

EROSION CONTROL NOTES

GENERAL:

THE DRAWINGS DEPICT THE REQUIRED SOIL EROSION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CONSTRUCTION SITE IN SUCH A MANNER THAT:

- SOIL EROSION IS KEPT TO A MINIMUM.
- NO SEDIMENT LEAVES THE CONSTRUCTION SITE PROPER.
- ALL POSSIBLE MEASURES ARE EMPLOYED TO PREVENT SEDIMENT FROM ENTERING DRAINAGE COURSES AND WETLANDS EVEN BEYOND THE DETAILS SHOWN ON THIS PLAN IF NECESSARY.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPs PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATERBODIES, OR WETLAND AS A RESULT OF THIS PROJECT.
- LOAM AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER DISTURBANCE, BUT NO LONGER THAN 7 DAYS. LOAM AND SEED ANY DISTURBED AREA WITHIN 15' OF WETLANDS OR WATERBODIES WITHIN 48 HOURS OR PRIOR TO AND STORM EVENT. USE WINTER SEED RATES AND SPECIFICATIONS IF APPROPRIATE.
- INSPECT SOIL EROSION MEASURES WEEKLY AND AFTER SIGNIFICANT STORM EVENTS. MAKE ALL NECESSARY REPAIRS TO FACILITIES AS SOON AS POSSIBLE, BUT NO LONGER THAN 2 DAYS. CLEAN AND RESET SILT FENCES AND STONE CHECK DAMS WHICH ACCUMULATE SEDIMENT AND DEBRIS.
- PROTECT AND STABILIZE ALL AREAS NOT SCHEDULED FOR EROSION PREVENTION OR STABILIZATION BUT THAT SHOW SIGNS OF EROSION. NOTIFY OWNER OF ANY SIGNIFICANT EROSION PROBLEM.
- APPLY MULCH TO BARE SOILS WITHIN 7 DAYS OF INITIAL DISTURBANCE OF SOILS, WITHIN 48 HOURS IF WITHIN 15' OF WETLAND OR WATERBODY, PRIOR TO ANY RAIN EVENT, OR PRIOR TO ANY WORK SHUTDOWN LASTING MORE THAN ONE DAY.
- TEMPORARILY SEED WITHIN 7 DAYS ANY AREA WHICH WILL BE LEFT DISTURBED AND UNWORKED FOR MORE THAN 14 DAYS WITH THE TEMPORARY SEED MIX LISTED BELOW. IF AREA IS WITHIN 15' OF A WETLAND OR WATERBODY, SEED WITHIN 48 HOURS. PERMANENTLY SEED ANY AREA WHICH CAN BE LOAMED AS SOON AS POSSIBLE WITH THE PERMANENT SEED MIX LISTED BELOW. DO NOT USE PERMANENT SEED MIX AFTER SEPTEMBER 15.
- MULCH ALL AREAS SEEDED SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE. DURING THE GROWING SEASON (APRIL 15 - SEPT. 30) USE EROSION CONTROL MESH (OR MULCH AND NETTING) ON:
 - SLOPES STEEPER THAN 15%
 - WITHIN 100 FT. OF STREAMS AND WETLANDS
 BETWEEN OCT. 1 AND APRIL 14 USE EROSION CONTROL MESH (OR MULCH AND NETTING) ON:
 - SIDE SLOPES OF GRASSED WATERWAYS
 - SLOPES STEEPER THAN 8%
- INSTALL EROSION CONTROL MESH IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. MESH TO BE EQUAL TO NORTH AMERICAN GREEN PRODUCT C125B.
- FOLLOW SILT FENCE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS FOR INSTALLATION OF SILT FENCE. SECURE ENTIRE BOTTOM OF FENCE EITHER BY BURYING BOTTOM OF FENCE IN A TRENCH OR BERMING WITH SOIL OR CHIPPED GRUBBINGS. REFER TO SILT FENCE DETAILS.
- PLACE AND GRADE LOAM IN A REASONABLY UNIFORM MANNER. WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEED BED IS PREPARED. REMOVE FROM SURFACE ALL STONES LARGER THAN 2" AND ALL OTHER UNSUITABLE MATERIAL. LIME AND FERTILIZER SHOULD BE MIXED INTO SOIL PRIOR TO ROLLING EXCEPT IF INCLUDED IN HYDROSEED MIXTURE. PERMANENT STABILIZATION OF REVEGETATED AREAS IS CONSIDERED AS 90% CATCH.
- ALL CULVERT OR PIPE OUTFALL PROTECTION MUST BE INSTALLED WITHIN 48 HOURS OF INSTALLING NEW PIPE OR CULVERT.
- DITCHES AND CHANNELS DESIGNATED TO BE LINED WITH RIPRAP AND/OR EROSION CONTROL MESH MUST BE INSTALLED WITHIN 48 HOURS OF COMPLETING THE GRADING OF THAT SECTION OF DITCH OR CHANNEL.
- ALL CATCH BASINS, NEW OR EXISTING, THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS MUST BE PROTECTED BY INSTALLING AND MAINTAINING SILT BAGS DURING CONSTRUCTION.
- WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION WILL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE OR EROSION CONTROL MIX LINED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING, ICING, AND SEDIMENT DISCHARGE TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE.

TOPSOIL:

- SUITABLE TOPSOIL SALVAGED FROM SITE OR SCREENED, LOOSE AND FRIABLE SANDY LOAM OR LOAM AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE CLASSIFICATION SYSTEM, FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS, ROOTS, WEEDS, RHIZOMES OR OTHER UNDESIRABLE FOREIGN MATTER AS DETERMINED BY THE INSPECTING AUTHORITY. CONTRACTOR SHALL SUBMIT REPORTS OF LOAM TEST RESULTS PERFORMED BY AN INDEPENDENT TESTING LABORATORY FOR TOPSOIL FROM DIFFERENT SOURCES PRIOR TO PLACING. THE COST OF TESTING SHALL BE INCIDENTAL TO THE COST OF TOPSOIL. TOPSOIL SHALL MEET THE FOLLOWING SPECIFICATIONS:

2. MATERIAL

- SAND - 0.08 IN. TO 0.002 IN. DIAMETER (% BY VOLUME) 45 - 75
- SILT - 0.002 IN. TO 0.00008 IN. DIAMETER (% BY VOLUME) 20 - 40
- CLAY - LESS THAN 0.00008 IN. DIAMETER (% BY VOLUME) 5 - 15
- ORGANICS (SHALL MEET THE REQUIREMENTS OF MDOT STANDARD SPECIFICATION 111.03 FEAT HUMUS) (% BY VOLUME) 10 - 20
- NUTRIENTS:
 - CALCIUM (CA) (% SATURATION) 60 - 80
 - MAGNESIUM (MG) (% SATURATION) 10 - 25
 - POTASSIUM (K) (% SATURATION) 21 - 30
 - PHOSPHORUS (P) (POUNDS/ACRE) 10 - 40
 - PH 6.0 - 6.5
- PERMEABILITY (INCHES PER HOUR) 3 - 10
- MAXIMUM STONE SIZE (INCHES) 3/4

SEEDING:

USE PERMANENT SEED MIXES AND RATES BETWEEN 5/15 AND 9/30. USE TEMPORARY SEED MIXES FOR PERIODS LESS THAN 12 MONTHS. IF USING TEMPORARY SEED MIXES AND RATES BETWEEN 10/1 AND 5/14, RE-SEED WITH PERMANENT SEED MIX AFTER 5/15.

PERMANENT SEED:

MDOT 111.03(a) METHOD NUMBER 3

TEMPORARY SEED:

CATS	..... 80.00 LBS/ACRE	4/01 - 5/14
ANNUAL RYEGRASS	..... 40.00 LBS/ACRE	
SUDANGRASS	..... 40.00 LBS/ACRE	5/15 - 8/14
ANNUAL RYEGRASS	..... 80.00 LBS/ACRE	5/15 - 9/14
WINTER RYE	..... 112.00 LBS/ACRE	9/15 - 9/30
WINTER RYE (W/ MULCH COVER)	..... 112.00 LBS/ACRE	10/01 - 3/31

LIME AND FERTILIZER:

APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (150 POUNDS PER 1000 SQUARE FEET). APPLY FERTILIZER (10-10-20) AT A RATE OF 800 POUNDS PER ACRE (18.4 POUNDS PER 1000 SQUARE FEET).

MULCH:

STRAW OR HAY (ANCHORED)	..... 70 - 90 LBS	PROTECTED AREAS
STRAW OR HAY (ANCHORED)	..... 185 - 275 LBS	WINDY AREAS
SHREDDED OR CHOPPED	..... 185 - 275 LBS	
JUTE MESH	..... AS REQUIRED	MODERATE TO HIGH VELOCITY AREAS & STEEP SLOPES

EXCELRIOR MAT AS REQUIRED

MULCH ANCHORING

PEG AND TWINE	..... LIQUID ASPHALT
MULCH NETTING	..... WOOD CELLULOSE FIBER
ASPHALT EMULSION	..... CHEMICAL TACK

WINTER CONSTRUCTION:

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 15% MATURE VEGETATION COVER OR RIP RAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIP RAP OR GRAVEL BASE ON A ROAD. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDER TAKEN DURING THE PRECEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. ALL AREA SHALL BE CONSIDERED TO BE DENuded UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS/1000 SF. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

1. SOIL STOCKPILES

STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER-WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS/1000 SF. (3 TONS/ACRE) OR WITH A FOUR INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND WILL BE REESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

2. NATURAL RESOURCES PROTECTION

ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 15% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTINGS OR PROTECTED WITH EROSION CONTROL MATS. DURING WINTER CONSTRUCTION, A DOUBLE LINE OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

3. SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF EROSION CONTROL MIX SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

4. MULCHING

ALL AREA SHALL BE CONSIDERED TO BE DENuded UNTIL AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LBS/1000 SF. OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75 LBS/1000 SF. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN MULCHED WITH STRAW OR HAY AT A RATE OF 150 LBS/1000 SF. (3 TONS/ACRE) AND ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH.

BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION, CHEMICAL TACK, OR WOOD CELLULOSE FIBER. WHEN GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH THEN COVER IS SUFFICIENT. AFTER NOVEMBER 1, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORK DAY.

5. MULCHING ON SLOPES AND DITCHES

SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS. MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS/1000 SF. ON ALL SLOPES GREATER THAN 8%. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%. EROSION CONTROL BLANKETS SHALL BE USED IN LIEU OF MULCH IN ALL DRAINAGE WAYS WITH SLOPE GREATER THAN 8%. EROSION CONTROL MIX CAN BE USED AS A SUBSTITUTE FOR EROSION CONTROL BLANKETS ON ALL SLOPES EXCEPT DITCHES.

6. SEEDING

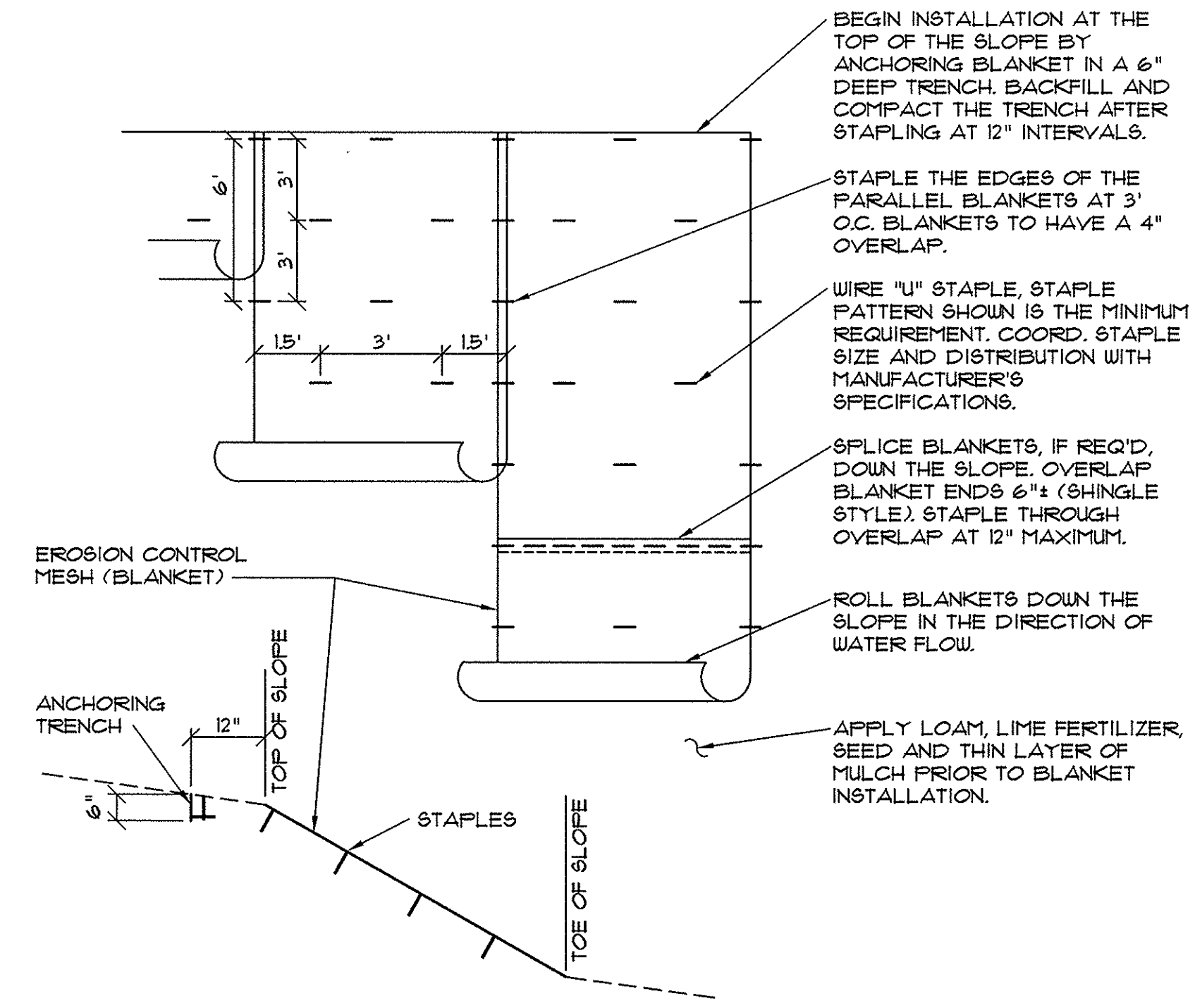
BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINISHED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. AFTER NOVEMBER 1 IF THE EXPOSED AREA HAS BEEN LOAMED AND FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND FABRIC NETTING ANCHORED WITH STAPLES. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND BE SEEDED AT AN APPLICATION RATE OF 5 LBS/1000 SF. ALL AREAS SEEDED DURING THE WINTER WILL BE REVEGETATED FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 15% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL AREAS DISTURBED IN THE WINTER SHALL BE VEGETATED IN THE SPRING.

7. TRENCH DEWATERING AND TEMPORARY STREAM DIVERSION

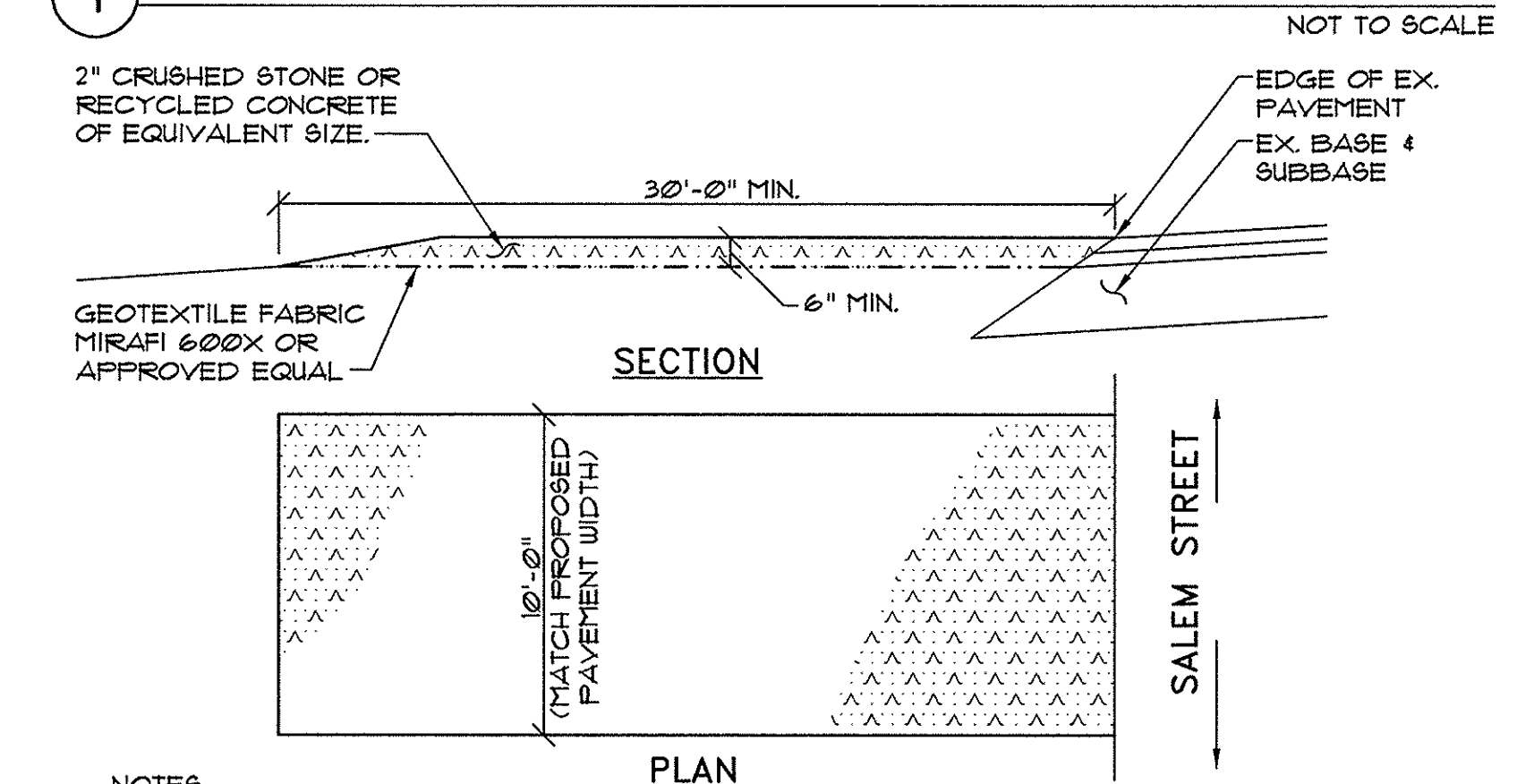
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8. INSPECTION AND MONITORING

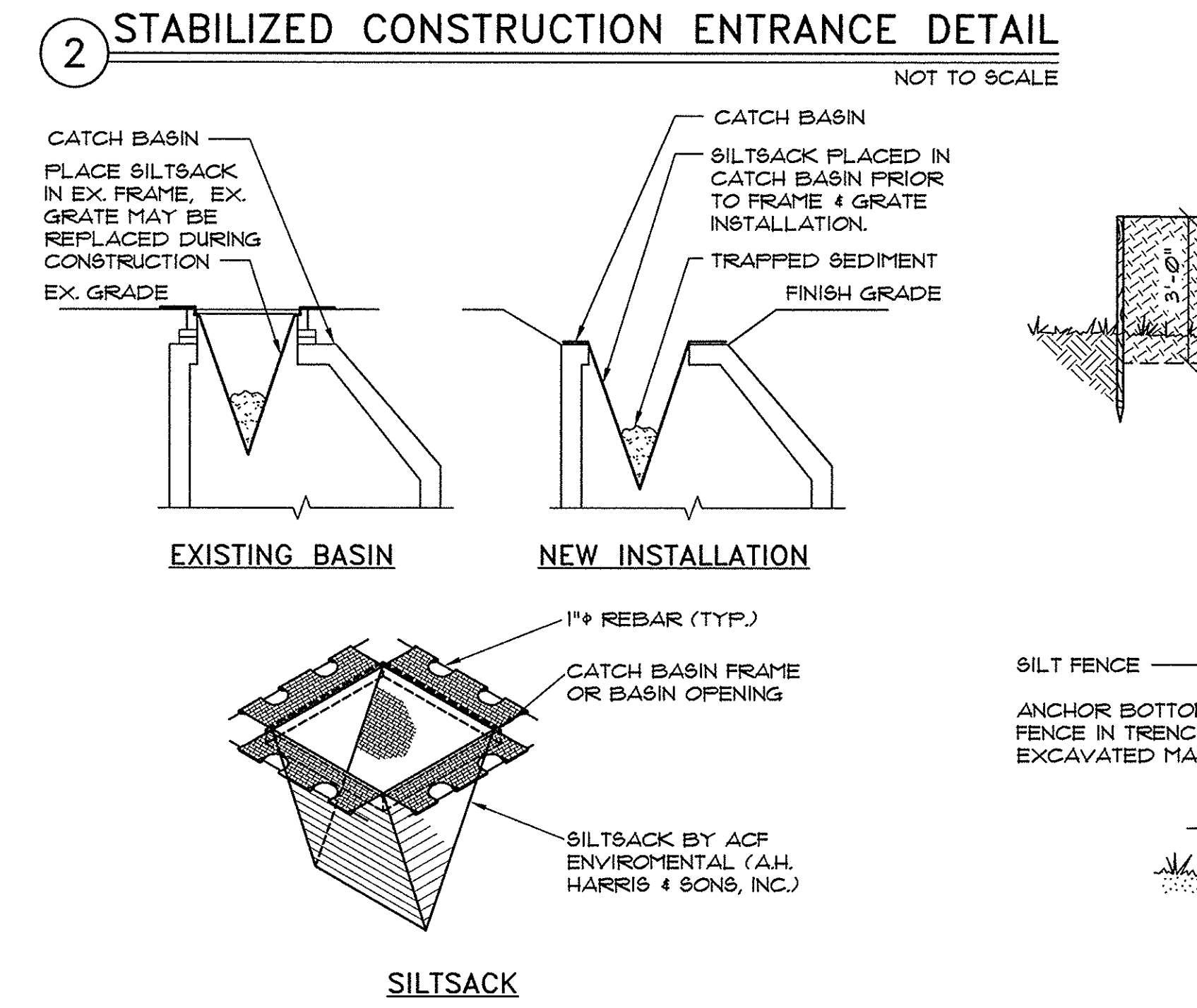
MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGED AND/OR UNESTABLISHED SPOTS. ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85 TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.



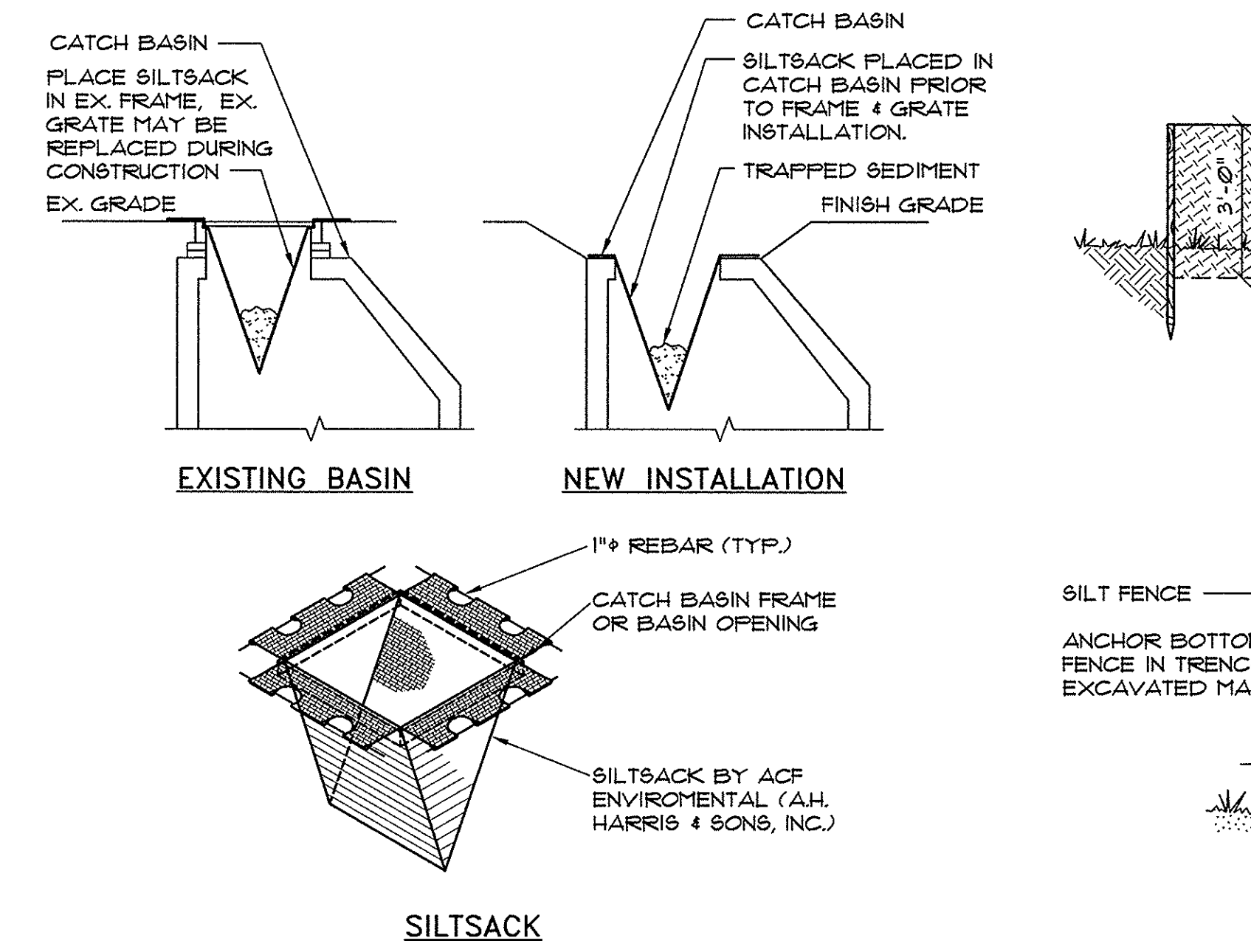
1 EROSION CONTROL MESH INSTALLATION DETAIL NOT TO SCALE



2 STABILIZED CONSTRUCTION ENTRANCE DETAIL NOT TO SCALE



3 SILT FENCE DETAIL NOT TO SCALE



4 CATCH BASIN PROTECTION NOT TO SCALE

PINKHAM & GREER CIVIL ENGINEERS
 28 BIRNHAM AVE. PORTLAND, ME. 04103
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Professional Engineer Seal for Thomas Greer, License No. 4206, State of Maine.

NO.	REV.	DATE	DESCRIPTION
2	1	7/14/15	REV'D PER STAFF COMMENTS
		5/20/15	FOR CITY SUBMITTAL

BRIGGS STREET PROPERTY, LLC
 55 SALEM ST. #B 04102
 PORTLAND, ME.

DRN BY: JDC/RJS
 DESG BY: TSG
 CHK BY: TSC

5 BRIGGS STREET
 PORTLAND, MAINE

SCALE: AS SHOWN
 DATE: APRIL 7, 2015
 PROJECT: 141164