A UNDERDAMN PIPE: PROCEED LAYOUT OF THE PIPE I MADERIDAN SYSTEM IS NOTESESSED TO EFFECTIVE IN THE UNDERDAMN PIPE: NOTES THE PIPE INTER ANY THE PIPE IN LAPTONE DIR LAYOUT DIR PIPE INTERPIPE INTERP	1. SPECIFIC DESIGN CRITERIA	D. CONSTRUCTION SEQUENCE:
<ul> <li>B. PHE BERNING AND TRANSTRUM 2006. THE 4 THE NUMBER OF ADDRESS (LINE) AND TRANSTRUM 2007. THE DECEMPTORY DEPEND AND TRANSTRUM 2007. THE DECEMPT</li></ul>	DRAIN THE ENTIRE FILTER AREA. THERE MUST BE AT LEAST ONE LINE OF UNDERDRAIN PIPE FOR EVERY FIFTEEN FEET OF FILTER AREA'S WIDTH. THE SLOPE OF THE INSTALLED UNDERDRAIN PIPE MUST BE POSITIVE. THE UNDERDRAIN PIPING SHOULD BE 4" TO 6" SLOTTED, RIGID SCHEDULE 40 PVC OR SDR35.	COMMON REASON FOR F LIKELY TO RESULT IN THE MUST NOT BE INSTALLE STABILIZED WITH PAVEMI STABILIZATION. OTHERWI AROUND THE FILTER UNT ON A CASE-BY-CASE BAS
<ul> <li>CONTROLMENT THE INSTANCE CONSIGNATION OF THE STATE ALL STATES, CLEAK CONTROLMENT AND THE CONSIGNATION OF THE STATES ALL STATES AND THE CONSIGNATION OF TH</li></ul>	BE BEDDED IN 12 TO 14 INCHES OF UNDERDRAIN MATERIAL WITH AT LEAST 4 INCHES OF MATERIAL BENEATH THE PIPE AND 4 INCHES ABOVE. TWO OPTIONS FOR PIPE BEDDING ARE PROVIDED BELOW;	MATERIAL FROM THE UNS E. REMEDIAL LOAM COVER: TO INSTALL A 2-3 INCH LAY
<ul> <li>G. SUM ETTER RED. THE SOL THE WASTE OF A LOAT I BOLES DEPON TO OT THE GRAVEL UNCERSION.</li> <li>G. SUM ETTER RED. THE SOL THE WASTE OF A LOAT I GOLES DE MARE UNA BARE. IN SOLVEMENT I SOLVEMENT</li></ul>	SPECIFICATION 703.22 UNDERDRAIN TYPE B FOR UNDERDRAIN BACKFILL. THE MATERIAL MUST CONTAIN LESS THAN 5% FINES PASSING THE #200 SIEVE. NO TRANSITION ZONE IS NECESSARY SINCE THE DRAINAGE PIPE IS BEDDED IN LESS PERVIOUS GRAVEL AND THIS DESIGN IS ACCEPTABLE FOR AREAS WHERE THE HEAD OR DEPTH TO SEASONAL HIGH GROUNDWATER IS CLOSE TO THE BOTTOM OF THE DRAINAGE LAYER.	CONTROL MESH. <b>F. CONSTRUCTION OVERSIGHT</b> CONSTRUCTION BY TH SCARBOROUGH. AT A MIN -AFTER PRELIMINARY CONS
<ul> <li>B. BUK HETER HERM. SOL, MODI AND CONSTRUCT CONSTRUCT OF A LOAMY CONTRE EARL SOL OF AND SOLES ON THE CONTROL OF THE SOLE.</li> <li>B. ADRIVING SOLE THE CONTREL HAVE NOT AND ADDRET THAN BY BASENG THE AD BERK AND SOLES THAT AS THE ADDRET HAVE NOT ADDRET THAN BY BASENG THE AD BERK AND SOLES THAN AS HOURDER AND NO MORE THAN BY BASENG THE AD BERK AND SOLES THAN AS HOURDER AND NO MORE THAN BY BASENG THE AD BERK AND SOLES THAN AS HOURDER AND NO MORE THAN BY BASENG THE AD BERK AND SOLES THAN AS HOURDER AND NO MORE THAN BY BASENG THE AD BERK AND SOLES THAN AS HOURDER AND NO MORE THAN BY BASENG THE AD BERK AND SOLES THAN AS HOURDER AND NO MORE THAN BY DOLLAR THE END SOLE OF THE SOLE ADDRESS OF THAN AS HOURDER AND NO MORE THAN AS HOURDER AND NO MEET THAN AS HOURDER AND NO ADDRESS THAN AS HOURDER AND NO MEET THAN BY DOLLAR THE END SOLE ADDRESS OF THE SOLE ADDRESS OF THE</li></ul>	PIPE BEDDING AND MUST EXTEND ACROSS THE BOTTOM OF THE ENTIRE FILTER AREA. THIS SOIL MIXTURE SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS CAN BE MIXED WITHIN THE	-ALL MATERIAL USED FOR T
<ul> <li>Besult may be intermediate marks that are presented in the average and average and average and average and average and average aveave average average average average average average average ave</li></ul>	BE APPROVED BY THE DEPARTMENT; HOWEVER AN AGRICULTURAL SOURCE IS NOT ACCEPTABLE FOR THE	ENGINEER AFTER TES SPECIFICATIONS. G. TESTING AND SUBMITTALS:
<ul> <li>AM SCHWIEL, HE MURTURE WAY CONTAINS YOULWE HE FOLLOWING: BW OF SAMPHETOT RULE OLDEATING NUMERICAET FINE FOR THE MEDIA BW OF LOWARY FORTOXIL CONTENT: USE OF DUES WITH MOME HAN 2 is CLAY CONTENT COULD CAUGE FALLINE OF HE STREAM ADD CARE YOULD BE TAKENDISSIECULLY IN A BUCK VIENT FOLLOWING: BWAYNER CLAY CONTENT: USE OF DUES WITH MOME HAN 2 is CLAY CONTENT COULD CAUGE FALLINE OF HE STREAM ADD CARE YOULD BE TAKENDISSIECULLY IN A BUCK VIENT FOLLOWING: BWAYNER CLAY TAKET THE BAR WAY TO THE MURTE BE PREMABLE ENDUCHT TO INSURE DRAINES WITH HIM 58 HOURS MAN INSURE THE RATE OF THE MUST BE PREMABLE ENDUCHT TO INSURE DRAINES WITH STREAM OF 2 HOURS. MAN INSURE THE RATE OF THE MUST BE PREMABLE ENDUCHT TO INSURE DRAINES WITH STREAM OF 2 HOURS. MAN INSURE THE RATE OF THE MUST BE TRAINES WITH THE PRECENT MOME FOR CLAY CONTENT. MUR DRAINES WITH MUST BUY DRAINES WITH STREAM YOULNES OF A MUMMUM OF 2 HOURS. MAN INSURE THE RATE ON THE STREAM TO THE MUST AND INFORMATION OF 2 HOURS. MAN INSURE THE RATE ON THE STREAM TO THE PRECENT MUST BE TOR CLAY CONTENT. MUR DRAINES WITH MUST BUY DRAINES WITH STREAM YOULNE OF AN AUXIEMUM AT THE SURFEXIMANT MURT BUCK AND AND AND TAGED. A CONSTRUCTIVE ORDER TO RELEVEN WITH STREAM OF A HOURS. MAN INSURE THE RATE ON AND BOS'S STRUMORD PROCTOR JARY DRAINES WITH ADD ON DE 2 HINNE THE PROCEED TO THE PROCEED TO AN AUXIEMT TO THE HAVEN A PERMEADALITY. MAN INSURE THE RATE ON AND DA DO ORDER THE TITER THE DO OTHER HE SURFAUNDED FOR MURA YE WAY DA AUXIEMT TO THE HERE AND CLOCENING THE PARAMETER MUST BE ANNOWING THE RATE AND AUXIEMT AND AUXIEMT AND AUXIEMT AND AUXIEMT MUST BE ANNOWING THE RATE AND AUXIEMT AND AUXIEMT AND AUXIEMT MUST BE ANNOWING THE RATE AND AUXIEMT AND AUXIEMT AND AUXIEMT AND AUXIEMT MUST BE ANNOWING THE RATE AND AUXIEMT AND AUXIEMT AND AUXIEMT AND AUXIEMT MUST BE ANNOWING THE RATE AND AUXIEMT AND AUXIEMT AND AUXIEMT AND AUXIEMT MUST BE AN AUXIEMT AND AUXIEMT AND AUXIEMT AND AUXIEMT AND AUXIEMT AND AUXIEMT MUST BE AUXIEMT AND AUXIEMT AND AUXIEMT AND AUXIEMT</li></ul>	CLAY CONTENT OF LESS THAN 2%. THE SYSTEM MUST BE DESIGNED TO DRAIN THE SURFACE STORAGE	COMPONENT OF THE FI SUBMITTED TO THE PROJI SUBMIT SAMPLES OF EA SAMPLES OF THE UNDE DIFFERENT LOCATIONS ( DETERMINED BY THE TES
<ul> <li>AMARCE SIGULD DE TAKEN, ESPECIALLY IN AREAS WHERE THE PREDOMINANT SOIL CONTAINS MARINE CALL MARKE AND MOTOR SOLUSED IN THE MURTURE MAY CURVE CONTAINS AND EMOVIA.</li> <li>FILTER AND MOTORSOIL USED IN THE MURTURE MAY CURVE ON THE SURVINO, TO DISOLAD DANING'S WITHIN AN SOURD SOLUSED POLLUTAINTS. THE DESIGN MAY EITHER RELY ON THE SOIL PERMANDLUTY, IF KNOWN, TO DISOLAD DANING'S HUMAND AND ANY EITHER RELY ON THE SOIL PERMANDLUTY, IF KNOWN, TO CONTAINTS. THE DESIGN MAY EITHER RELY ON THE SOIL PERMANDLUTY, IF KNOWN, TO CONTAINTS. THE DESIGN MAY EITHER RELY ON THE SOIL PERMANDLUTY, IF KNOWN, TO CONTAINTS SOIL ORSINGTONE OREGAN WEREAS SOULD BE CON YLIGHTY.</li> <li>ARMANDAM YEAR SURVINCE CONSIDERED GRANDLUNG HUMANDRAIL MAREA SPECIAL MAYE A PERMEABULTY OF A HUMAN CONTAINTS. SOIL OF CONSIDERED GRANDLUNG THE SURVINCE AND AUXOCATION.</li> <li>ARMANDANTETSTING CHARACTER SOIL THE TAKEN COLLED FOR RELYEW BEFORE DUAL CALL AND CONTAINT TESTING OF THE SOIL FITE ANALY CONTERNAL CONTERNAL CALL AND CONTAINT TESTING OF THE PROVIDE TO THE PROVIDE TO CONTAINT. THE SINGE OF THE PLICE THE SOIL THE TAKEN COLLED FOR RELYEW BEFORE DUAL CALL AND CONTAINT TESTING OF THE RELYEM AND CLOCENING THE PLICE THE SURVINCE SOIL THE FARRE CONTELLE FARRE CALL AND CLOCENING THE PLICE THE SURVINCE SOIL THE FARRE CONTELLE FARRE CALL AND CLOCENING THE PLICE THE SURVINCE SOIL THE FARRE CONTELLE FARRE CALL AND CLOCENING THE PLICE THE SURVINCE SOIL THE FARRE CONTELLE FARRE CALL AND CLOCENING THE PLICE THE SURVINCE SOIL THE FARRE CONTELLE FARRE CALL AND CLOCENING THE PLICE THE SURVINCE SOIL THE FARRE CALL AND CLOCENING THE PLICE THE SURVINCE STATULT AND CLOCENING THE PLICE THE SURVINCE SOIL CONTAINT THE SURVINCE THAN THE SURVINCE SOIL THE FARRE SOLUL DOWN THE THE THE THE RELEVANCE SOULD CONTAINT THE THE SURVINCE THAN THE SURVINCE SOULD CONTAINT THE SURVINCE THAN THE SURVINCE THAN THE SURVINCE SOLUL PROVIDE THE THE THE THE SURVINCE SOLUL CONTAINT THE PLICE THE SURVINCE SOLUL CONTAINT THE THE THE SURVINCE THAN THE SURVINCE THAN THE SURVINC</li></ul>	65% OF SANDY (MEDOT #703.01 CONTAINS INSUFFICIENT FINE FOR THE MEDIA) 35% OF LOAMY TOPSOIL	(STANDARD TEST METHO TYPE OF THE SAMPLE MA 8% BY WEIGHT PASSING 1 GRAIN SIZE ANALYSIS) AN PERFORM A PERMEABILIT THE MIXTURE COMPACTEI
<ul> <li>F. HLTER PERMEABUITY. THE FUTTER MUST BE PERMEABLE PROVIDED CANNAGE WITHIN 48 HOURS MAXIMAM, VIET HAVE SUPERCISE THINS TO NUMBE FUTATION OF PINE PARTABLITY. IF WORK, TO DISSOLVED POLUTIATIS. THE EXEMPTION MAY ETHER RELY ON THE SOL PERMEABUITY. IF WORK, TO DISSOLVED POLUTIATIS. THE EXEMPTION MAY ETHER RELY ON THE SOL PERMEABUITY. IF WORK, TO DISSOLVED POLUTIATIS. THE EXEMPTION PORTEE OF RELY ON THE SOL PERMEABUITY. IF WORK, TO DISSOLVED POLUTIATIS. THE EXEMPTION OF THE RELAT. THE EXEMPTION PORTEE OF ALL MONES AND THE LIVEL COMPACIED BETWEEN SO AND SEX. STANDARD PROCTOR (ASIM DERIN, VIEL MORERRAN ON DIS BE ONLY LIVEL COMPACIED BETWEEN SO AND SEX. STANDARD PROCTOR (ASIM DERIN, VIEL MORERRAN ON DIS BE ONLY LIVEL COMPACIED BETWEEN SO AND SEX. STANDARD PROCTOR (ASIM DERIN, VIEL MORERRAN ON DIS ALL HAVE A PERMEABUITY OF 2 AIRWIN, TESTING C. GRADATION TESTS, INCLUDING HYDORMETER TESTING FOR LAY CONTENT, AND DEPEMERATIVITY TESTING OF THE SOLF INTER MITTARIAL, SHALL BE PERCENTING FOR CLAY CONTENT, AND DEPEMERATIVITY TESTING OF THE SOLF INTER MAREN SOL THE CHARGE FOR FULCE BETWEEN SOLF ROM MIGRATING ACCOUNTS AND SEARCH TO THE PROCEED INTERCENT THE SURGOUND AND AND AND AND CLOBEN THE UTHER AND CLOADERNA THE OUTET OVERLAP SEARCH WILL CAUSE COODING AND AND CLOADERN STICL THE PRACEMENT THE SURGOUND CONTENT THE SURGOUND CONTENT AND AND COMPACIEND AND CLOADERN THE UNIT A CONSERVATION MAY OF GRASS SPECIES IN THE BALL FEAR AND AND CLOADERN THE THE THE UTHER AND THE EXCLUDED WITH A CONSERVATION THE SUGLID CONTAIN THE THE ARRONG DE AN APPROVED EDUIVALENCE ON SERVICE MEETING FUNCTION AND ON ARE RELATED TO THE PLATER AND THE EXCLUDE AND MAXING THE AND AND AND CLOADER CONTINUE AND AND AND CLOADERN THE THE AND AND AND AND AND AND AND AND AND AND</li></ul>	AND CARE SHOULD BE TAKEN, ESPECIALLY IN AREAS WHERE THE PREDOMINANT SOIL CONTAINS MARINE	<b>3. MAINTENANCE CRITERIA</b> DURING THE FIRST YEAR,
<ul> <li>OF 24 INNE TO 4 INNE.</li> <li>S. GRADATION TESTING: GRADATION TESTI ICLUDING HYDROMETER TESTING FOR CLAY CONTENT. AND PERMABILITY TESTING: OF THE SOLE PLATER MATERIAL, SHALL BE PERFORMED BY A GUALIEED SOLE AND COMPACTION.</li> <li>M. GOETACTION.</li> <li>M. GOETACTICAL BERGING MITH SUTABLE CHARACTERISTICS MAY BE PLACED BETWEEN BOLL FROM MIGRATING INTO AND COGGING THE FLITTER AND CLOCENDS THE COULTER TO SURLING.</li> <li>M. GOETACTION.</li> <li>M. GOETACTION.</li></ul>	MAXIMUM, YET HAVE SUFFICIENT FINES TO INSURE FILTRATION OF FINE PARTICLES AND REMOVAL OF DISSOLVED POLLUTANTS. THE DESIGN MAY EITHER RELY ON THE SOIL PERMEABILITY, IF KNOWN, TO PROVIDE THE SLOW RELEASE OF THE WATER TREATMENT VOLUME OVER A MINIMUM OF 24 HOURS, OR MAY INSURE THIS RATE BY INSTALLING A CONSTRICTIVE ORIFICE OR VALVE ON THE UNDERDRAIN OUTLET. IN DETERMINING THE PERMEABILITY OF THE MEDIA, THE PERCENT FINES OF THE MIXTURE AND THE LEVEL OF COMPACTION SHOULD BE CONSIDERED. GENERALLY, THE SOIL MEDIA SHOULD BE ONLY LIGHTLY	EVENTS. DEBRIS AND SEDIMENT BL MOWING OF A GRASSED B ANY BARE AREA OR EROS
<ul> <li>PERMABILITY TESTING OF THE SOLF HITER MATERIAL, SHALL BE PERFORMED BY A GUALIFIED SOL TESTING LABORATORY AND SUBJOITTED TO THE PROJECT ENSINEER FOR REVIEW BEFORE PLACEMENTA AND COMPACTION.</li> <li>BEDERSTEINE CARE AND ADJACESH TOOL THE FOR REVIEW BEFORE PLACEMENT MUST BE A MINIMUM OF 12 INCHES DO NOT WEAP FABRIC OVER THE TOP OF THE PIPE BEDDING AS IT MUST BE A MINIMUM OF 12 INCHES DO NOT WEAP FABRIC OVER THE TOP OF THE PIPE BEDDING AS IT MUST BE A MINIMUM OF 12 INCHES DO NOT WEAP FABRIC OVER THE TOP OF THE PIPE BEDDING AS IT HAT IS TOLERANT OF FROMEWILL PREVENT FLOWS OUT OF THE FILTER. THE GEOTEXTILE FABRIC SHALL PLIER SHALL BE MULCHED WITH HAY OR AN EROSION CONTROL BLANKET. ANNUAL YOF HAS BEEN ADDE PLIER SHALL BE MULCHED WITH HAY OR AN EROSION CONTROL BLANKET. ANNUAL YOF HAS BEEN ADDE FILTER SHALL BE MULCHED WITH HAY OR AN EROSION CONTROL BLANKET. ANNUAL YOF HAS BEEN ADDE TO MANDIN YEAR HOLE AND WITH A CONSERVATION MIX OF GRASS SPECIES IN ADDECOMPTED LOAD LEDGE MUST BE PLANTED WITH A CONSERVATION MIX OF GRASS SPECIES IN ADDECOMPTED TO REPOLICE TO MADAICH DARIED SOLL DOWN THE STALLED ON THE IN ALL REPOLIENT IN A ADDECARGENER AND TYPE MATURE.</li> <li>IN OULCRASS SPECIES AND LEDRAT OF REPOLIENT IN ADDECARGENER AND TYPE MATURE.</li> <li>IN OLD CHART OF SEDIMENT HAY OF AN EROSION CONTROL BLANKET. ANNUAL YOF THE WOLLOW IT IT TAL TESTIC IS AN APPROVED EQUIVALENT COMPACING SEGONTY TO THE VOLUME IT IS HALL REPOLUE 16. IS BAS SQ.FT. TALL REPOLUE 16. IS BAS SQ.FT. TALL REPOLUE 16. IS BAS SQ.FT.</li> <li>INDUBERDENCAL DESIGN MANUAL CHAPTER 7.1, FLIETANION ERPORATION OF THE INSTALLED IN SHALL REMAIN CLEAR OF SEDIMENT UNTIL THE UPGRADIENT TRIBUTIOR ARE AND FINAL BEADING AS A SCHWENT THAN THE SUBLE FOR ASEDINGT TRIBUTION AND MICH ON AND AND THE STALLED IN AT LEAST 2. UNDERDRANAND ON CONTRET 7.1, FLIETANDE BE ADDIES AND AND INTERED TO ADDIES STRUCTION. AFTER EXCAVATION OF THE BASIN MAY BE EXCAVATED IN PREPARATION OF THE INSTALLED O A MO CONSTRUCTIVE ORIFICE.</li> <li>OUTLET BEADING AND WAD R</li></ul>	OF 2.4 IN/HR TO 4 IN/HR.	SEEDED AND MULCHED. MAINTAINING GOOD GRA EXCEEDS 48 HOURS, THE
<ul> <li>4. GEOTEXTLE FARRIC: A GEOTEXTLE FARRIC WITH SUITABLE CHARACTERISTICS MAY BE PLACED BETWEENTHAN THE SIDES OF THE FILTER LAVER AND AUACKINT SOLL THE FARRIC WILL REVENT THE SURROUNDING SOLL FROM MIGRATING INTO AND CLOGGING THE FILTER AND CLOGGING THE OUTLET. CVERLAP SURROUNDING SOLL FROM MIGRATING INTO AND CLOGGING THE FILTER AND CLOGGING THE OUTLET. CVERLAP SEARCH SHALL MUST BE A MINIMUM OF IX UNCHES, DO NOT WARP FARRIC OVER THE TOP OF THE FILE EADING. THE SURROUNDING BE EMRAFTING NE COLUMALENT.</li> <li>9. SOLL FILTER SURFACE MUST BE PLANTED WITH A CONSERVATION MIX OF CRASS SPEINS. THE SOL FILTER SHALL BE MULCHED WITH HWY OR AN EPOSION CONTROL BUNNET. ANNUAL RYE HAS BEEN ADDED TO RAPIDY ESTABLISH VIGETATION. AN APPROPRIATE SEED MUST THE SHOULD CONTAIN THE TALL REPOLUENT IN THE YOUR AN EPOSION CONTROL BUNNET. ANNUAL RYE HAS BEEN ADDED TO RAPIDY ESTABLISH VIGETATION. AN APPROPRIATE SEED MUST THE TALL REPOLUENT. IS AND AND AND AND AND AND AND AND AND AND</li></ul>	PERMEABILITY TESTING OF THE SOIL FILTER MATERIAL, SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE PROJECT ENGINEER FOR REVIEW BEFORE PLACEMENT	FILTRATION CAPACITY IF E
<ul> <li>VEGETATION: THE SOIL FILTER SURFACE MUST BE PLANTED WITH A CONSERVATION MIX OF GRASS SPECIES THAT IS TOLERARY OF FREQUENT INJUDATION AND WELL DRAINED SOILS. UPON SEEDING, THE SOIL FILTER STALLED WITH AY OR AN EROSION CONTROL BLANKET. ANNUAL RYE HAS BEEN ADDED TO RAPICLY ESTABLISH VEGETATION. AN APPROPRIATE SEED MIXTURE: SHOULD CONTAIN THE APPROPRIATE SEED MIXTURE:</li> <li>ANNUAL RYE 4.0 LIBSM, SO, FT. TALL FREQUE: 1.6 LIBSM, SO, FT. TALL FESCUE: 1.6 LIBSM, SO, FT. TALL FESCUE: 1.6 LIBSM, SO, FT. TOTAL 8.0 LIBSM, SO, FT. TALKER, TOTAL 8.0 LIBSM, SO, BURCH 8.0 LIBSM, SO, FT. TOTAL 8.0 LIBSM, SO, BURCH 8.0 LIBSM, SO, FT. TOTAL 8.0 LIBSM, SO, FT. TO</li></ul>	THE SIDES OF THE FILTER LAYER AND ADJACENT SOIL. THE FABRIC WILL PREVENT THE SURROUNDING SOIL FROM MIGRATING INTO AND CLOGGING THE FILTER AND CLOGGING THE OUTLET. OVERLAP SEAMS MUST BE A MINIMUM OF 12 INCHES. DO NOT WRAP FABRIC OVER THE TOP OF THE PIPE BEDDING AS IT WILL CAUSE CLOGGING AND WILL PREVENT FLOWS OUT OF THE FILTER. THE GEOTEXTILE FABRIC SHALL	ARE INCLUDED WITH PERI <b>B. SOIL FILTER INSPECTION</b> : T FIRST YEAR TO BE SURE I AT LEAST ONCE EVERY SI
<ul> <li>ANNUAL RYE 1.4.0 LISSM. SQ. FT. TALL FEGULE 1.6 LISSM. SQ. FT.</li> <li>MORE DESCUE 1.6 LISSM. SQ. FT.</li> <li>NOCK FOREBAY: A ROCK FOREBAY IS RECOMMENDED TO REDUCE FLOW VELOCITY INTO THE VOLUME III. BMPS TECHNICAL DESIGN MANUAL CHAPTER 7.1, FILTRATION BMP- GRASSED FILTER BASIN BASIN. IT SHALL REMAIN CLEAR OF SEDMENT UNTIL THE UPGRADIENT TRIBUTARY AREA IS FULLY VEGETATED.</li> <li>CONSTRUCTION CRITERIA</li> <li>A BASIN EXCAVATION: THE AREA OF THE BASIN MAY BE EXCAVATED IN PREPARATION OF THE INSTALLED AT THE APPROPRIATE LEVATION AND CAN BE USED FOR A SEDIMENT TRAP FROM THE SITE DURING CONSTRUCTION. AFTER EXCAVATION: OF THE BASIN IMAY BE EXCAVATED IN PREPARATION OF THE INSTALLED AT THE APPROPRIATE LEVATION AND CAN BE USED FOR A SEDIMENT TRAP FROM THE SITE DURING CONSTRUCTION. AFTER EXCAVATION: OF THE BASIN TRAP OFTICETED WITH A SEDIMENT TRAP INTO HE SITE DURING CONSTRUCTION. AFTER EXCAVATION OF THE BASIN INATY BE EXCAVATED IN PREPARATION OF THE INSTALLED AT THE APPROPRIATE LEVATION AND PROTECTED WITH A SEDIMENT TRAP INTO HE SITE DURING CONSTRUCTION. AFTER EXCAVATION OF THE BASIN TRAP OFTICETED WITH A SEDIMENT TRAP INTO HE SITE DURING CONSTRUCTION. AFTER EXCAVATION OF THE BASIN DATO PROTECTED WITH A SEDIMENT THE BASIN IS TO BE USED AS A SEDIMENT TRAP. THE SIDES OF THE EMBANYMENTS MUST BE MULCHED AND MAINTAINED TO PREVENT PROVENT TRAP. THE SIDES OF THE EMBANYMENTS MUST BE MULCHED AND MAINTAINED TO PREVENT PROVENT TRAP. THE SIDES OF THE FULTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A COMPACTED TO BETWEEN DAND 42% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF INCHES TO PREVENT POCKETS OF LODGE MEDIA.</li> <li>COMPACTED TO BETWEEN DAND 42% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED BY A CONSTRUCTIVE ORIFICE.</li> </ul>	I. VEGETATION: THE SOIL FILTER SURFACE MUST BE PLANTED WITH A CONSERVATION MIX OF GRASS SPECIES THAT IS TOLERANT OF FREQUENT INUNDATION AND WELL DRAINED SOILS. UPON SEEDING, THE SOIL FILTER SHALL BE MULCHED WITH HAY OR AN EROSION CONTROL BLANKET. ANNUAL RYE HAS BEEN ADDED TO RAPIDLY ESTABLISH VEGETATION. AN APPROPRIATE SEED MIXTURE SHOULD CONTAIN THE	C. SOIL FILTER REPLACEMENT MATERIAL WHEN WATER F
TALL RED FESCUE       1.6       LBSM. SQ. FT.         BIRDSPOT TREFOIL       0.8       LBSM. SQ. FT.         1. ROCK FOREBAY: A ROCK FOREBAY IS RECOMMENDED TO REDUCE FLOW VELOCITY INTO THE VOLUME II: BMPS TECHNICAL DESIGN MANUAL CHAPTER 7.1, FLITRATION BMP- GRASSED FILTER BASIN BASIN BIT. SHALL REMAIN CLEAR OF SEDIMENT UNTIL THE UPGRADIENT TRIBUTARY AREA IS FULLY VEGETATED.       F. FERTILIZITON: FFERT ABSIN EXCAVATION: THE AREA OF THE BASIN MAY BE EXCAVATED IN PREPARATION OF THE INSTALLATION OF THE UNDERDRAIN AND CAN BE USED FOR A SEDIMENT TRAP FROM THE SITE DURING CONSTRUCTION. AFTER EXCAVATION OF THE BASIN MAY BE EXCAVATED IN PREPARATION OF THE INSTALLATION OF THE UNDERDRAIN AND CAN BE USED FOR A SEDIMENT TRAP FROM THE SITE DURING CONSTRUCTION. AFTER EXCAVATION OF THE BASIN MAY BE EXCAVATED IN PREPARATION OF THE INSTALLATION OF THE APPROPRIATE ELEVATION AND PROTECTED WITH A SEDIMENT BARRIER. IF THE BASIN IS TO BE USED AS A SEDIMENT TRAP, THE SIDES OF THE EMBANKMENTS MUST BE MULCHED AND MAINTAINED TO PREVENT EROSION.       A DETAILED O & M COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90 AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2.LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA.         C. OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A CONSTRUCTIVE ORIFICE.       MUDERDRAIN WILL BE CONTROLLED BY A	ANNUAL RYE 4.0 LBS/M. SQ. FT.	SEDIMENTS SHOULD BE D
1. ROCK FOREBAY: A ROCK FOREBAY IS RECOMMENDED TO REDUCE FLOW VELOCITY INTO THE VOLUME II: BMPS TECHNICAL DESIGN MANUAL CHAPTER 7.1, FILTRATION BMP. GRASSED FILTER BASIN BASIN I SHALL REMAIN CLEAR OF SEDIMENT UNTIL THE UPGRADIENT TRIBUTARY AREA IS FULLY VEGETATED. 2. CONSTRUCTION CRITERIA  4. BASIN EXCAVATION: THE AREA OF THE BASIN MAY BE EXCAVATED IN PREPARATION OF THE INSTALLATION OF THE UNDERDRAIN AND CAN BE USED FOR A SEDIMENT TRAP FROM THE SITE DURING CONSTRUCTION. AFTER EXCAVATION OF THE BASIN, THE OUTLET STRUCTURE AND PIPING SYSTEM MUST BE INSTALLED AT THE APPROPRIATE ELEVATION AND PROTECTED WITH A SEDIMENT BARRIER. IF THE BASIN IS TO BE USED AS A SEDIMENT TRAP, THE SIDES OF THE EMBANKMENTS MUST BE MULCHED AND MAINTAINED TO PREVENT EROSION.  3. COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90 AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF PREVENT POCKETS OF CLOOSE MEDIA.  5. OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A CONSTRICTIVE ORIFICE.  5. UNDERDRAINED GRASSED SOIL FILTER CONSTRUCTION NOTES STRUCTURE	TALL RED FESCUE     1.6     LBS/M. SQ. FT      BIRDSFOOT TREFOIL     0.8     LBS/M. SQ. FT.	E. MOWING: IF MOWING IS DES THE FILTER (NO TRACTO
A. BASIN EXCAVATION: THE AREA OF THE BASIN MAY BE EXCAVATED IN PREPARATION OF THE INSTALLATION OF THE UNDERDRAIN AND CAN BE USED FOR A SEDIMENT TRAP FROM THE SITE DURING CONSTRUCTION. AFTER EXCAVATION OF THE BASIN, THE OUTLET STRUCTURE AND PIPING SYSTEM MUST BE INSTALLED AT THE APPROPRIATE LEVATION AND PROTECTED WITH A SEDIMENT BARRIER. IF THE BASIN IS TO BE USED AS A SEDIMENT TRAP, THE SIDES OF THE EMBANKMENTS MUST BE MULCHED AND MAINTAINED TO PREVENT EROSION. 3. COMPACTION OF SOLL FILTER: FILTER SOLL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90 AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA. 3. OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A CONSTRUCTIVE ORIFICE. 3. OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A CONSTRUCTIVE ORIFICE. 3. OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A CONSTRUCTIVE ORIFICE. 3. OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A CONSTRUCTIVE ORIFICE. 3. UNDERDRAINED GRASSED SOIL FILTER CONSTRUCTION NOTES STRUCTURE	BMPS TECHNICAL DESIGN MANUAL CHAPTER 7.1, FILTRATION BMP- GRASSED FILTER BASIN BASIN. IT	GROWING SEASON TO MA <b>F. FERTILIZATION:</b> FERTILIZAT ABSOLUTELY NECESSARY
OF THE UNDERDRAIN AND CAN BE USED FOR A SEDIMENT TRAP FROM THE SITE DURING CONSTRUCTION. AFTER EXCAVATION OF THE BASIN, THE OUTLET STRUCTURE AND PIPING SYSTEM MUST BE INSTALLED AT THE APPROPRIATE ELEVATION AND PROTECTED WITH A SEDIMENT BARRIER. IF THE BASIN IS TO BE USED AS A SEDIMENT TRAP, THE SIDES OF THE EMBANKMENTS MUST BE MULCHED AND MAINTAINED TO PREVENT EROSION. 3. COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90 AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA. 3. OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A CONSTRUCTIVE ORIFICE. 3. OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A CONSTRUCTIVE ORIFICE.		G. HARVESTING AND WEEDING OCCASIONALLY. WEEDING
COMPACTED TO BETWEEN 90 AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA. C. OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A CONSTRICTIVE ORIFICE.	OF THE UNDERDRAIN AND CAN BE USED FOR A SEDIMENT TRAP FROM THE SITE DURING CONSTRUCTION. AFTER EXCAVATION OF THE BASIN, THE OUTLET STRUCTURE AND PIPING SYSTEM MUST BE INSTALLED AT THE APPROPRIATE ELEVATION AND PROTECTED WITH A SEDIMENT BARRIER. IF THE BASIN IS TO BE USED AS A SEDIMENT TRAP, THE SIDES OF THE EMBANKMENTS MUST BE MULCHED AND MAINTAINED TO	NEW MULCH ONLY AS NEC A DETAILED O & M SCHE CCSWCD AND IS SUBJECT
C. OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A CONSTRUCTIVE ORIFICE.	COMPACTED TO BETWEEN 90 AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST	
UNDERDRAINED GRASSED SOIL FILTER CONSTRUCTION NOTES STRUCTUR	C. OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN WILL BE CONTROLLED BY A	
		DTES STRUCTURE

EROSION AND SEDIMENTATION FROM UNSTABLE SUBCATCHMENTS IS THE MOST FILTER FAILURE. NOT HEEDING THE CONSTRUCTION SEQUENCING CRITERIA IS E NEED TO REPLACE THE SOIL FILTER. THE SOIL FILTER MEDIA AND VEGETATION ED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY IENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT ISE, THE RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA MUST BE DIVERTED TIL STABILIZATION IS COMPLETED UNLESS THE DEPARTMENT HAS DETERMINED, SIS, THAT SUFFICIENT MEASURES ARE BEING TAKEN TO PREVENT EROSION OF STABLE CATCHMENT AREA AND DEPOSITION ON THE FILTER.

O RAPIDLY ESTABLISH VEGETATION IN THE FILTER AREA, THE CONTRACTOR WILL YER OF SANDY LOAM TOPSOIL (WITH LESS THAN 2% CLAY AS TESTED VIA OVE THE GRASS FILTER PRIOR TO SEEDING, MULCHING, AND ANCHORING EROSION

**T:** INSPECTION OF THE FILTER BASIN SHALL BE PROVIDED FOR EACH PHASE OF HE DESIGN ENGINEER WITH REQUIRED REPORTING TO THE TOWN OF HIMUM, INSPECTIONS WILL OCCUR: STRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE

CKFILLED; R IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA; AS BEEN INSTALLED AND SEEDED;

AND THE CONTRACTOR SHALL DEVELOP A PLAN TO ESTABLISH TURF IN THE

THE CONSTRUCTION OF THE FILTER BASIN WILL BE APPROVED BY THE DESIGN STS BY A CERTIFIED LABORATORY SHOW THAT THEY ARE PASSING DEP

THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH ILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE ECT ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL:

ACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND ERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE STING LABORATORY. PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136 DD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES; 1996A) ON EACH ATERIAL. THE RESULTING SOIL FILTER MEDIA MIXTURE MUST HAVE NO MORE THAN THE #200 SIEVE, A CLAY CONTENT OF LESS THAN 2% (DETERMINED HYDROMETER ID HAVE 10% DRY WEIGHT OF ORGANIC MATTER.

TY TEST ON THE SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2434 WITH ED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698.

, THE BASIN WILL BE INSPECTED SEMI-ANNUALLY AND FOLLOWING MAJOR STORM

UILDUP SHALL BE REMOVED FROM THE FOREBAY AND BASIN AS NEEDED.

BASIN CAN OCCUR SEMIANNUALLY TO A HEIGHT NO LESS THAN 6 INCHES.

SION RILLS SHALL BE REPAIRED WITH NEW FILTER MEDIA OR SANDY LOAM THEN

ASS COVER WILL MINIMIZE CLOGGING WITH FINE SEDIMENTS AND IF PONDING E TOP OF THE FILTER BED MUST BE ROTOTILLED TO REESTABLISH THE SOIL'S EXTENDED PONDING IS OBSERVED.

AN AGENT OF SCARBOROUGH PROPERTY HOLDINGS, LLC IS RESPONSIBLE FOR ANNING ANY UNDERDRAINED FILTER. OTHER STORMWATER O&M REQUIREMENTS MIT APPLICATION.

THE SOIL FILTER SHOULD BE INSPECTED AFTER EVERY MAJOR STORM IN THE IT IS FUNCTIONING PROPERLY. THEREAFTER, THE FILTER SHOULD BE INSPECTED IX MONTHS TO ENSURE THAT IT IS DRAINING WITHIN 48 HOURS FOLLOWING A ONE ER. AND THAT FOLLOWING A STORMS THAT FILL THE SYSTEM TO OVERFLOW, IT N 36 TO 60 HOURS. IF THE SYSTEM DRAINS TOO FAST, AN ORIFICE MAY NEED TO RDRAIN OUTLET OR, IF ALREADY PRESENT, MAY NEED TO BE MODIFIED.

**I**: THE TOP SEVERAL INCHES OF THE FILTER SHALL BE REPLACED WITH FRESH PONDS ON THE SURFACE OF THE BED FOR MORE THAN 72 HOURS. THE REMOVED DISPOSED OF IN AN ACCEPTABLE MANNER.

MENT AND PLANT DEBRIS SHOULD BE REMOVED FROM THE PRETREATMENT INUALLY.

SIRED, ONLY HANDHELD STRING TRIMMERS OR PUSH-MOWERS ARE ALLOWED ON OR) AND THE GRASS BED SHOULD BE MOWED NO MORE THAN 2 TIMES PER

TION OF THE UNDERDRAINED FILTER AREA SHOULD BE AVOIDED UNLESS Y TO ESTABLISH VEGETATION.

: HARVESTING AND PRUNING OF EXCESSIVE GROWTH WILL NEED TO BE DONE G TO CONTROL UNWANTED OR INVASIVE PLANTS MAY ALSO BE NECESSARY. ADD CESSARY FOR BIORETENTION CELL.

EDULE ACCOMPANIES THIS APPLICATION. THE O & M IS TO BE COMPLETED BY TO PERIODIC REVISIONS.

	6	08.03.15	FINAL PLANS ISSUED TO CITY OF PORTLAND, ISSUED FOR CONSTRUCTION		
	5	07.22.14	REMOVED ALL DETAILS ADDED NOTES AND SUBMITTED AMENDED PLANS TO CITY AND MEDEP		
	4	05.03.13	REVISED AND RESUBMITTED TO CITY		
	3	04.18.13	REVISED PER CITY STAFF COMMENTS		
	2	04.09.13	SUBMITTED TO MEDEP STORMWATER DISCHARGE PERMIT		
	1	03.28.13	SUBMITTED TO CITY OF PORTLAND		
R	REV	DATE	DESCRIPTION		
Г	REVISIONS				

PROJECT MULTI-USE DEVELOPMENT FST FAY, SPOFFORD & THORN	
STEPHEN R       2282 CONGRESS ST., PORTLAND, ME         SHEET TITLE       SHEET TITLE	STS
STORMWATER MANAGEMENT: GRASSED UNDERDRAINED FILTER DETAILS       DRAWN:       CMW       DATE:       OCTOBER 2013         DESIGNED:       SRB       SCALE:       N.T.S.         CLIENT       CJ DEVELOPERS, INC.       CHECKED:       SRB       JOB NO.       3118         DE STERDHEN DUSHEX       STORMWATER MANAGEMENT: GRASSED       CHECKED:       SRB       SCALE:       N.T.S.	