EROSION AND SEDIMENTATION CONTROL PRACTICES

1. GENERAL EROSION AND SEDIMENT CONTROL PRACTICES.
THE FOLLOWING PRACTICES SHALL BE APPLIED THROUGHOUT THE CONDUCT OF THE WORK THROUGH THE USE OF THE FOLLOWING METHODS:

1.1. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED FOR TRANSIENT SITE CONDITIONS TO TEMPORARILY STABILIZE SITE CONDITIONS AND MINIMIZE THE POTENTIAL FOR SOIL EROSION.

1.2. PERMANENT EROSION CONTROL MEASURES SHALL BE INSTALLED FOR PROPOSED SITE FEATURES TO PERMANENTLY STABILIZE SITE CONDITIONS AND MINIMIZE THE POTENTIAL FOR SOIL EROSION.

1.3. MANAGEMENT OF CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN SUCH A MANNER TO MINIMIZE THE POTENTIAL FOR SOIL EROSION.

2. TEMPORARY EROSION CONTROL MEASURES.
THE FOLLOWING MEASURES SHALL BE PROVIDED WHERE SHOWN ON THE PLANS AND WHERE SITE CONDITIONS WARRANT TO PROVIDE TEMPORARY STABILIZATION. AT A MINIMUM, THESE MEASURES ARE ANTICIPATED TO INCLUDE:

2.1. SILTATION FENCE SHALL BE INSTALLED ALONG THE DOWN GRADIENT EDGES OF DISTURBED AREAS TO TRAP SEDIMENTS UNTIL THE SITE IS STABILIZED. SILT FENCE SHALL BE UTILIZED AS REQUIRED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SHALL NOT BE UTILIZED AS A LIMIT OF WORK FENCE.

2.2. HAY BALES SHALL BE INSTALLED AS REQUIRED TO TRAP SEDIMENTS AND REDUCE RUNOFF VELOCITIES.

2.3. TEMPORARY STABILIZATION THROUGH THE USE OF SEEDING, MULCHING, NETTING, AND OTHER METHODS.

2.4. STONE CHECK DAMS AND EROSION CONTROL BLANKET SHALL BE INSTALLED IN SWALES AND AREAS OF CONCENTRATED FLOW.

3. PERMANENT EROSION CONTROL MEASURES.
THE FOLLOWING MEASURES SHALL BE PROVIDED WHERE SHOWN ON THE PLANS TO PROVIDE PERMANENT STABILIZATION. THESE MEASURES ARE ANTICIPATED TO INCLUDE:

3.1. PERMANENT VEGETATIVE STABILIZATION INCLUDING LOAM, SEED, AND MULCH.

3.2. RIPRAP PROTECTION WHERE SHOWN ON THE PLANS INCLUDING CULVERT APRONS AND AREAS OF CONCENTRATED FLOW DISCHARGE.

4. MANAGEMENT OF CONSTRUCTION ACTIVITIES – CONSTRUCTION PHASE.
THE FOLLOWING CONSTRUCTION MANAGEMENT PRACTICES SHALL BE USED TO MINIMIZE THE POTENTIAL FOR EROSION DURING THE CONSTRUCTION PHASE OF THIS PROJECT.

4.1. PHASE CLEARING AND EARTHWORK TO MINIMIZE DENUDED AREAS AT ANY SPECIFIC MOMENT. PERFORM DISTURBANCE AND RESTORATION EFFORTS CONCURRENTLY TO PROGRESSIVELY COMPLETE THE WORK.

4.2. PRIOR TO THE START OF CONSTRUCTION IN A SPECIFIC AREA, SEDIMENT BARRIERS SHALL BE INSTALLED AT THE DOWNGRADIENT EDGE OF ALL AREAS TO BE DISTURBED. SEDIMENT BARRIERS MAY CONSIST OF SILTATION FENCING, SILT SOCK, SILT SACK, HAY BALES, EROSION CONTROL MIX AND OTHER MEASURES AND SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS AND AS DICTATED BY SITE CONDITIONS.

4.3. ALL DISTURBED AREAS NOT INTENDED FOR OTHER FEATURES SHALL RECEIVE LOAM, SEEDING, AND MULCH WITHIN 5 DAYS OF FINAL GRADING TO STABILIZE THESE AREAS. SEEDING REQUIREMENTS ARE PROVIDED IN PARAGRAPH 5.3.

4.4. AREAS THAT HAVE BEEN DISTURBED AND ARE NOT INTENDED FOR FINAL GRADING WITHIN 5 DAYS SHALL RECEIVE TEMPORARY MULCH COVER. ALL DISTURBED AREAS EXPECTED TO REMAIN LONGER THAN 30 DAYS SHALL BE SEEDED WITH CONSERVATION MIX OF ANNUAL RYE GRASS (0.9 LBS/1000 SQ. FT) AND MULCHED.

4.5. MULCH SHALL BE USED AS A TEMPORARY MEASURE TO COVER DENUDED AREAS UNTIL PERMANENT STABILIZATION HAS BEEN INSTALLED. MULCH MAY BE USED ON SLOPES LESS THAN 15% AND IN AREAS WHICH DO NOT CONVEY CONCENTRATED FLOW. HAY OR STRAW MULCH MAY BE USED.

4.6. FOR SLOPES GREATER THAN 15%, DRAINAGE WAYS, OR AREAS OF CONCENTRATED FLOW, JUTE MESH NETTING SHALL BE UTILIZED TO ANCHOR THE MULCH COVER. OTHER NETTING MATERIALS WHICH MAY BE USED INCLUDE CURLEX II, EXCELSIOR, OR APPROVED EQUAL.

4.7. SILTATION FENCE SHALL BE INSTALLED ALONG THE DOWNGRADIENT SIDE OF DISTURBED AREAS. THE SILTATION FENCE WILL REMAIN IN PLACE UNTIL THE UPGRADIENT AREAS ARE 85% REVEGETATED.

4.8. HAY BALES SHALL BE PLACED IN AREAS OF SHEET FLOW TO PROVIDE ADDITIONAL SEDIMENT COLLECTION.

4.9. STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE COURSES AND IN AREAS WHICH HAVE MINIMUM POTENTIAL FOR EROSION. STOCKPILES SHALL NOT BE LOCATED CLOSER THAN 100' FROM WATER RESOURCES INCLUDING, BUT NOT LIMITED TO, WETLANDS, STREAMS, AND OPEN WATER BODIES. PLACE STOCKPILES IN AREAS WITH SLOPES LESS THAN 10 PERCENT AND ARE NOT AREAS OF CONCENTRATED FLOW INCLUDING DRAINAGE SWALES.

4.10. STOCKPILES OF STUMPS, GRUBBINGS, OR SOIL MATERIAL SHALL BE PROTECTED AS FOLLOWS:

4.10.1. MATERIAL STOCKPILE SIDE SLOPES SHALL NOT EXCEED 2:1.

4.10.2. SURROUND MATERIAL STOCKPILES WITH SILTATION FENCE ALONG ITS DOWNGRADIENT EDGE.

4.10.3. ALL STOCKPILES EXPECTED TO REMAIN LONGER THAN 15 DAYS SHALL BE SEEDED WITH CONSERVATION MIX AND TREATED WITH ANCHORED MULCH.

4.11. NATIVE TOPSOIL SHALL BE SEPARATED, STOCKPILED AND RE–USED FOR PERMANENT RESTORATION. TOPSOIL AMENDMENTS SHALL BE USED TO MEET SPECIFICATIONS.

5. MANAGEMENT OF CONSTRUCTION ACTIVITIES – POST CONSTRUCTION PHASE.
THE FOLLOWING GENERAL PRACTICES SHALL BE USED TO PREVENT EROSION WHEN PERMANENT RESTORATION CAN BE PROVIDED.

5.1. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AFTER PERMANENT STABILIZATION HAS BEEN ACHIEVED.

5.2. PERMANENT VEGETATIVE STABILIZATION SHALL INCLUDE LOAM, SEED, AND MULCH.

5.3. FOR PERMANENT RESTORATION EFFORTS BETWEEN APRIL 15 AND SEPTEMBER 15, PERMANENT SEEDING SHALL BE PROVIDED AS SPECIFIED BELOW. PRIOR TO SEEDING, LIMESTONE SHALL BE APPLIED AT A RATE OF 138 LBS/1000 SQ. FT. AND 10:20:20 FERTILIZER APPLIED AT A RATE OF 18.4 LBS/1000 SQ.FT. PROVIDE BROADCAST SEEDING AT THE FOLLOWING RATES:

LAWNS	SWALES:
KENTUCKY BLUEGRASS: 0.46 LBS/1000 SF.	CREEPING RED FESCUE; 0.46 LBS/1000 SF.
CREEPING RED FESCUE: 0.46 LBS/1000 SF.	REDTOP: 0.05 LBS/1000 SF.
PERENNIAL RYEGRASS: 0.11 LB/1000 SF.	TALL FESCUE: 0.46 LBS/1000 SF.
TOTAL: 1.03 LBS/1000 S.F.	TOTAL: 0.97 LBS/1000 S.F.

5.4. MULCH SHALL BE PROVIDED CONCURRENTLY WITH INSTALLATION OF SEED. MULCHING SHALL CONSIST OF HAY, STRAW, HYDRO–MULCH, JUTE NET OVER MULCH, PRE–MANUFACTURED EROSION MATS OR ANY SUITABLE SUBSTITUTE DEEMED ACCEPTABLE BY THE ENGINEER.

5.5. HAY MULCH SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE SUCH THAT SOIL IS NOT VISIBLE. HAY MULCH SHALL BE SECURED.

5.6. HYDRO–MULCH SHALL BE AN ACCEPTABLE METHOD OF MULCHING AND SHALL CONSIST OF A MIXTURE OF WATER WITH EITHER WOOD FIBER OR PAPER FIBER AND WATER SPRAYED OVER A SEEDED AREA. HYDRO–MULCH SHALL NOT BE USED BETWEEN SEPTEMBER 15 AND APRIL 15.

5.7. FOLLOWING PERMANENT SEEDING, THE SITE WILL BE INSPECTED EVERY 7 DAYS UNTIL 85% COVER HAS BEEN ESTABLISHED. RESEEDING SHALL BE PERFORMED AFTER 30 DAYS IF THE EXISTING CATCH IS INADEQUATE.

6. MANAGEMENT OF CONSTRUCTION ACTIVITIES – INSPECTION, MONITORING, AND MAINTENANCE

6.1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING, MONITORING, MAINTAINING, REPAIRING, REPLACING AND REMOVING ALL OF THE EROSION AND SEDIMENTATION CONTROLS THROUGHOUT THE PROJECT. MAINTENANCE, REPLACEMENT, AND ADDITIONAL MEASURES SHALL BE PROVIDED DURING THE CONDUCT OF THE PROJECT AS CONDITIONS WARRANT.

6.2. PERIODIC VISUAL INSPECTIONS SHALL BE MADE FOR EROSION CONTROL MEASURES AS FOLLOWS. DOCUMENT INSPECTIONS WITH PHOTOS AND REPORTS. PROVIDE COPIES OF PHOTOS AND REPORTS TO THE OWNER.

6.2.1. HAY BALE BARRIERS, SILT FENCE, AND STONE CHECK DAMS SHALL BE INSPECTED WEEKLY OR IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL AND SHALL BE RESTORED AS CONDITIONS WARRANT. SEDIMENT TRAPPED BEHIND THESE BARRIERS SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6" AND SHALL BE REDISTRIBUTED TO AREAS UNDERGOING FINAL GRADING.

6.2.2. RIPRAP APRONS SHALL BE INSPECTED WEEKLY OR AFTER EACH SIGNIFICANT RAINFALL AND RESTORED AS CONDITIONS WARRANT. SEDIMENT SHALL BE REMOVED FROM THESE FEATURES WHEN IT ATTAINS A DEPTH EQUAL TO 1/2 THE HEIGHT OF THE DESIGN STONE SIZE AND SHALL BE REDISTRIBUTED TO AN AREA UNDERGOING FINAL GRADING.

6.2.3. WEEKLY INSPECTIONS SHALL BE CONDUCTED OF ALL TEMPORARY AND PERMANENT SEEDED AREAS BY THE CONTRACTOR UNTIL 85% GRASS CATCH. NECESSARY REPAIRS AND RESTORATION SHALL BE PERFORMED TO ADDRESS LACK OF CATCH, EROSION, OR DETERIORATION.

6.3. LONG–TERM PROVISIONS FOR PERMANENT MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROL FACILITIES AFTER ACCEPTANCE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE OWNER OR THEIR DESIGNEE.

7. MANAGEMENT OF CONSTRUCTION ACTIVITIES – WINTER. IN THE EVENT THAT CONSTRUCTION OCCURS DURING THE PERIOD OF OCTOBER 15 THROUGH APRIL 15, THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION DURING WINTER CONDITIONS.

7.1. EXPOSED AREA SHALL BE LIMITED TO THOSE AREAS THAT CAN BE STABILIZED IN A ONE DAY PRIOR TO ANY SNOW EVENT. AT THE END OF EACH WORK WEEK, ALL DENUDED AREAS SHALL BE STABILIZED FOR THE WEEKEND PERIOD.

7.2. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 150 LB. PER 1000 S.F. OR DORMANT SEEDED, MULCHED, AND ANCHORED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.

7.3. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH A SLOPE GREATER THAN 8% OR AREAS OF CONCENTRATED FLOW INCLUDING DRAINAGE SWALES.

7.4. ALL DENUDED AREAS ARE TO BE COVERED WITH HAY MULCH WITH AN APPLICATION RATE TWICE THE NORMAL RATE. AND ANCHORED WITH FABRIC NETTING. THE PERIOD BETWEEN THE INSTALLATION OF FINAL GRADING AND PERMANENT RESTORATION SHALL BE A 15 DAY MAXIMUM.

7.5. FOR SEEDING IN WINTER CONDITIONS, THE FOLLOWING PROCEDURES SHALL BE FOLLOWED:

7.5.1. USE UNFROZEN LOAM MATERIAL.

7.5.2. REMOVE SNOW COVER GREATER THAN 1 INCH PRIOR TO LOAMING, SEEDING AND MULCHING SHALL NOT BE DONE OVER SNOW OR ICE COVER.

7.5.3. FOR PERMANENT SEEDING, ANNUAL WINTER RYE AT A RATE OF 1.2 LBS/1000 SQ.FT SHALL BE ADDED TO THE PREVIOUSLY NOTED DESIGN MIXES.

7.5.4. FOR TEMPORARY SEEDING, PROVIDE ANNUAL WINTER RYE AT A RATE OF 2.6 LBS/1000 SQ. FT. IN LIEU OF PREVIOUSLY NOTED DESIGN MIXES.

7.5.5. FERTILIZING, SEEDING AND MULCHING SHALL BE APPLIED ON THE SAME DAY AS LOAM INSTALLATION.

ISSUED FOR BID
NOT FOR CONSTRUCTION
JANUARY 5, 2017

JOINING SECTIONS OF SILT FENCES

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. INSPECT FOR SIGNS OF EROSION OR SEDIMENTATION. REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE, REPLACE PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AFTER EACH STORM EVENT AND WHEN DEPOSITS REACH APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.

1 C-501 TYPICAL SILTATION FENCE DETAIL
SCALE: NTS

NOTES:
1. INSTALL SILTSACK PER MANUFACTURER'S RECOMMENDATIONS.
2. SILTSACKS SHALL BE CHECKED FOR SEDIMENT LEVEL AND OVERALL CONDITION IMMEDIATELY AFTER EVERY RAIN EVENT AND AT LEAST EVERY DAY DURING PROLONGED RAINFALL.
3. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE SILTSACK. REMOVED SEDIMENT SHALL BE DISPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT WILL NOT ERODE.
4. SEDIMENT SHALL ONLY BE REMOVED BY REMOVING THE SILTSACKS FROM THE CATCH BASINS ACCORDING TO MANUFACTURER RECOMMENDATIONS.
6. CARE SHALL BE TAKEN TO AVOID SPILLING SEDIMENT WHILE REMOVING THE SILTSACK.
7. ANY DAMAGED SILTSACK SHALL BE REPLACED WITH A NEW SILTSACK.

2 C-501 INLET PROTECTION – SILT SACK DETAIL
SCALE: NTS
REF. DWG: C–102

STATE OF MAINE
CALEN B. COLBY
No. 6364
LICENSED
PROFESSIONAL ENGINEER
01/05/17

REV	DESCRIPTION	DWN	APP	DATE
C	RE-ISSUED FOR BID	BVD	CBC	01/05/17
B	RE-ISSUED FOR BID	BVD	JTR	10/28/16
A	ISSUED FOR BID	BVD	JTR	9/02/16

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64 BLUEBERRY ROAD, PORTLAND, ME

SCALE HOUSE WITH INSULATED BLOCK CONSTRUCTION

EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS

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SIZE: ANSI D
DATE: 09/02/2016
DES BY: MJL
DWN BY: BVD
CKD BY: JTR

PROJECT NO. 162.002.002
SHEET 6 OF 40
DRAWING NO. C-501

Reviewed for Code Compliance Inspection Division Portland, Maine
Date: 05/17/17
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