EROSION CONTROL NOTES GENERAL: MANNER THAT:

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

1. SOIL EROSION IS KEPT TO A MINIMUM. 2. NO SEDIMENT LEAVES THE CONSTRUCTION SITE PROPER 3. 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.
- 2. 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.
- 3. LOAM AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER DISTURBANCE. BUT NO LONGER THAN I DAYS. LOAM AND SEED ANY DISTURBED AREA WITHIN 15' OF WETLANDS OR WATERBODEIS WITHIN 48 HOURS OR PRIOR TO AND STORM EVENT. USE WINTER SEED RATES AND SPECIFICATIONS IF APPROPRIATE.
- 4. 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.
- 6. APPLY MULCH TO BARE SOILS WITHIN I 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 I 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.
- 8. 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:
 - -THE BASE OF GRASSED WATERWAYS -SLOPES STEEPER THAN 15%
 - -WITHIN 100 ft. OF STREAMS AND WETLANDS
- BETWEEN OCT. I AND APRIL 14 USE EROSION CONTROL MESH (OR MULCH AND NETTING) ON: -SIDE SLOPES OF GRASSED WATERWAYS -SLOPES STEEPER THAN 8%
- 9. INSTALL EROSION CONTROL MESH IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. MESH TO BE EQUAL TO NORTH AMERICAN GREEN PRODUCT CI25BN.
- 10. 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 STABLILIZATION OF REVEGETATED AREAS IS CONSIDERED AS 90% CATCH.
- 12. ALL CULVERT OR PIPE OUTFALL PROTECTION MUST BE INSTALLED WITHIN 48 HOURS OF INSTALLING NEW PIPE OR CULVERT.
- 13. 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.
- 14. ALL CATCH BASINS, NEW OR EXISTING, THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS MUST BE PROTECTED BY INSTALLING AND MAINTAINING SILT SACKS DURING CONSTRUCTION.
- 15. 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 DISCHARGES 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 UNDESIREABLE 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 MOOT STANDARD SPECIFICATION 117.09 PEAT HUMUS) (% BY VOLUME). 10 - 20

CALCIUM (CA) (% SATURATION)......60 - 80 MAGNESIUM (MG) (% SATURATION)...... 10 - 25 POTASSIUM (K) (% SATURATION)..... 2.1 - 3.0 PHOSPHORUS (P) (POUNDS/ACRE) 10 - 40 PH60 - 65

PERMEABILITY (INCHES PER HOUR).....3 - 10

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 117.03(a) METHOD NUMBER 3

TEMPORARY SEED:

OATS	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 (138 POUNDS PER 1000 SQUARE FEET). APPLY FERTILIZER (10-20-20) AT A RATE OF 800 POUNDS PER ACRE (18.4 POUNDS PER 1000 SQUARE FEET)

MULCH:

WOLCH.	
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

EXCELSIOR 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 I THROUGH APRIL IS. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 15% MATURE VEGETATION COVER OR RIP RAP BY NOVEMBER IS 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 I 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 PROCEEDING IS 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 LBG/1,000 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.

VELOCITY AREAS &

STEEP SLOPES

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.

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/1,000 S.F. (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 75% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER I AND ANCHORED WITH PLASTIC NETTING 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 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/1,000 SF. OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 15 LBS/1,000 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/1,000 S.F. (3 TONS/ACRE) AND ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH.

BETWEEN THE DATES OF NOVEMBER I 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 I, 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 EXCEPT 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/1,000 S.F. ON ALL SLOPES GREATER THAN 8%. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAT 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

6. SEEDING

BETWEEN THE DATES OF OCTOBER IS AND APRIL I, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. AFTER NOVEMBER I 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.

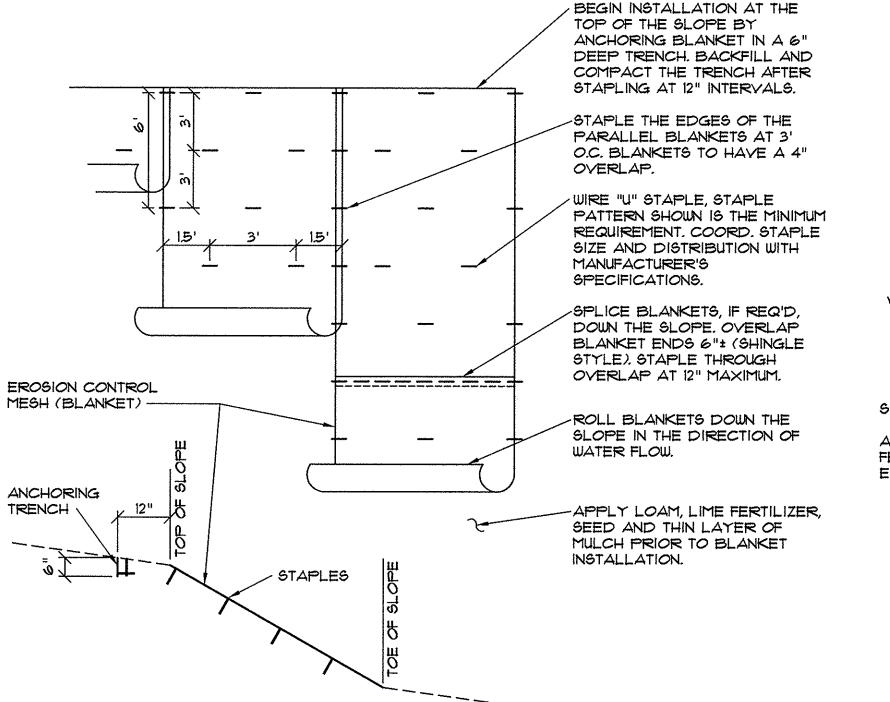
IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND BE SEEDED AT AN APPLICATION RATE OF 5 LBS/1000 SF. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75 % CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL AREAS DISTURBED IN THE WINTER SHALL BE YEGETATED IN THE SPRING.

T. TRENCH DEWATERING AND TEMPORARY STREAM DIVERSION

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 DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE.

8. INSPECTION AND MONITORING

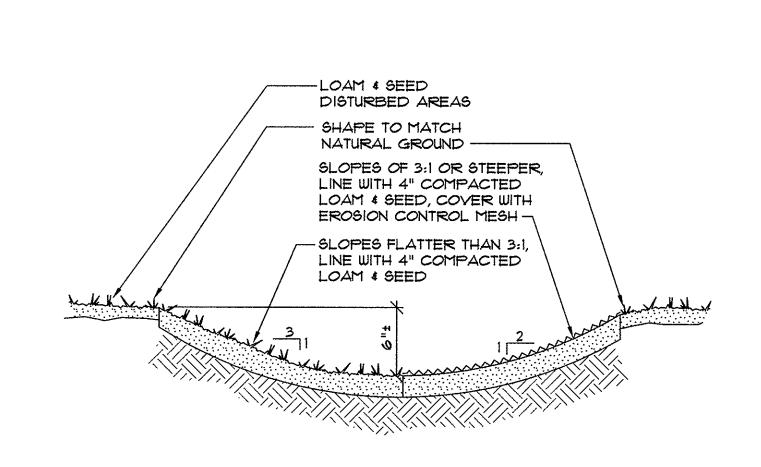
MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, 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.

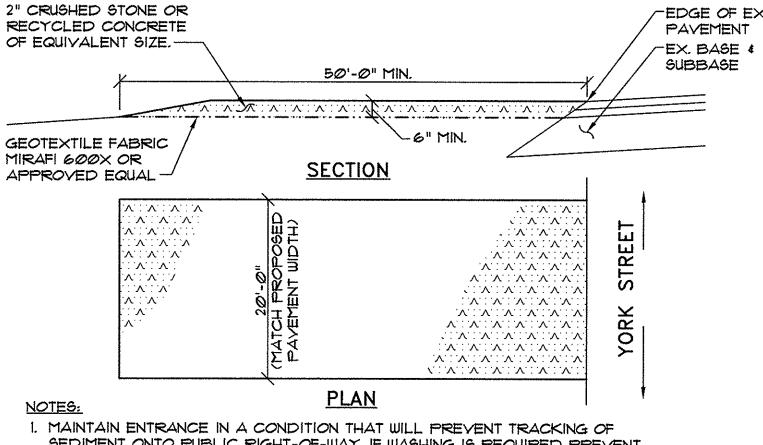


-SILT FENCE FABRIC HARDWOOD STAKES SPACED AT 6'-0" MAX. O.C. ON DOWNSTREAM SILT FENCE -LOAM AND SEED ANCHOR BOTTOM OF FENCE IN TRENCH WITH NOTE: SILT FENCE TO BE USED TO EXCAVATED MATERIAL. CONTROL SHEET FLOW IN AREAS LESS THAN 1/2 ACRE FLOW -SILT FENCE FABRIC My What STAKES OVERLAP JOINTS

ROSION CONTROL MESH INSTALLATION DETAIL NOT TO SCALE

NOT TO SCALE



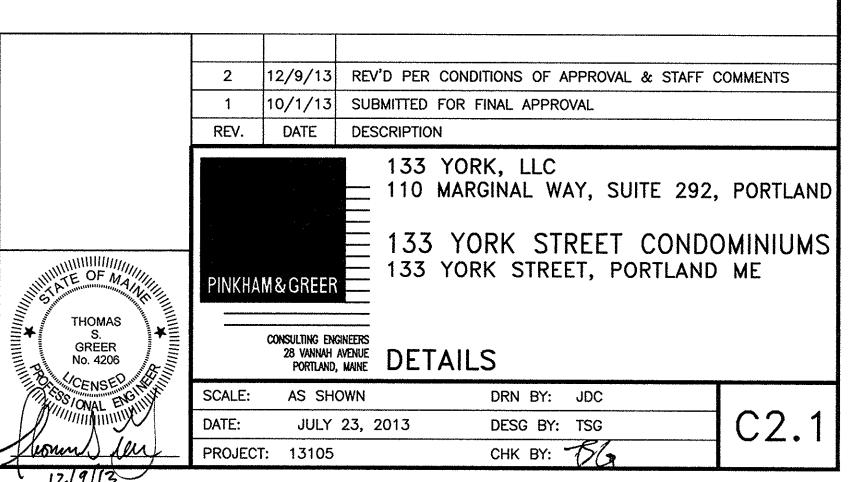


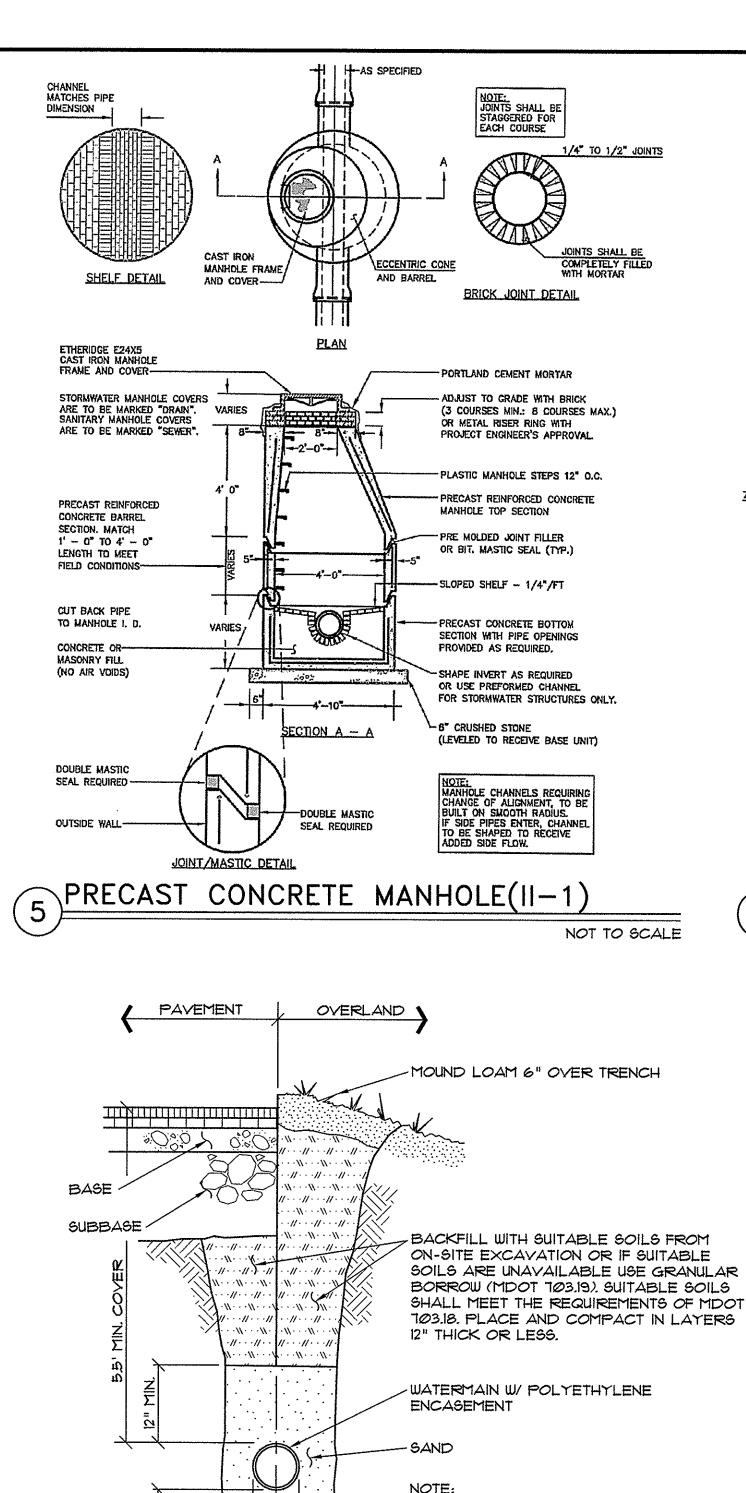
- SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. IF WASHING IS REQUIRED PREVENT SEDIMENT FROM ENTERING WATERWAYS, DITCHES OR STORM DRAINS.
- 2. REMOVE STABILIZED CONSTRUCTION ENTRANCE TO FINISH ROAD CONSTRUCTION & PAVING.

GRASS DITCH SECTION

NOT TO SCALE

STABILIZED CONSTRUCTION ENTRANCE DETAIL NOT TO SCALE





ALL MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE, LOCATED 8" FROM THE CENTER OF THE COVER. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER. 7/8" DIA. PICK HOLE FRAME PLAN VIEW PLAN VIEW ---8 **—22 3/8*—**→ SECTION A - A

CONCRETE IRON MANHOLE \bigcirc COVER & FRAME (II-5)

COVER

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

(homes) pur

12/9/13

MIN. WGT. 320 LBS.

SECTION B - B

POLYETHYLENE ENCASEMENT GENERAL SPECIFICATIONS

- 1. TUBE TYPE POLYETHYLENE ENCASEMENT SHALL BE INSTALLED ON ALL DUCTILE IRON PIPE AND FITTINGS IN ACCORDANCE WITH AWWA STANDARD CIØ5 - LATEST REVISION, METHOD A.
- 2. POLYETHYLENE ENCASEMENT SHALL BE EITHER LINEAR LOW-DENSITY POLYETHYLENE (LLDPE) FILM WITH A MINIMUM THICKNESS OF 8-MIL OR HIGH-DENSITY, CROSS-LAMINATED POLYETHYLENE (HDCLPE) FILM WITH A MINIMUM THICKNESS OF 4-MIL.
- 3. CIRCUMFERENTIAL WRAPS OF TAPE OR PLASTIC TIE STRAPS SHALL BE PLACED AT 2-FT. INTERVALS ALONG THE BARREL OF THE PIPE.
- 4. THE POLYETHYLENE ENCASEMENT SHALL PREVENT CONTACT BETWEEN THE PIPE AND THE SURROUNDING BACKFILL AND BEDDING MATERIAL BUT IS NOT INTENDED TO BE A COMPLETELY AIRTIGHT OR WATERTIGHT ENCLOSURE, ALL LUMPS OF CLAY, MUD, CINDERS, AND SO FORTH, ON THE PIPE SURFACE SHALL BE REMOVED PRIOR TO INSTALLATION OF THE POLYETHYLENE ENCASEMENT. DURING INSTALLATION, CARE SHALL BE EXERCISED TO PREVENT SOIL OR EMBANKMENT MATERIAL FROM BECOMING TRAPPED BETWEEN THE PIPE AND THE POLYETHYLENE.
- 5. THE POLYETHYLENE FILM SHALL BE FITTED TO THE CONTOUR OF THE PIPE TO EFFECT A SNUG, BUT NOT TIGHT, ENCASEMENT WITH MINIMUM SPACE BETWEEN THE POLYETHYLENE AND THE PIPE. SUFFICIENT SLACK SHALL BE PROVIDED IN CONTOURING TO PREVENT STRETCHING THE POLYETHYLENE WHERE IT BRIDGES IRREGULAR SURFACES, SUCH AS BELL-SPIGOT INTERFACES, BOLTED JOINTS, OR FITTINGS, AND TO PREVENT DAMAGE TO THE POLYETHYLENE DUE TO BACKFILLING OPERATIONS. OVERLAPS AND ENDS SHALL BE SECURED WITH ADHESIVE TAPE, STRING, PLASTIC TIE STRAPS, OR ANY OTHER MATERIAL CAPABLE OF HOLDING THE POLYETHYLENE ENCASEMENT IN PLACE UNTIL BACKFILLING OPERATIONS ARE COMPLETE.
- 6. THREE LAYERS OF POLYETHYLENE ADHESIVE TAPE SHALL BE WRAPPED AROUND ANY POLYWRAPPED PIPE WHERE A TAPPING MACHINE WILL BE PLACED, ALL COPPER SERVICES CONNECTED TO A PIPE WRAPPED IN POLYETHYLENE ENCASEMENT SHALL BE WRAPPED WITHIN THREE FEET OF THE PIPE.

UNDERGROUND UTILITIES WARNING TAPE

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES

COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT

GAS, OIL, STEAM, PETROLEUM OR GASEOUS MATERIALS

RECLAIMED WATER, IRRIGATION AND SLURRY LINES

ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 lbs. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED MANHOLES MAY BE CONSTRUCTED OF PRECAST

UNDERGROUND UTILITIES WARNING TAPE

THAT MAY BE EXPOSED BY THIS CONSTRUCTION.

PROPOSED EXCAVATION

SEWERS AND DRAIN LINES

POTABLE WATER

TEMPORARY SURVEY MARKINGS

OR EQUAL.

WHITE

ORANGE

PURPLE

GREEN

BLUE

APWA UNIFORM COLOR CODE:

IDENTIFICATION TAPE TO BE INSTALLED ABOVE ALL NEW UNDERGROUND UTILITIES AND ABOVE ANY EXISTING UTILITIES

DETECTABLE UNDERGROUND MARKING TAPE TO BE PERMANENT

TAPE, INTENDED FOR DIRECT-BURIAL SERVICE NOT LESS THAN

3" WIDE x 5 MILS THICK. PROVIDE TAPE WITH BLACK PRINTING

BRIGHT-COLORED, CONTINUOUS-PRINTED PLASTICIZED ALUMINUM

IDENTIFYING THE UTILITY. DETECTABLE WARNING TAPE REQUIRED

OVER ALL WATER, SEWER, DRAINAGE, OR GAS UTILITIES. TAPE TO BE TERRA TAPE BY REEF INDUSTRIES, INC., www.reefindustries.com,

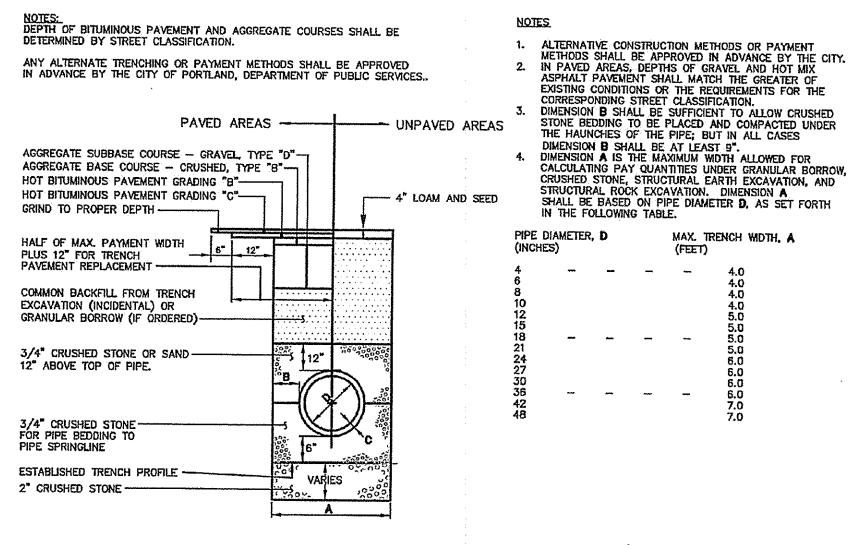
- REINFORCED CONCRETE, OR CAST IN PLACE.
- PRECAST REINFORCED CONE BARREL MANUFACTURED PER 4. ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE
- LOCATED 8" FROM THE CENTER OF THE COVER. 5. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER / DRAIN
- MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE ALL MANHOLE RISERS SHALL BE ETHERIDGE 24" OR
- APPROVED EQUAL
- SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA.

- 8. ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.
- 9. CATCH BASIN FRAMES FOR TYPE A4 CATCH BASIN CURB INLETS SHALL BE ETHERIDGE DR5A OR APPROVED EQUAL. 10. CASTINGS SHALL CONFORM TO ASTM DESIGNATION
- A48-CLASS 35. 11. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
- 12. ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A CASCO TRAP. SEE FIGURE 11-09.

NOT TO SCALE

GENERAL NOTES FOR

MANHOLES AND CATCH BASINS (II-4)



6 TYPICAL WATER MAIN SECTION ON-SITE

3'-0" MIN.

WATERSTOP TO BE INSTALLED IN

LEDGE TRENCHES, IN AREAS OF

SEE WATERSTOP DETAIL.

MORE THAN 2% SLOPE, FOR SPACING,

PAVEMENT OVERLAND MOUND LOAM 6" OVER TRENCH 0,00 - WARNING TAPE SUBBASE SAND GAS PIPELINE TRACER WIRE

PIPING TRENCH SECTION

GRAVITY WALL, BY REDI-ROCK® INTERNATIONAL LLC, 28" WIDE - LOAM & SEED ALL GRAVITY BLOCKS, AREAS DISTURBED BY STYLE: COBBLESTONE WALL CONSTRUCTION (www.redi-rock.com) --12" MIN. GRAVEL BACKFILL, MDOT TYPE C GROUND LEVEL -CRUSHED STONE BURY LEVELING PAD NOTE: WALL SUPPLIER TO PROVIDE WALL DESIGN PLAN AND DETAILS STAMPED BY A PROFESSIONAL ENGINEER

MODULAR BLOCK WALL

TYPICAL PIPE TRENCH INSTALLATION (11-12)

12/9/13 REV'D PER CONDITIONS OF APPROVAL & STAFF COMMENTS 10/1/13 SUBMITTED FOR FINAL APPROVAL 9/3/13 | REV'D PER STAFF REVIEW COMMENTS DATE DESCRIPTION 133 YORK, LLC 133 YORK STREET CONDOMINIUMS 133 YORK STREET, PORTLAND ME PINKHAM&GREEI **THOMAS** CONSULTING ENGINEERS GREER 28 VANNAH AVENUE DETAILS No. 4206 CENSE SCALE: AS SHOWN DRN BY: JDC DATE:

DESG BY: TSG

CHK BY: TS/

JULY 23, 2013

PROJECT: 13105

GRANITE CURB-QUARRY SPLIT FACE WITH TOP SAWN FINISH, MORTAR AT JOINTS. SET CURB AT BINDER COURSE FINISH GRADE OF PAVEMENT GRAVEL MDOT 703.06(A) TYPE A NOTES: MINIMUM LENGTH OF THE CURB SECTIONS SHALL BE 3'-0". 2. FOR ALL CURBS WITH RADIUS LESS THAN 15' INSTALL STONES CUT TO THE RADIUS REQUIRED (NOT STRAIGHT SECTIONS). SLOPED GRANITE CURB SECTION ON-SITE

NOT TO SCALE

NOT TO SCALE

