDING OR SHRUB PLANTING IS ESTABLISHING. MULCH WILL CONSERVE MOISTURE AND MODIFY THE SURFACE SOIL TEMPERATURE AND REDUCE FLUCTUATION OF BOTH. MULCH WILL PREVENT SOIL SURFACE CRUSTING AND AID IN WEED CONTROL. MULCH CAN ALSO BE USED ALONE FOR TEMPORARY STABILIZATION IN NONGROWING MONTHS. USE OF STONE AS A MULCH COULD BE MORE PERMANENT AND SHOULD NOT BE LIMITED TO NON-GROWING MONTHS.

2. CONDITIONS WHERE PRACTICE APPLIES
   2.1. ON SOILS SUBJECT TO EROSION AND ON NEW SEEDINGS AND SHRUB PLANTINGS. MULCH IS USEFUL ON SOILS WITH LOW INFILTRATION RATES BY RETARDING RUNOFF.

3. CRITERIA
   3.1. SITE PREPARATION PRIOR TO MULCHING REQUIRES THE INSTALLATION OF NECESSARY EROSION CONTROL OR WATER MANAGEMENT PRACTICES AND DRAINAGE SYSTEMS. SLOPE, GRADE AND SMOOTH THE SITE TO FIT NEEDS OF SELECTED MULCH PRODUCTS. REMOVE ALL UNDESIRABLE STONES AND OTHER DEBRIS TO MEET THE NEEDS OF THE ANTICIPATED LAND USE AND MAINTENANCE REQUIRED. APPLY MULCH AFTER SOIL AMENDMENTS AND PLANTING IS ACCOMPLISHED OR SIMULTANEOUSLY IF HYDROSEEDING IS USED. SELECT APPROPRIATE MULCH MATERIAL AND APPLICATION RATE OR MATERIAL NEEDS. HAY MULCH SHALL NOT BE USED IN WETLANDS OR IN AREAS OF PERMANENT SEEDING. CLEAN STRAW MULCH IS PREFERRED ALTERNATIVE IN WETLAND APPLICATION. DETERMINE LOCAL AVAILABILITY. SELECT APPROPRIATE MULCH ANCHORING MATERIAL.

4. NOTE: THE BEST COMBINATION FOR GRASS/LEGUME ESTABLISHMENT IS STRAW (CEREAL GRAIN) MULCH APPLIED AT 2 TON/ ACRE (90 LBS./1000SQ.FT.) AND ANCHORED WITH WOOD FIBER MULCH (HYDROMULCH) AT 500 – 750 LBS./ACRE (11 – 17 LBS./1000 SQ. FT.). THE WOOD FIBER MULCH MUST BE APPLIED THROUGH A HYDROSEEDER IMMEDIATELY AFTER MULCHING.

STANDARDS AND SPECIFICATIONS FOR SOIL RESTORATION

1. DEFINITION & SCOPE
   1.1. THE DECOMPACTION OF AREAS OF A DEVELOPMENT SITE OR CONSTRUCTION PROJECT WHERE SOILS HAVE BEEN DISTURBED TO RECOVER THE ORIGINAL PROPERTIES AND POROSITY OF THE SOIL; THUS PROVIDING A SUSTAINABLE GROWTH MEDIUM FOR VEGETATION, REDUCTION OF RUNOFF AND FILTERING OF POLLUTANTS FROM STORMWATER RUNOFF.

2. CONDITIONS WHERE PRACTICE APPLIES
   2.1. SOIL RESTORATION IS TO BE APPLIED TO AREAS WHOSE HEAVY CONSTRUCTION TRAFFIC IS DONE AND FINAL STABILIZATION IS TO BEGIN. THIS IS GENERALLY APPLIED IN THE CLEANUP, SITE RESTORATION, AND LANDSCAPING PHASE OF CONSTRUCTION FOLLOWED BY THE PERMANENT ESTABLISHMENT OF AN APPROPRIATE GROUND COVER TO MAINTAIN THE SOIL STRUCTURE. SOIL RESTORATION MEASURES SHOULD BE APPLIED OVER AND ADJACENT TO ANY RUNOFF REDUCTION PRACTICES TO ACHIEVE DESIGN PERFORMANCE.
   2.1.1. SOIL RESTORATION AREAS WILL BE DESIGNATED ON THE PLAN VIEWS OF AREAS TO BE DISTURBED.
   2.1.2. SOIL RESTORATION WILL BE COMPLETED IN ACCORDANCE WITH TABLE 4.6

3. SPECIFICATION FOR FULL SOIL RESTORATION
   3.1. DURING PERIODS OF RELATIVELY LOW TO MODERATE SUBSOIL MOISTURE, THE DISTURBED SUBSOILS ARE RETURNED TO ROUGH GRADE AND THE FOLLOWING SOIL RESTORATION STEPS APPLIED:
   3.1.1. APPLY 3 INCHES OF COMPOST OVER SUBSOIL. THE COMPOST SHALL BE WELL DECOMPOSED (MATURED AT LEAST 3 MONTHS), WEED-FREE, ORGANIC MATTER. IT SHALL BE AEROBICALLY COMPOSTED, POSSESS NO OBJECTIONABLE ODORS, AND CONTAIN LESS THAN 1%, BY DRY WEIGHT, OF MAN-MADE FOREIGN MATTER. THE PHYSICAL PARAMETERS OF THE COMPOST SHALL MEET THE STANDARDS LISTED IN TABLE 5.2 - COMPOST STANDARDS TABLE, EXCEPT FOR "PARTICLE SIZE" 100% WILL PASS THE 1/2" SIEVE. NOTE: ALL BIOSOLIDS COMPOST PRODUCED IN NEW YORK STATE (OR APPROVED FOR IMPORTATION) MUST MEET NYS DEC'S 6 NYCRR PART 360 (SOLID WASTE MANAGEMENT FACILITIES) REQUIREMENTS. THE PART 360 REQUIREMENTS ARE EQUAL TO OR MORE STRINGENT THAN 40 CFR PART 503 WHICH ENSURE SAFE STANDARDS FOR PATHOGEN REDUCTION AND HEAVY METALS CONTENT.
   3.1.2. TILL COMPOST INTO SUBSOIL TO A DEPTH OF AT LEAST 12 INCHES USING A CAT-MOUNTED RIPPER, TRACTOR MOUNTED DISC, OR TILLER, TO MIX AND CIRCULATE AIR AND COMPOST INTO THE SUBSOIL.
   3.1.3. ROCK-PICK UNTIL UPLIFTED STONE/ROCK MATERIALS OF FOUR INCHES AND LARGER SIZE ARE CLEANED OFF THE SITE.
   3.1.4. APPLY TOPSOIL TO A DEPTH OF 6 INCHES.
   3.1.5. VEGETATE AS REQUIRED BY THE SEEDING PLAN. USE APPROPRIATE GROUND COVER WITH DEEP ROOTS TO MAINTAIN THE SOIL STRUCTURE.
   3.1.6. TOPSOIL MAY BE MANUFACTURED AS A MIXTURE OR A MINERAL COMPONENT AND ORGANIC MATERIAL SUCH AS COMPOST. AT THE END OF THE PROJECT AN INSPECTOR SHOULD BE ABLE TO PUSH A 3/8" METAL BAR 12 INCHES INTO THE SOIL JUST WITH BODY WEIGHT. THIS SHOULD NOT BE PERFORMED WITHIN THE DRIP LINE OF ANY EXISTING TREES OR OVER UTILITY INSTALLATIONS THAT ARE WITHIN 24 INCHES OF THE SURFACE.

4. MAINTENANCE
   4.1. KEEP THE SITE FREE OF VEHICULAR AND FOOT TRAFFIC OR OTHER WEIGHT LOADS. CONSIDER PEDESTRIAN FOOTPATHS.

TABLE 4.6 SOIL RESTORATION REQUIREMENTS

TYPE OF SOIL DISTURBANCE	SOIL RESTORATION REQUIREMENT		COMMENTS/EXAMPLES
NO SOIL DISTURBANCE	RESTORATION NOT PERMITTED		PRESERVATION OF NATURAL FEATURES
MINIMAL SOIL DISTURBANCE	RESTORATION NOT REQUIRED		CLEARING AND GRUBBING
AREAS WHERE TOPSOIL IS STRIPPED ONLY - NO CHANGE IN GRADE	HSG A&B	HSG C&D	PROTECT AREA FROM ANY ONGOING CONSTRUCTION ACTIVITIES.
	APPLY 6 INCHES OF TOPSOIL	AERATE* AND APPLY 6 INCHES OF TOPSOIL	
AREAS OF CUT OR FILL	HSG A&B	HSG C&D	
	AERATE* AND APPLY 6 INCHES OF TOPSOIL	APPLY FULL SOIL RESTORATION**	
HEAVY TRAFFIC AREAS ON SITE (ESPECIALLY IN A ZONE 5-25 FEET AROUND BUILDINGS BUT NOT WITHIN A 5 FOOT PERIMETER AROUND FOUNDATION WALLS)	APPLY FULL SOIL RESTORATION (DECOMPACTION AND COMPOST ENHANCEMENT)		
AREAS WHERE RUNOFF REDUCTION AND/OR INFILTRATION PRACTICES ARE APPLIED	RESTORATION NOT REQUIRED, BUT MAY BE APPLIED TO ENHANCE THE REDUCTION SPECIFIED FOR APPROPRIATE PRACTICES.		KEEP CONSTRUCTION EQUIPMENT FROM CROSSING THESE AREAS. TO PROTECT NEWLY INSTALLED PRACTICE FROM ANY ONGOING CONSTRUCTION ACTIVITIES CONSTRUCT A SINGLE PHASE OPERATION FENCE AREA
REDEVELOPMENT PROJECTS	SOIL RESTORATION IS REQUIRED ON REDEVELOPMENT PROJECTS IN AREAS WHERE EXISTING IMPERVIOUS AREA WILL BE CONVERTED TO PERVIOUS AREA.		
"* AERATION INCLUDES THE USE OF MACHINES SUCH AS TRACTOR-DRAWN IMPLEMENTS WITH COULTERS MAKING A NARROW SLIT IN THE SOIL, A ROLLER WITH MANY SPIKES MAKING INDENTATIONS IN THE SOIL, OR PRONGS WHICH FUNCTION LIKE A MINI-SUBSOILER. ** PER "DEEP RIPPING AND DE-COMPACTION, DEC 2008"."			

STANDARDS AND SPECIFICATIONS FOR SURFACE ROUGHENING

1. DEFINITION & SCOPE
   1.1. ROUGHENING A BARE SOIL SURFACE WHETHER THROUGH CREATING HORIZONTAL GROOVES ACROSS A SLOPE, STAIR-STEPPING, OR TRACKING WITH CONSTRUCTION EQUIPMENT TO AID THE ESTABLISHMENT OF VEGETATIVE COVER FROM SEED, TO REDUCE RUNOFF VELOCITY AND INCREASE INFILTRATION, AND TO REDUCE EROSION AND PROVIDE FOR TRAPPING OF SEDIMENT.

2. CONDITIONS WHERE PRACTICE APPLIES
   2.1. ALL CONSTRUCTION SLOPES REQUIRE SURFACE ROUGHENING TO FACILITATE STABILIZATION WITH VEGETATION, PARTICULARLY SLOPES STEEPER THAN 3:1.

3. DESIGN CRITERIA
   3.1. THERE ARE MANY DIFFERENT METHODS TO ACHIEVE A ROUGHENED SOIL SURFACE ON A SLOPE. NO SPECIFIC DESIGN CRITERIA IS REQUIRED. HOWEVER, THE SELECTION OF THE APPROPRIATE METHOD DEPENDS ON THE TYPE OF SLOPE. METHODS INCLUDE TRACKING, GROOVING, AND STAIR-STEPPING. STEEPNESS, MOWING REQUIREMENTS, AND/OR A CUT OR FILL SLOPE OPERATION ARE ALL FACTORS CONSIDERED IN CHOOSING A ROUGHENING METHOD.

4. CONSTRUCTION SPECIFICATIONS
   4.1. CUT SLOPE, NO MOWING.
   4.1.1. STAIR-STEP GRADE OR GROOVE CUT SLOPES WITH A GRADIENT STEEPER THAN 3:1.
   4.1.2. USE STAIR-STEP GRADING ON ANY ERODIBLE MATERIAL SOFT ENOUGH TO BE RIPPED WITH A BULLDOZER. SLOPES OF SOFT ROCK WITH SOME SOIL ARE PARTICULARLY SUITED TO STAIR-STEP GRADING.
   4.1.3. MAKE THE VERTICAL CUT DISTANCE LESS THAN THE HORIZONTAL DISTANCE, AND SLIGHTLY SLOPE THE HORIZONTAL POSITION OF THE "STEP" TO THE VERTICAL WALL.
   4.1.4. DO NOT MAKE VERTICAL CUTS MORE THAN 2 FEET IN SOFT MATERIALS OR 3 FEET IN ROCKY MATERIALS. GROOVING USES MACHINERY TO CREATE A SERIES OF RIDGES AND DEPRESSIONS THAT RUN PERPENDICULAR TO THE SLOPE FOLLOWING THE CONTOUR. GROOVE USING ANY APPROPRIATE IMPLEMENT THAT CAN BE SAFELY OPERATED ON THE SLOPE, SUCH AS DISKS, TILLERS, SPRING HARROWS, OR THE TEETH OF A FRONT-END LOADER BUCKET. DO NOT MAKE THE GROOVES LESS THAN 3 INCHES DEEP OR MORE THAN 15 INCHES APART.
   4.2. FILL SLOPE, NO MOWING
   4.2.1. PLACE FILL TO CREATE SLOPES WITH A GRADIENT NO STEEPER THAN 2:1 IN LIFTS 9 INCHES OR LESS AND PROPERLY COMPACTED. ENSURE THE FACE OF THE SLOPE CONSISTS OF LOOSE, UNCOMPACTED FILL 4 TO 6 INCHES DEEP. USE GROOVING AS DESCRIBED ABOVE TO ROUGHEN THE SLOPE, IF NECESSARY.
   4.2.2. DO NOT BACK BLADE OR SCRAPE THE FINAL SLOPE FACE.
   4.3. CUTS/FILLS, MOWED MAINTENANCE
   4.3.1. MAKE MOWED SLOPES NO STEEPER THAN 3:1.
   4.3.2. ROUGHEN THESE AREAS TO SHALLOW GROOVES BY NORMAL TILLING, DISKING, HARROWING, OR USE OF CULTIPACKERSEEDER. MAKE THE FINAL PASS OF SUCH TILLAGE EQUIPMENT ON THE CONTOUR.
   4.3.3. MAKE GROOVES AT LEAST 1 INCH DEEP AND A MAXIMUM OF 10 INCHES APART.
   4.3.4. EXCESSIVE ROUGHNESS IS UNDESIRABLE WHERE MOWING IS PLANNED.

5. TRACKING SHOULD BE USED PRIMARILY IN SANDY SOILS TO AVOID UNDUE COMPACTION OF THE SOIL SURFACE. TRACKING IS GENERALLY NOT AS EFFECTIVE AS THE OTHER ROUGHENING ETHODS DESCRIBED. (IT HAS BEEN USED AS A METHOD TO TRACK DOWN MULCH.) OPERATE TRACKED MACHINERY UP AND DOWN THE SLOPE TO LEAVE HORIZONTAL DEPRESSIONS IN THE SOIL. DO NOT BACK-BLADE DURING THE FINAL GRADING OPERATION.

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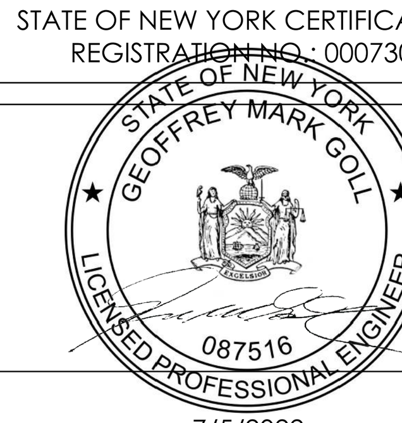
PROJECT NOTES

1. TAX MAP IDENTIFICATION NUMBER: SECTION 90.06 BLOCK 1 LOT 13.1 TOTAL AREA OF SUBJECT PARCEL: 17.903± ACRES.
2. BOUNDARY AND PLANIMETRIC INFORMATION BASED UPON FIELD SURVEY AS PERFORMED BY ENGINEERING & SURVEYING PROPERTIES, PC.
3. THE TOPOGRAPHY SHOWN HEREON WAS COMPILED BY ENGINEERING & SURVEYING PROPERTIES PC, FROM USGS 1M HYDRO-FLATTENED DIGITAL ELEVATION MODELS (DEMS) AS DERIVED FROM 2012 SOURCE LIDAR. THE DEMS WERE PROVIDED BY NYS.GIS.GOV AND CORRESPOND TO ACTUAL SURVEY OBSERVATIONS TAKEN IN THE FIELD. CONTOURS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988.
4. OWNER/APPLICANT: ROSE LODGE, LLC
5. 83 SOMERSTOWN ROAD
6. OSSINING, NY 10562
7. THE WETLANDS WERE DELINEATED BY PETER TORGERSEN ON NOVEMBER 2, 2021 AND GPS LOCATED BY ENGINEERING & SURVEYING PROPERTIES, PC ON NOVEMBER 12, 2021.

DATE	DESCRIPTION

REVISIONS

STATE OF NEW YORK CERTIFICATE OF REGISTRATION NO.: 0007304



7/5/2022
DATE

PRINCETON HYDRO
SCIENCE ENGINEERING DESIGN
35 CLARK STREET, SUITE 200
TRENTON, NEW JERSEY 08611
PHONE: 908.237.5660
PRINCETONHYDRO.COM

PROJECT NAME/LOCATION:

REGULATORY COMPLIANCE
AND DESIGN
83 SOMERSTOWN ROAD
OSSINING, WESTCHESTER COUNTY, NY

DRAWING NAME:

SOIL EROSION SEDIMENT
CONTROL NOTES AND DETAILS

DATE:	7/1/2022
PROJECT NO.:	2080.001
SCALE:	AS SHOWN
DRAWN BY:	CAS
CHECKED BY:	DS, GG

SHEET NO.

2 OF 2