SCALE: 1" = 20'

STORMWATER MANAGEMENT SUMMARY TABLE REQUIRED PROVIDED ELEVATION REMARKS REQUIREMENT | AREA (Ac) WQv (cf) 762 (0.02 OF 0.55 AC. UNDISTURBED) 101.40 STRUCTURAL TREATMENT; STONE TRENCH BELOW STORAGE STRUCTURE (1'-5" DEPTH) 0.55 Cpv (cf) NA 1-YR STORM 1.2 CFS < 2.0 CFS Qp10 (cfs) 2.09 | 106.49 | 10-YR MANAGEMENT, < 2% INCREASE Qf (cf) 3.39 | 3.29 | 108.72 | 100-YR MANAGEMENT

DRAINAGE AREA (TO FACILITY): 0.36 Ac±
TOTAL SITE AREA: 0.55 Ac± WATERSHED: GWYNNS FALLS WITHIN CRITICAL AREA: NO QUANTITY MANAGEMENT: Qf (100-YR MANAGEMENT) CLASSIFICATION: NON-378

STORMWATER MANAGEMENT FACILITY MAINTENANCE REQUIREMENTS

- THE FACILITY SHALL BE INSPECTED MONTHLY. VISUAL INSPECTION OF ALL COMPONENTS SHALL BE COMPLETED BY THE OWNER. THE OWNER SHALL KEEP NOTES OF EACH INSPECTION.
- 2. THE FACILITY SHALL BE KEPT FREE OF TRASH INCLUDING ALL AREAS DISCHARGING INTO THE FACILITY.
- 3. ALL REQUIRED MAINTENANCE SHALL BE PERFORMED BY THE OWNER, AT THE OWNER'S EXPENSE.

LEGEND:

EX. PROPERTY LINE ————— EX. EDGE OF PAVING PROP. CURB & GUTTER ------ PROP. PAVING/WALK EX. STORM DRAIN = EX. SANITARY PROP. 15" RCCP PROP. STORM DRAIN PROP. WHC PROP. WATER — S PROP. SHC PROP. SEWER - - $\frac{250}{}$ - - EX. CONTOURS PROP. CONTOURS

●●●●●●●● • LIMIT OF DISTURBANCE

DEVELOPER'S / LANDOWNER'S CERTIFICATION

I / WE HEREBY CERTIFY THAT ALL PROPOSED WORK SHOWN ON THESE CONSTRUCTION DRAWING(S) AND APPROVED SEDIMENT CONTROL DRAWING(S) WILL BE ACCOMPLISHED PURSUANT TO THESE PLANS. I/WE ALSO UNDERSTAND THAT IT IS MY/OUR RESPONSIBILITY TO HAVE THE CONSTRUCTION SUPERVISED AND CERTIFIED INCLUDING THE SUBMITTAL OF "AS-BUILT" PLANS WITHIN THIRTY (30) DAYS OF COMPLETION, BY A REGISTERED PROFESSIONAL ENGINEER.

PRINT NAME PHONE No. **ADDRESS** DATE SIGNATURE

ENGINEER'S CERTIFICATION

SIGNATURE

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED BY ME OR UNDER MY SUPERVISION AND MEETS THE MINIMUM STANDARDS OF BALTIMORE CITY DEPARTMENT OF PUBLIC WORKS REQUIREMENTS AND SPECIFICATIONS.

	30 E. PADONIA ROAD, SUITE 500 TIMONIUM, MD 21093	410-560-1502
ENGINEER PRINT NAME	ADDRESS	PHONE No.

LICENSE No.

MAINTENANCE AND LIABILITY

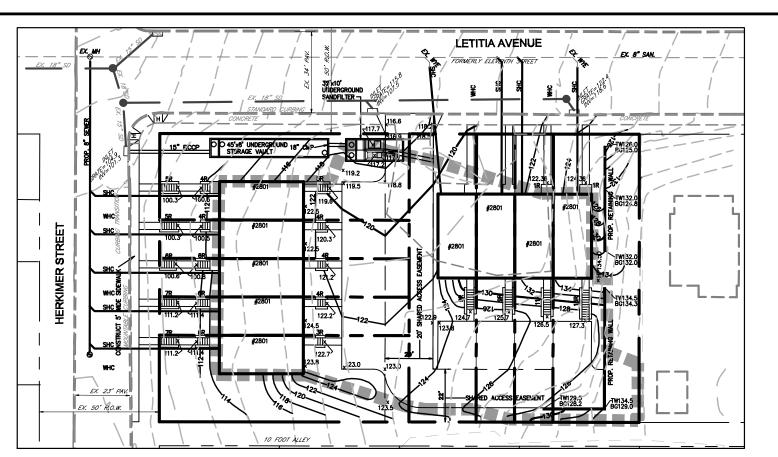
MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITY AND APPURTENANT DRAINAGE STRUCTURE SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE PROPERTY OWNER SHALL ALSO BE FULLY LIABLE FOR ALL DAMAGES OR INJURIES THAT MAY BE SUSTAINED BY ANY PERSON OR PROPERTY AS A RESULT OF ANY FAILURE OR MALFUNCTION OF THE STORMWATER MANAGEMENT FACILITY AND APPURTENANCES.

OWNER/DEVELOPER PRINT NAME **ADDRESS** PH□NE No. SIGNATURE

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

PRINT NAME	ADDRESS	PHONE
GIGNATURE		DATE



DRAINAGE AREA MAP

SCALE: 1" = 40' GRASS COVER LIMIT OF PAVING SANDFILTER TOP HATCH MH4 GRASS COVER MH5 LIMIT OF PAVING UNDER & ROUND SANDFILTER GRASS COVER

GRATE /ACCESS DOOR PAVING DETAIL

GENERAL NOTES

- . EXISTING UTILITIES ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR AND THE COMPLETENESS OR ACCURACY OF THE SAME IS NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES BEFORE TRENCH EXCAVATION BEGINS. HE SHALL PROTECT SERVICE CONNECTIONS AND MAINTAIN THEIR UNINTERRUPTED SERVICE. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY. THE COST OF SUCH REPAIRS SHALL BE BORNE
- 2. THE EXISTING FEATURES WITHIN THE DEVELOPMENT ENVELOPE ON THIS DRAWING WERE GENERATED FROM FIELD TOPOGRAPHY COMPLETED BY DIETZ SURVEYING, INC. ON
- 3. PROPERTY LINES SHOWN ON THIS PLAN ARE ONLY APPROXIMATE AND SHOULD NOT BE USED FOR THE ESTABLISHMENT OF THE BOUNDARY OR PROPERTY CORNERS.
- 4. CONTRACTOR IS TO CONTACT "MISS UTILITY" (1-800-257-7777) 72 HOURS PRIOR TO THE START OF CONSTRUCTION. 5. STAKEOUT TO BE PERFORMED BY A REGISTERED PROFESSIONAL LAND SURVEYOR OR A
- REGISTERED PROFESSIONAL ENGINEER (STAKEOUT TO INCLUDE ALL SERVICES). 6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OCCUPATIONAL SAFETY LAWS. SEE BALTIMORE COUNTY STANDARD SPECIFICATIONS.

STORM DRAIN NOTES

- 1. ALL WORK WITHIN THE CITY RIGHT OF WAY SHALL BE ACCOMPLISHED IN ACCORDANCE WITH "SPECIFICATIONS" AND "BOOK OF STANDARDS" FOR THE CITY OF BALTIMORE, DEPARTMENT OF PUBLIC WORKS.
- 2. OBSTRUCTIONS SHOWN ON THIS DRAWING ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND THE CITY DOES NOT WARRANT OR GUARANTEE THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION GIVEN. THE CONTRACTOR MUST VERIFY ALL SUCH INFORMATION TO HIS OWN SATISFACTION.
- 3. BEFORE DOING ANY DIGGING, NOTIFY THE FOLLOWING: "MISS UTILITY" 1-800-257-7777 BUREAU OF TRANSPORTATION, STREET LIGHTING MAINT. SECTION, BILL COLBERT,
- 410-396-5965 BUREAU OF TRANSPORTATION, CONDUIT MAINT. SECTION, JEFF HARTMAN 410-396-1515 4. ALL CHANNELS IN MANHOLES MUST BE CONSTRUCTED TO CONFORM, AS CLOSE AS
- POSSIBLE, TO THE STANDARD CHANNELS CALLED FOR ON THE PROFILES. A GRAVEL CRADLE IS REQUIRED UNDER ALL PIPING EXCEPT INLET CONNECTIONS. ALL BACKFILL SHALL BE MECHANICALLY TAMPED. SEE THE BALTIMORE CITY BOOK FOR STANDARD DETAILS. 5. STANDARD STORM MANHOLES WITH A DIFFERENCE IN INVERT ELEVATIONS OF LESS THAN 12 INCHES SHALL BE BUILT AND REBUILT IN ACCORDANCE WITH STANDARD DETAIL BC 383.01
- . NOTIFY STREET LIGHTING MAINTENANCE ON 410-396-1311 PRIOR TO STARTING WORK. . THE TRANSPORTATION MAINTENANCE DIVISION MAINTAINS STREET LIGHT POLES AND CABLE I THESE AREAS. STREET LIGHTS MUST BE PROTECTED AND SERVICE MAINTAINED AT ALL TIMES. IF YOU REQUIRED FURTHER ASSISTANCE, PLEASE CONTACT MR. WILLIAM COLBERT OR ANTHONY P. WALLNOFER, JR AT 410-396-1686.
- 8. STANDARD TYPE "S" COMBINATION INLETS SHALL BE BUILT AND REBUILT IN ACCORDANCE WITH STANDARD DETAIL BC 379.51, USING STANDARD TYPE "S-7" FRAME AND GRATE (BC 379.04), AND MODIFIED SPECIAL CURB (BC 379.52).

LOCATION MAP

WARD 25 BLOCK 7762 SECTION 02 LOTS 1 THRU 7

(TO BE CONSOLIDATED AND RESUBDIVIDED) OWNER: RIVERSIDE WORK FORCE LLC 2030 ALICEANNA STREET BALTIMORE, MARYLAND 21231

410-342-5263 TOTAL AREA: 23,980.8 SQUARE FEET OR 0.5505 ACRES

EXISTING ZONING: R-6

PARKING REQUIREMENTS: ONE EACH

JEFF LANDSMAN

PARKING PROVIDED: ONE EACH UNIT DEED REFERENCE: FMC 9789/054

EXISTING USE: VACANT

PROPOSED DEVELOPMENT: 9 SINGLE FAMILY ATTACHED DWELLINGS

SITE IS NOT WITHIN THE CRITICAL AREA.

WATERSHED: GWYNNS FALLS

EXISTING IMPERVIOUS AREA: TOTAL: 2,775 Sq.Ft.

PROPOSED IMPERVIOUS AREAS: BUILDING: 5,040 Sq.Ft. PAVING: 6.064 Sa.Ft. SIDEWALK: 1,524 Sq.Ft. TOTAL: 12,628 Sq.Ft.

THE SITE LIES WITHIN A ZONE "X" AS SHOWN ON THE FLOOD INSURANCE RATE COMMUNITY PANEL NUMBER 240087 0013 D DATED SEPTEMBER 30, 1988. ZONE X REPRESENT AREAS OUTSIDE THE 500-YEAR FLOOD PLAIN WITH LESS THAN 0.2% ANNUAL PROBABILITY OF FLOODING.

DISTURBED AREA: 25,600 SF OR 0.59 AC±

CONTACT PERSON: BRIAN KOWALCZYK

SETBACK REQUIREMENTS:

RICHARDSON ENGINEERING, LLC 30 EAST PADONIA ROAD, SUITE 500 TIMONIUM, MARYLAND 21093 PHONE: 410-560-1502 EXT. 117

<u>PROPOSED</u> FRONT YARD 25' 20' STREET CORNER SIDE 17.8**'**± INTERIOR SIDE 25' 50' REAR YARD 1,500 SF 2,160± SF MIN MIN. LOT AREA 38% MAX. MAX. LOT COVERAGE 45% MAX. HEIGHT

THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION.

Richardson Engineering, LLC

30 East Padonia Road, Suite 500 Timonium, Maryland 21093

Phone: 410-560-1502 Fax: 443-901-1208

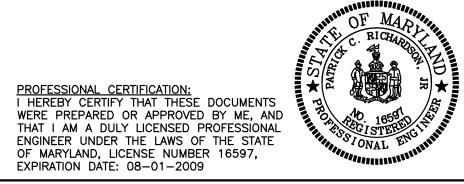
SITE, GRADING & STORMWATER MANAGEMENT PROFILE & DETAILS

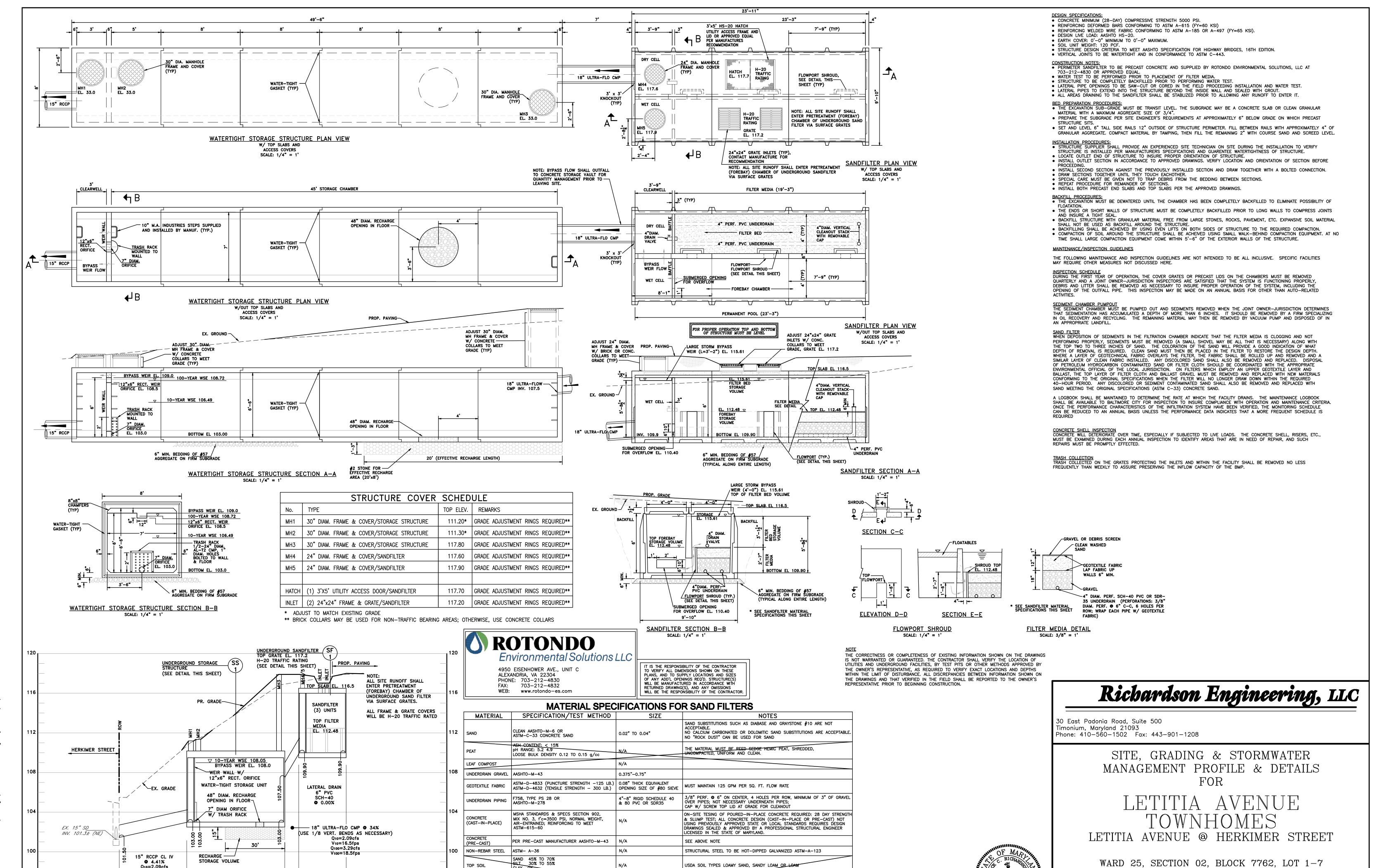
LETITIA AVENUE TOWNHOMES

LETITIA AVENUE @ HERKIMER STREET

WARD 25, SECTION 02, BLOCK 7762, LOT 1-7 BALTIMORE CITY, MARYLAND

REVISIONS DESIGNED BY: SCALE: DRAWN BY: BTKAS SHOWN DATE: *OB NO.:* SHEET NO.: 10-14-08 08057 1 OF 5





USDA SOIL TYPES LOAMY SAND, SANDY LOAM OR LOAM

6"x6" OR 8"x8" OR 2"x8" OR DO NOT COAT WITH CREOSOTE; EMBED AT LEAST 3' INTO SIDE SLOPES

VARIES (NO. 6) OR (1 TO 3 USE CLEAN BANK-RUN GRAVEL

RECYCLED CONCRETE EQUIVALENT MAY BE SUBSTITUTED FOR STONE

CLASSIFICATIONS. RECYCLED CONCRETE EQUIVALENT SHALL BE BROKEN INTO SIZES MEETING THE APPROPRIATE CLASSIFICATION, SHALL CONTAIN NO STEEL REINFORCEMENT, AND SHALL HAVE 150 LBS PER CUBIC FOOT DENSITY.

PROFESSIONAL CERTIFICATION:
HEREBY CERTIFY THAT THESE DOCUMENTS

WERE PREPARED OR APPROVED BY ME, AND

THAT I AM A DULY LICENSED PROFESSIONAL

ENGINEER UNDER THE LAWS OF THE STATE

OF MARYLAND, LICENSE NUMBER 16597,

EXPIRATION DATE: 08-01-2009

CLAY 0%

ASTM-A975-97

GABION STONE, GABION BASKET

AND CURTAIN DRAIN

PEA GRAVEL DIAPHRAM ASTM D-448

Q10=2.09cfs

V10=7.5fps

Q100=3.29cfs

V100=8.5fps

STORMWATER OUTFALL PROFILE

SCALE: HORZ. 1" = 20'

BALTIMORE CITY, MARYLAND DRAWN BY:

REVISIONS SCALE: DESIGNED BY: BTKAS SHOWN DATE: *OB NO.:* SHEET NO.: 10-14-08 08057 2 OF 5

EROSION AND SEDIMENT CONTROL NOTES

- THE CONTRACTOR WILL COMPLY WITH ALL REQUIREMENTS OF SEDIMENT AND EROSION CONTROL AS SET FORTH IN THE BALTIMORE CITY SEDIMENT AND EROSION CONTROL MANUAL. CONTRACTOR MUST SUBMIT WRITTEN NOTIFICATION 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY TO THE BALTIMORE CITY ENVIRONMENTAL ENGINEERING SECTION STATING:
 - B. SOURCE OF BORROW MATERIAL C. DISPOSAL SITE FOR EXCESS MATERIAL

A. WHEN THE CONTRACTOR INTENDS TO BEGIN WORK,

- D. STAGING AND/OR STOCKPILE LOCATION(S) INITIAL DISTURBANCE WILL BE LIMITED TO THAT NECESSARY TO GAIN ENTRANCE TO THE SITE AND INSTALL SEDIMENT CONTROLS AS PER THE APPROVED PLANS.
- ALL SEDIMENT CONTROLS AND CRITICAL SLOPES MUST BE STABILIZED WITHIN SEVEN CALENDAR DAYS. ALL OTHER INACTIVE DISTURBED AREAS ON THE PROJECT SITE MUST BE STABILIZED WITHIN FOURTEEN DAYS.
- ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE WHENEVER POSSIBLE AND CONFINED TO AN AREA WHERE IT WILL NOT OBSTRUCT THE NORMAL COURSE OF DRAINAGE. PUMPING OF SEDIMENT LADEN WATER WILL NOT BE ALLOWED UNLESS IT IS FILTERED BY WAY OF
- APPROVED SEDIMENT TRAPPING DEVICE. CONTINUOUS INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES IS MANDATORY. ANY SEDIMENT CONTROL DEVICES DISTURBED DURING UTILITY CONSTRUCTION MUST BE RESTORED
- ALL POINTS OF INGRESS AND EGRESS SHALL BE PROTECTED TO MINIMIZE TRACKING OF MUD ON TO PUBLIC RIGHT-OF-WAYS.
- 10. ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL TRACKED, SPILLED, OR WASHED ON TO ADJACENT ROADS MUST BE IMMEDIATELY REMOVED AND DISPOSED OF IN A PROPER MANNER. FLUSHING WILL NOT BE PERMITTED. ALL MATERIAL MUST BE REMOVED BY MEANS OF SHOVELING AND SWEEPING.
- 11. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 5,000 SQ. FT., THE CONTRACTOR SHALL HAVE A BALTIMORE CITY EROSION AND SEDIMENT CONTROL INSPECTOR INSPECT AND APPROVE THE WORK COMPLETED AT THE STAGES OF CONSTRUCTION SPECIFIED BELOW: A. UPON COMPLETION OF THE INSTALLATION OF THE PERIMETER SEDIMENT CONTROLS;
 - B. DURING ALL GRADING AND BUILDING OPERATIONS; C. UPON FINAL STABILIZATION OF THE ENTIRE SITE PRIOR TO REMOVAL OF THE SEDIMENT
- THE CONTRACTOR SHALL NOT DEVIATE FROM THE APPROVED SEDIMENT AND EROSION CONTROL PLAN WITHOUT FIRST RECEIVING APPROVAL FROM THE ENVIRONMENTAL ENGINEERING SECTION. VARIATIONS TO THE ORIGINAL PLAN MUST BE SUBMITTED IN WRITING WITH ALL PROPOSED MODIFICATIONS BEING HIGHLIGHTED. SUBSTANTIAL CHANGES WILL NECESSITATE AMENDMENT OF THE GRADING/BUILDING

SEQUENCE OF CONSTRUCTION

- THREE (3) WORKING DAYS PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR MUST SUBMIT TO BALTIMORE CITY'S ENVIRONMENTAL ENGINEERING SECTION DEPARTMENT A WRITTEN NOTIFICATION STATING:

 A. WHEN CONTRACTOR INTENDS TO BEGIN CONSTRUCTION DISPOSAL AREA OF SITE MATERIAL

- B. DISPOSAL AREA OF SITE MATERIAL
 C. CONTRACTOR'S TENTATIVE CLOSING DATE
 3. NOTIFY MISS UTILITY AT LEAST 5 DAYS PRIOR TO DOING ANY CONSTRUCTION AT 888-257-7777 TO
 LOCATE ALL EXITING UTILITIES.
 4. CONTACT THE CITY OF BALTIMORE 48 HOURS BEFORE CONSTRUCTION TO COORDINATE A
 PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR.
 5. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, INSTALL STABILIZED CONSTRUCTION
 ENTRANCE, SILT FENCE, SUPER SILT FENCE AND CHECK DAMS PER PLAN.
 6. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB THE SITE NECESSARY
 FOR BUILDING CONSTRUCTION, PAVING AND STORMWATER FACILITY; TEMPORARILY STABILIZE.
 7. GRADE PAVING AREA TO SUBBASE. INSTALL WATER AND SANITARY UTILITY CONNECTIONS, INCLUDING
 STORM DRAIN AND STORMWATER FACILITY. STORM DRAIN AND STORMWATER FACILITY (SEE STORMWATER SEQUENCE OF CONSTRUCTION FOR FACILITY INSTALLATION SHEET 1 OF 5). (NOTE: UTILITY INSTALLATION MAY COINCIDE WITH SUBBASE GRADING. STOCKPILE MATERIAL MAY BE PLACED UP SLOPE OF SILT FENCE, TEMPORARILY STABILIZE GRADED AREA
- AND STOCKPILE.) 8. PLACE AT GRADE INLET PROTECTION ON SANDFILTER INLET GRATES AND BLOCK THE 48" DIAMETER RECHARGE OPENING IN STORAGE VAULT UNTIL SUCH A TIME WHEN THE SITE HAS BEEN PERMANENTLY
- UPON COMPLETING UTILITY INSTALLATION, PERMANENTLY STABILIZE USING TRENCH REPAIR. CONSTRUCT PROPOSED PAVING SUBBASE, CURB & GUTTER AND SIDEWALKS.
- 10. BEGIN BUILDING CONSTRUCTION. (NOTE: BUILDING CONSTRUCTION MAY BEGIN SIMULTANEOUSLY WITH
- UTILITY INSTALLATION AND SUBBASE GRADING/PAVING.)

 11. COMPLETE SUBBASE GRADING AND PAVING, STABILIZE DISTURBED AREAS.

 12. COMPLETE BUILDING CONSTRUCTION. FINE GRADE AND PERMANENTLY STABILIZE AS NECESSARY. 13. INSTALL PROPOSED PAVING SURFACE COURSE. (NOTE: DISTURB ONLY THAT WHICH CAN BE COMPLETED
- 13. INSTALL PROPOSED PAVING SURFACE COURSE. (NOTE: DISTURB ONLY THAT WHICH CAN BE COMPLETED AND STABILIZED BY THE END OF EACH DAY.)
 14. ONCE SITE CONSTRUCTION IS COMPLETE AND STABILIZED WITH ESTABLISHED VEGETATION, REMOVE SEDIMENT CONTROL DEVICES, INCLUDING BLOCKED RECHARGE OPENING, AFTER OBTAINING WRITTEN PERMISSION FROM THE BALTIMORE CITY SEDIMENT CONTROL INSPECTOR AND IMMEDIATELY STABILIZE AS SPECIFIED BY THE APPROVED SEDIMENT CONTROL PLAN FOR THE PROJECT SITE. ANY SEDIMENT BUILD—UP WITHIN THE UNDERGROUND FACILITIES SHALL BE MANUALLY REMOVED.
 15. INSTALL THE FILTER MEDIA MATERIAL FOR THE UNDERGROUND SANDFILTER PER APPROVED STORMWATER MANAGEMENT PLANS.

STABILIZATION SCHEDULE

AREA	SF	STABILIZATION TYPE	SEQ#
A	F 040	EXCAVATED (TEMP) AREAS	6, 7
BUILDINGS	5,040	COMPLETE (PERM) STRUCTURES	12
B	0.004	STONE (TEMP) BASE	9
ROADWAYS	6,064	CONC. BITUMINOUS (PERM) PAVING	13
(0)	4.504	TEMPORARY (TEMP) SEEDING	7
CURBS & SIDEWALKS	1,524	CONC. CURBS (PERM) & WALKS	9
Q	44.740	TEMP SEEDING (TEMP) BASE	6, 7
PERVIOUS AREAS	11,348	SEED, SED (PERM) LANDSCAPING	12, 14
E	0.050	SEEDING/STONE (TEMP) BASE	5-9
SEDIMENT CONTROLS	2,050	PERMANENT SEED/ (PERM) PAVING	14

AREAS ARE TO BE VEGETATIVELY STABILIZED TO SATISFY THE 7/14 REQUIREMENT AS PER THE BALTIMROE CITY STANDARD EROSION AND SEDIMENT CONTROL NOTES.

LOCATION MAP

(TO BE CONSOLIDATED AND RESUBDIVIDED)

BLOCK 7762 SECTION 02 LOTS 1 THRU 7

OWNER: RIVERSIDE WORK FORCE LLC 2030 ALICEANNA STREET BALTIMORE, MARYLAND 21231 JEFF LANDSMAN

TOTAL AREA: 23,980.8 SQUARE FEET OR 0.5505 ACRES

EXISTING ZONING: R-6 PARKING REQUIREMENTS: ONE EACH

410-342-5263

PARKING PROVIDED: ONE EACH UNIT

DEED REFERENCE: FMC 9789/054

EXISTING USE: VACANT PROPOSED DEVELOPMENT:

9 SINGLE FAMILY ATTACHED DWELLINGS SITE IS NOT WITHIN THE CRITICAL AREA.

THE SITE DOES NOT LIE WITHIN THE 100-YEAR FLOODPLAIN. THE SITE LIES WITHIN A ZONE "X" AS SHOWN ON THE FLOOD INSURANCE RATE COMMUNITY PANEL NUMBER 240087 0013 D DATED SEPTEMBER 30, 1988. ZONE X REPRESENT AREAS OUTSIDE THE 500-YEAR FLOOD PLAIN WITH LESS THAN 0.2% ANNUAL PROBABILITY OF FLOODING.

DISTURBED AREA: 25,600 SF OR 0.59 AC±

CONTACT PERSON: BRIAN KOWALCZYK RICHARDSON ENGINEERING, LLC 30 EAST PADONIA ROAD, SUITE 500

TIMONIUM, MARYLAND 21093 PHONE: 410-560-1502 EXT. 117 SETBACK REQUIREMENTS: <u>REQUIRED</u> <u>PROPOSED</u> FRONT YARD

STREET CORNER SIDE 17.8**'**± INTERIOR SIDE 50' REAR YARD 1,500 SF 2,160± SF MIN MIN. LOT AREA MAX. LOT COVERAGE 45% 38% MAX. MAX. HEIGHT

TOTAL SITE AREA = 0.550 Ac. / 23,980 S.F.AREA TO BE DEDICATED = 0.0 Ac. / 0.0 S.F. TO THE CITY SITE AREA REMAINING = 0.550 Ac. / 23,980 S.F. DISTURBED AREA = 0.590 Ac. / 25,600 S.F.

CUT: 550 C.Y. FILL: 465 C.Y. RATIO: 1.18 (85 C.Y. EXCESS)*

*CUT/FILL QUANITIES ARE ESTIMATES ONLY, CONTRACTOR SHALL VERIFY SAME TO THEIR OWN SATISFACTION.

ESD #5809

Richardson Engineering, LLC

30 East Padonia Road, Suite 500 Timonium, Maryland 21093

EROSION & SEDIMENT CONTROL PLAN

LETITIA AVENUE TOWNHOMES LETITIA AVENUE @ HERKIMER STREET

WARD 25, SECTION 02, BLOCK 7762, LOT 1-7

10-30-08

OB NO.:

08057

3 OF 5

BALTIMORE CITY, MARYLAND REVISIONS SCALE: DRAWN BY: DESIGNED BY: BTK1" = 20'DATE: SHEET NO.:

INLET PROTECTION NOTE

——SSF——SSF—— SUPER SILT FENCE

—— SF ——— SUPER SILT FENCE

HEAVY DUTY SCE W/

CONTRACTORS STAGING AREA/ TEMPORARY STOCKPILE AREA

CLEAN-OUT RACK

THE CONTRACTOR IS REQUIRED TO INSTALL INLET PROTECTION ON ALL STORM DRAIN INLETS AS SOON AS THEY BECOME FUNCTIONAL.

TEMPORARY STOCKPILE SHALL BE LOCATED WITHIN THE LIMIT OF DISTURBANCE, DRAIN EXCESS MATERIAL THAT IS TO BE HAULED OFF-SITE SHALL BE TAKEN TO AREA THAT IS APPROVED FOR SEDIMENT AND EROSION CONTROL.

THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION.

UTILITY NOTE

- 1. CONTRACTOR SHOULD OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY.
- 2. PLACE ALL EXCAVATED MATERIAL ON THE UPHILL SIDE OF THE

ENGINEER'S CERTIFICATION

"I DO CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED UPON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE

410-560-1502 TELEPHONE NUMBER

OWNER'S/DEVELOPERS CERTIFICATION

DÉVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVAL PLAN AND THAT ÁLL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF ATTENDANCE AT AN APPROVED DEPARTMENT OF THE ENVIRONMENT SEDIMENT AND EROSION CONTROL TRAINING PROGRAM PRIOR TO THE BEGINNING OF WORK I HEREBY AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY CITY OF BALTIMORE COMPLIANCE INSPECTORS.'

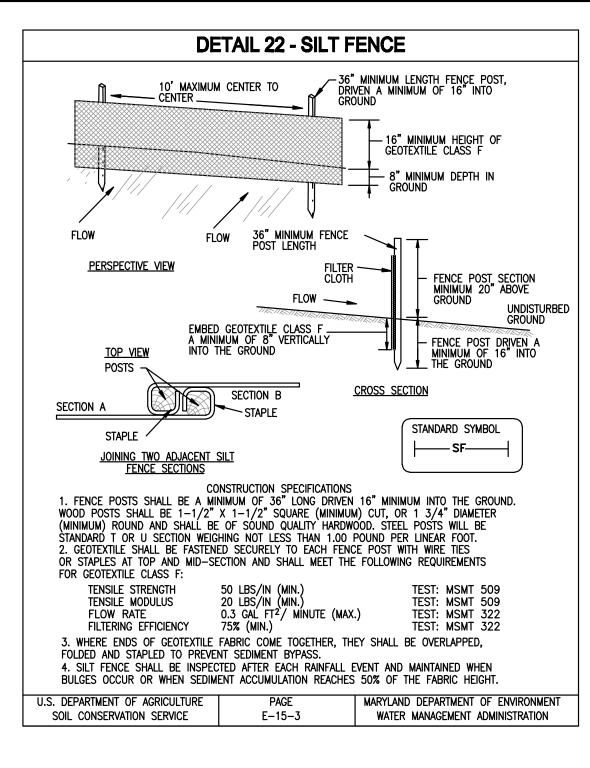
PRINT NAME SIGNATURE ADDRESS TELEPHONE NUMBER

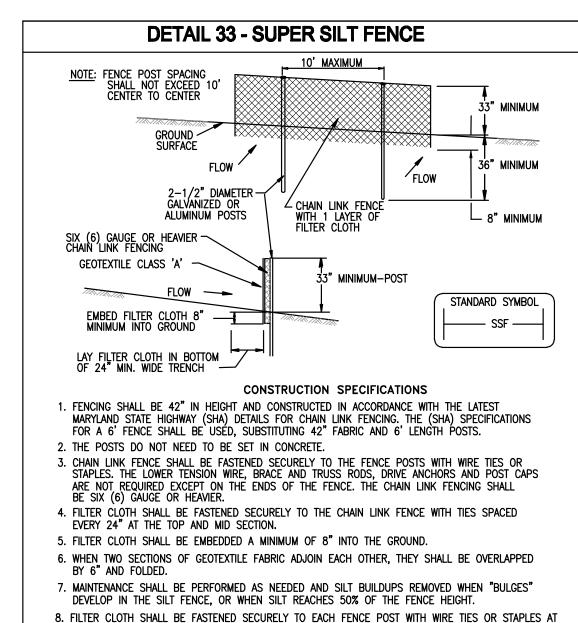


PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS
WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER 16597, EXPIRATION DATE: 08-15-2009

DATE

REQUIREMENTS OF THE BALTIMORE CITY ENVIRONMENTAL ENGINEERING SECTION." MAINTENANCE OF SEDIMENT CONTROL **LEGEND:** 3. ANY SEDIMENT CONTROLS DISTURBED BY UTILITY PATRICK C. RICHARDSON, JR CONTRACTOR SHALL, WITHOUT EXTRA COST TO THE PROJECT, REPAIR AND MAINTAIN CONSTRUCTION ARE REPAIRED IMMEDIATLY. EX. PROPERTY LINE EXISTING SEDIMENT CONTROL DEVICES UNTIL ALL AREAS WITHIN LIMITS OF CONTRUCTION SIGNATURE ARE STABILIZED. ALL SEDIMENT CONTROL MEASURES REFERRED TO ON THESE PLANS SHALL BE IN ACCORDANCE WITH THE PUBLICATION ENTITLED 1994 MARYLAND STANDARDS 30 E. PADONIA ROAD, STE 500 TIMONIUM, MD 21093 — — — — EX. EDGE OF PAVING AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL. PROP. CURB & GUTTER ----- PROP. PAVING/WALK **STOCKPILE NOTE** EX. STORM DRAIN 15" RCCP PROP. STORM DRAIN "I/WE DO HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR TO A FUNCTIONING SEDIMENT CONTROL DEVICE, AND POSITIONED SO AS NOT TO - - - $\frac{250}{}$ - - EX. CONTOURS IMPEDE UPON OR IMPAIR THE FUNCTION OF SAID DEVICE. THE STOCKPILE SHALL NOT ALTER THE DRAINAGE DIVIDE. SILT FENCE SHALL BE PLACED DOWNSTREAM OF THE PROP. CONTOURS STOCKPILE TO LIMIT THE FLOW OF SILT LAIDEN RUNOFF ACROSS THE SITE. ANY ● ● ● ● ● ● ● ● ■ LIMIT OF DISTURBANCE





TOP AND MID SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TEST: MSMT 509

MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION

0.3 GAL/FT /MINUTE (MAX.) TEST: MSMT 322

OPENING SIZE

MM. MAX.

0.30 **

0.60

0.30

0.60

0.30

THE PROPERTIES SHALL BE DETERMINED IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:

ASTM D 3786

FABRIC SHALL RESIST DETERIORATION FROM ULTRAVIOLET EXPOSURE.

H-26-3 MODIFIED

24.0 MATERIALS SPECIFICATIONS

Table 27 Geotextile Fabrics

LB. MIN.

250

200

200

90

90

90

RATE IN BOTH PRINCIPAL DIRECTIONS OF GEOTEXTILE FABRIC.

* US Std Sieve CW-02215 ** .50 mm. max. for Super Silt Fence

THE FABRIC SHALL BE INERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS, AND WILL BE ROT AND MILDEW RESISTANT. IT SHALL BE MANUFACTURED FROM FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS,

IN ADDITION, CLASSES A THROUGH E SHALL HAVE A 0.01 CM./SEC. MINIMUM PERMEABILITY WHEN TESTED IN ACCORDANCE WITH MSMT 507, AND AN APPARENT MINIMUM ELONGATION OF 20 PERCENT (20%) WHEN TESTED IN ACCORDANCE WITH THE GRAB TENSILE STRENGTH REQUIREMENTS LISTED ABOVE.

SILT FENCE
CLASS F GEOTEXTILE FABRICS FOR SILT FENCE SHALL HAVE A 50 LB./IN. MINIMUM TENSILE STRENGTH AND A 20

AND COMPOSED OF A MINIMUM OF 85% BY WEIGHT OF POLYOLEPHINS, POLYESTERS, OR POLYAMIDES. THE GEOTEXTILE

-GRAB TENSILE STRENGTH ASTM D 1682: 4X8" SPECIMEN, 1X2" CLAMPS, 12"/MIN, STRAIN

STRENGTH | BURST STRENGTH

PSI. MIN.

500

320

320

145

APPARENT | GRAB TENSILE

TENSILE STRENGTH 50 LBS/IN (MIN.)

TENSILE MODULUS 20 LBS/IN (MIN.)

FILTERING EFFICIENCY 75% (MIN.)

Α

D

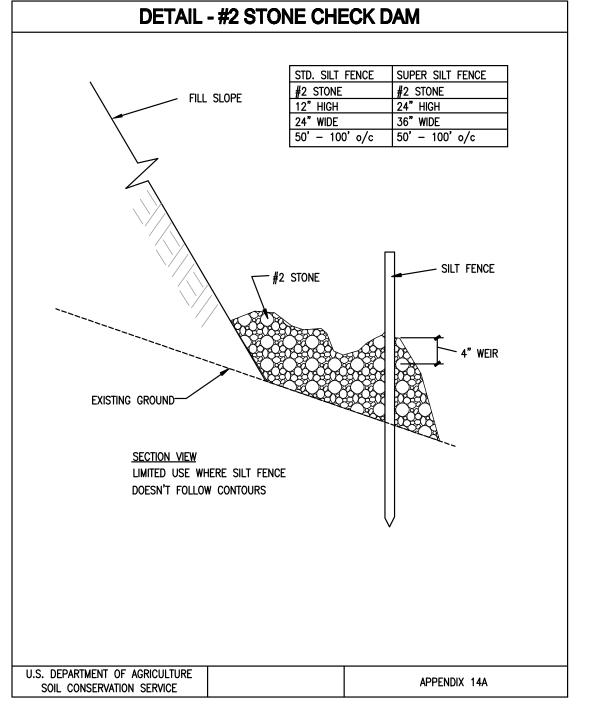
-APPARENT OPENING SIZE MSMT 323

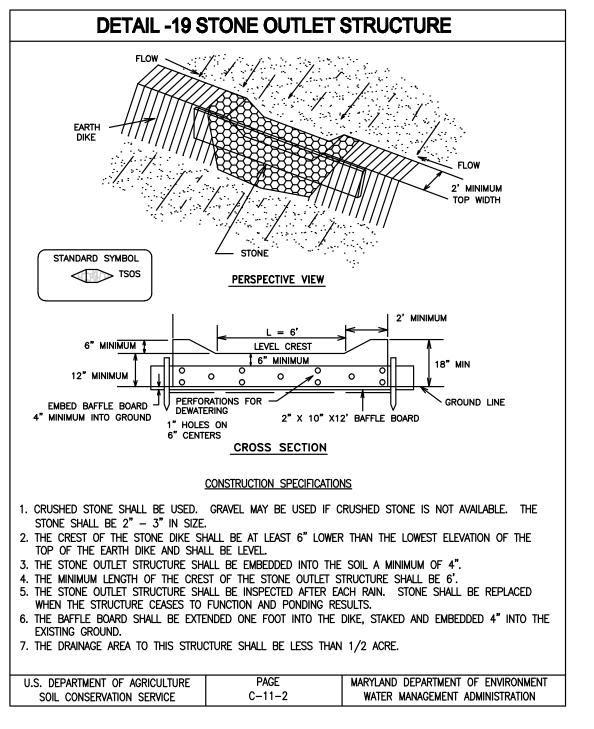
-BURST STRENGTH

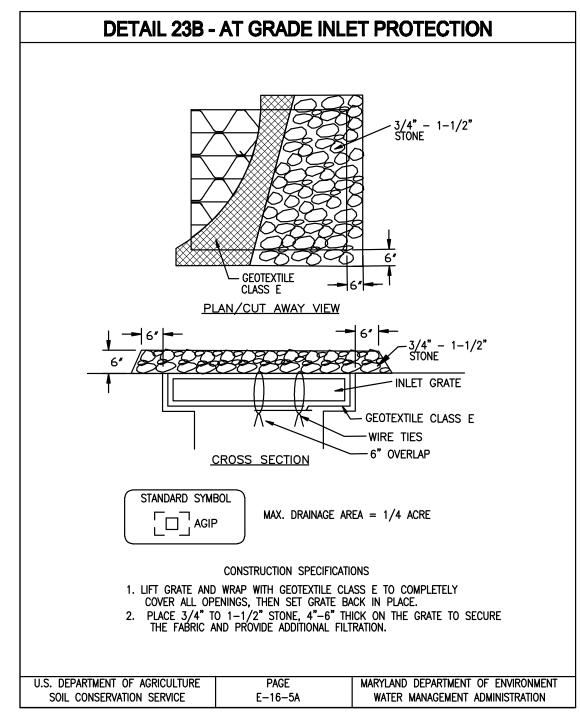
F (SILT FENCE) | 0.40-0.80*

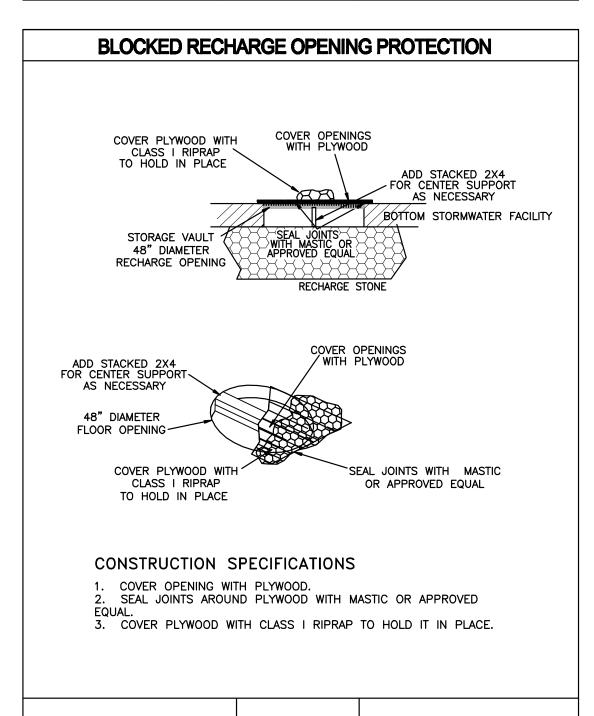
U.S. DEPARTMENT OF AGRICULTURE

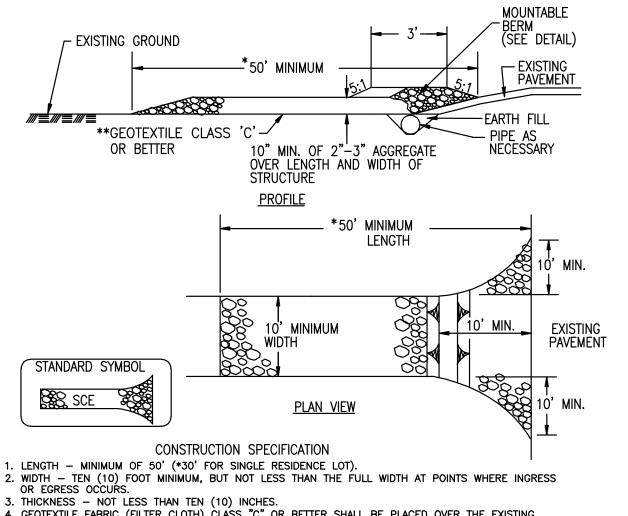
SOIL CONSERVATION SERVICE











4. GEOTEXTILE FABRIC (FILTER CLOTH) CLASS "C" OR BETTER SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. (**GEOTEXTILE FABRIC WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENTIAL LOT.)

5. STONE — CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
6. A MOUNTABLE BERM WITH 5:1 SLOPES IS REQUIRED FOR ALL SURFACE WATER FLOWING OR DIVERTED TOWRDS CONSTRUCTION ENTRANCE. (IF NECESSARY, A PIPE SHALL BE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE AND SHALL BE PROTECTED WITH AND A MINIMUM OF 10" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. A 6" DIAM. MINIMUM WILL BE REQUIRED. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE WILL NOT BE NECESSARY.)

7. MAINTENANCE — THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY. B. WASHING - WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC

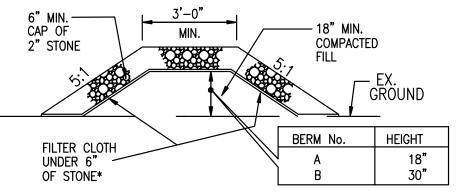
RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

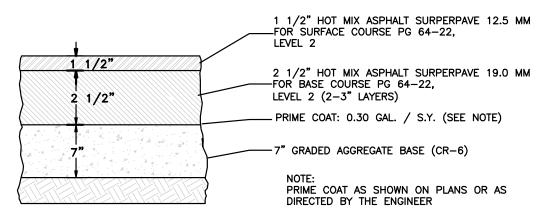
HEAVY DUTY STABILIZED CONSTRUCTION ENTRANCE

CAP OF COMPACTED

NOT TO SCALE

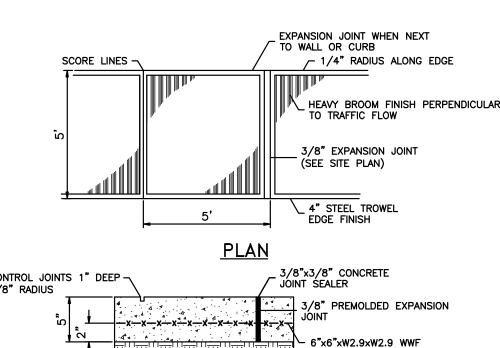


MOUNTABLE BERM NOT TO SCALE



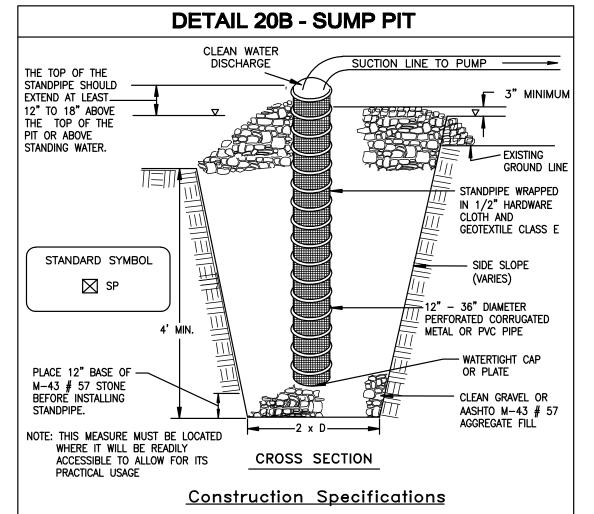
ON-SITE PAVING SECTION

NOT TO SCALE



CONCRETE WALK NOT TO SCALE

SECTION



2. THE STANDPIPE SHOULD BE CONSTRUCTED BY PERFORATING A 12" TO 24" DIAMETER CORRUGATED

. THE STANDPIPE SHOULD EXTEND 12" TO 18" ABOVE THE LIP OF THE PIT OR THE RISER CREST

MODIFIED

THE ANTICIPATED STANDING WATER ELEVATION.

U.S. DEPARTMENT OF AGRICULTURE

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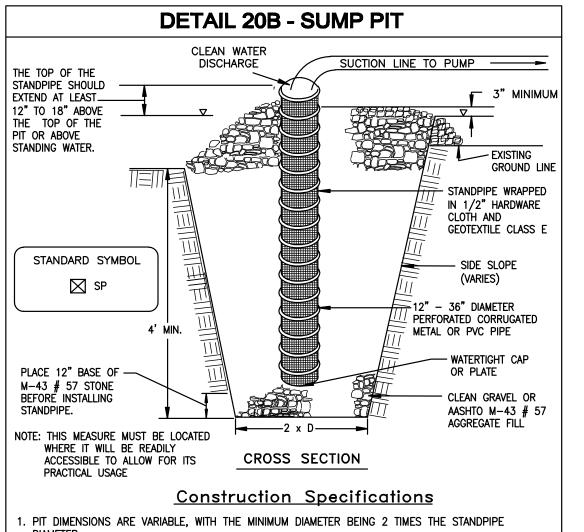
ELEVATION (BASIN DEWATERING ONLY) AND THE FILTER MATERIAL SHOULD EXTEND 3" MINIMUM ABOVE

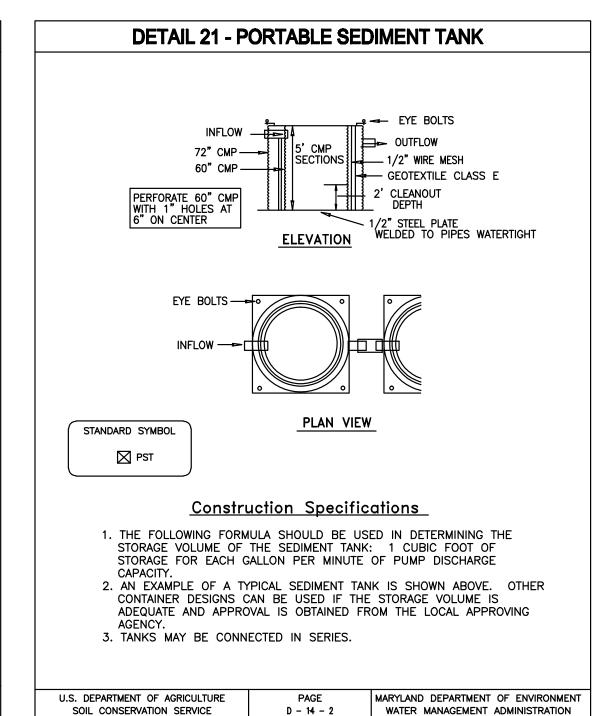
MARYLAND DEPARTMENT OF ENVIRONMENT

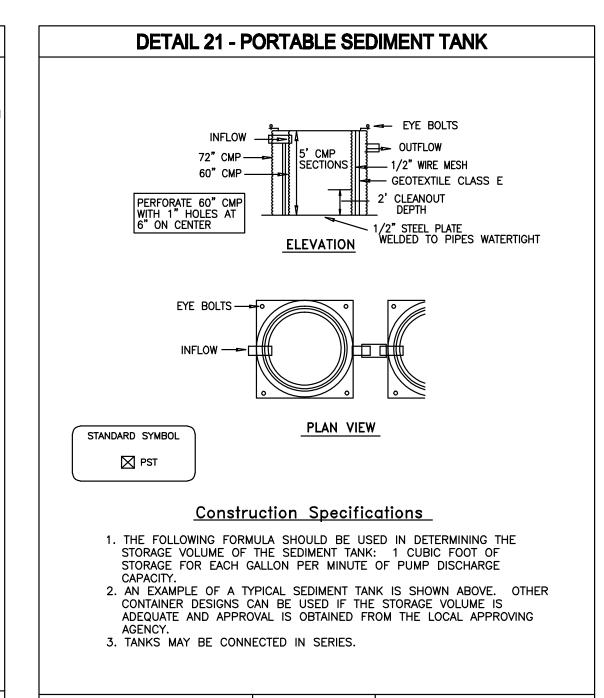
WATER MANAGEMENT ADMINISTRATION

OR PVC PIPE. THEN WRAPPING WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE CLASS E. THE PERFORATIONS SHALL BE 1/2" X 6" SLITS OR 1" DIAMETER HOLES. 3. A BASE OF FILTER MATERIAL CONSISTING OF CLEAN GRAVEL OR #57 STONE SHOULD BE PLACED IN THE PIT TO A DEPTH OF 12". AFTER INSTALLING THE STANDPIPE. THE PIT SURROUNDING THE STANDPIPE SHOULD THEN BE BACKFILLED WITH THE SAME FILTER MATERIAL.

THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE. AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION.





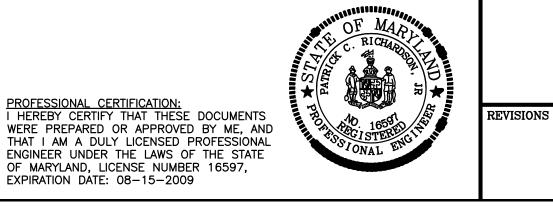


EROSION & SEDIMENT CONTROL & SITE DETAILS FOR

LETITIA AVENUE TOWNHOMES LETITIA AVENUE @ HERKIMER STREET

WARD 25, SECTION 02, BLOCK 7762, LOT 1-7

BALTIMORE CITY, MARYLAND SCALE: DESIGNED BY: DRAWN BY: BTK1" = 20'DATE: *OB NO.:* SHEET NO.: 10-30-08 08057 4 OF 5



LB./IN. MINIMUM TENSILE MODULES WHEN TESTED IN ACCORDANCE WITH MSMT 509. THE MATERIAL SHALL ALSO HAVE A 0.3 GAL/FT.2/MIN. FLOW RATE AND SEVENTY-FIVE PERCENT (75%) MINIMUM FILTERING EFFICIENCY WHEN TESTED IN GEOTEXTILE FABRICS USED IN THE CONSTRUCTION OF SILT FENCE SHALL RESIST DETERIORATION FROM ULTRAVIOLET EXPOSURE. THE FABRIC SHALL CONTAIN SUFFICIENT AMOUNTS OF ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 12 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO CONTROL JOINTS 1" DEEP - 3/8" RADIUS U.S. DEPARTMENT OF AGRICULTURE H - 24 - 1SOIL CONSERVATION SERVICE

- COMPACTED SUBGRADE

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

ESD #5809

Richardson Engineering, LLC

30 East Padonia Road, Suite 500 Timonium, Maryland 21093

PERFORM ALL GRADING OPERATIONS AT RIGHT ANGLES TO THE SLOPE. FINAL GRADING AND SHAPING IS NOT USUALLY NECESSARY FOR TEMPORARY SEEDING. SCHEDULE REQUIRED SOIL TESTS TO DETERMINE SOIL AMENDMENT COMPOSITION AND APPLICATION RATES FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES.

B. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS) SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OVER 5 ACRES. SOIL ANALYSIS MAY BE PERFORMED BY THE UNIVERSITY OF MARYLAND OR A RECOGNIZED COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.

FERTILIZERS SHALL BE UNIFORM IN COMPOSITION FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROVED EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS SHALL ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE STATE FERTILIZER LAWS AND SHALL BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTEE OF THE PRODUCER.

LIME MATERIALS SHALL BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED) WHICH CONTAINS AT LEAST 50% TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT AT LEAST 50% WILL PASS THROUGH A #100 MESH SIEVE AND 98-100% WILL PASS THROUGH A #20 MESH SIEVE

INCORPORATE LIME AND FERTILIZER INTO THE TOP 3"-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS. C. SEEDBED PREPARATION

TEMPORARY SEEDING
A. SEEDBED PREPARATION SHALL CONSIST OF
LOOSENING SOIL TO A DEPTH OF 3" TO 5" BY MEANS OF
SUITABLE AGRICULTURAL OR CONSTRUCTION
EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL
PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION
EQUIPMENT. AFTER THE SOIL IS LOOSENED IT SHOULD
NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN
THE ROUGHENED CONDITION. SLOPED AREAS
(GREATER THAN 3:1) SHOULD BE TRACKED LEAVING
THE SURFACE IN AN IRREGULAR CONDITION WITH
RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE
SLOPE.

B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE INCORPORATE LIME AND FERTILIZER INTO THE TOP 3"-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

PERMANENT SEEDING MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT.

RMANENT VEGETATIVE ESTABLISHMENT.

SOIL PH SHALL BE BETWEEN 6.0 AND 7.0

SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS
PER MILLION (PPM).

THE SOIL SHALL CONTAIN LESS THAN 40% CLAY
BUT ENOUGH FINE GRAINED MATERIAL (> 30%
SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO
HOLD A MODERATE AMOUNT OF MOISTURE. AN
EXCEPTION IS IF LOVEGRASS OR SERECIA
LESPEDEZA IS TO BE PLANTED, THEN A SANDY
SOIL (< 30% SILT PLUS CLAY) WOULD BE
ACCEPTABLE.

SOIL SHALL CONTAIN 1.5% MINIMUM ORGANIC
MATTER BY WEIGHT.

SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO
PERMIT ADEQUATE ROOT PENETRATION.

PERMIT ADEQUATE ROOT PENETRATION.
IF THESE CONDITIONS CANNOT BE MET BY SOILS
ON SITE, ADDING TOPSOIL IS REQUIRED IN
ACCORDANCE WITH SECTION 21: STANDARD AND
SPECIFICATION FOR TOPSOIL.

AREAS PREVIOUSLY GRADED IN CONFORMANCE WITH
THE DRAWINGS SHALL BE MAINTAINED IN A TRUE AND
EVEN GRADE, THEN SCARIFIED OR OTHERWISE
LOOSENED TO A DEPTH OF 3-5" TO PERMIT BONDING OF
THE TOPSOIL TO THE SURFACE AREA AND TO CREATE
HORIZONTAL EROSION CHECK SLOTS TO PREVENT
TOPSOIL FROM SLIDING DOWN A SLOPE.

APPLY SOIL AMENDMENTS AS PER SOIL TEST OR AS INCLUDED ON THE PLANS. INCLUDED ON THE PLANS.

MIX SOIL AMENDMENTS INTO THE TOP 3-5" OF TOPSOIL BY DISKING OR OTHER SUITABLE MEANS. LAWN AREAS SHOULD BE RAKED TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION, WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION, LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE STEEP SLOPES (STEEPER THAN 3:1) SHOULD BE TRACKED BY A DOZER LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE, THE TOP 1-3" OF SOIL SHOULD BE I LOOSE AND FRIABLE. SEFDBED

SHOULD BE LOOSE AND FRIABLE. SEEDBED LOOSENING MAY NOT BE NECESSARY ON NEWLY

D. SEED SPECIFICATIONS ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED SHALL BE SUBJECT TO RE—TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED SHALL HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON THIS JOB.

NOTE: SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED. INOCULANT — THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES SHALL BE A PURE CULTURE OF NITROGEN—FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS SHALL NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANT AS DIRECTED ON PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDRO SEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75—80'F. CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

METHODS OF SEEDING HYDRO SEEDING: APPLY SEED UNIFORMLY WITH HYDRO SEEDER (SLURRY INCLUDES SEED AND FERTILIZER).

IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATE AMOUNTS WILL NOT EXCEED THE FOLLOWING: NITROGEN: MAXIMUM OF 100 LBS. PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS): 200 LBS./AC; K20 (POTASSIUM): 200

B. LIME — USE ONLY GROUND AGRICULTURAL LIMESTONE
(UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDRO
SEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE
APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO
NOT USE BURNT OR HYDRATED LIME WHEN HYDRO
SEEDING SEED AND FERTILIZER SHALL BE MIXED ON SITE AND SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS. SEED SPREAD DRY SHALL BE INCORPORATED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY OR PERMANENT SEEDING SUMMARIES OR TABLES 25 OR 26. THE SEEDED AREA SHALL THEN BE ROLLED WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.

DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.

CULTIPACKING SEEDERS AREA REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM

MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)

STRAW SHALL CONSIST OF THOROUGHLY THRESHED WHEAT, RYE OR OAT STRAW, REASONABLY BRIGHT IN COLOR AND SHALL NOT BE MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY AND SHALL BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW. WOOD CELLULOSE FIBER MULCH (WCFM)

WCFM SHALL CONSIST OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.

WCFM SHALL BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY. WCFM, INCLUDING DYE, SHALL CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.

WCFM MATERIALS SHALL BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL SHALL FORM A BLOTTER—LIKE GROUND COVER ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND SHALL COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.

WCFM MATERIAL SHALL CONTAIN NO ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.

NOTE:

WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH TO APPROXIMATELY 10 MM., DIAMETER APPROXIMATELY 1 MM., PH RANGE 04.0 TO 8.5, ASH CONTENT OF 1.6% MAXIMUM AND WATER HOLDING CAPACITY OF 90% MINIMUM.

MULCHING SEEDED AREAS — MULCH SHALL BE APPLIED TO ALL SEED AREA IMMEDIATELY AFTER SEEDING. IF GRADING IS COMPLETED OUTSIDE OF THE SEEDING
SEASON, MULCH ALONE SHALL BE APPLIED AS PRESCRIBED
IN THIS SECTION AND MAINTAINED UNTIL THE SEEDING
SEASON RETURNS AND SEEDING CAN BE PERFORMED IN
ACCORDANCE WITH THESE SPECIFICATIONS.

ACCURDANCE WITH THESE SPECIFICATIONS.

WHEN STRAW MULCH IS USED, IT SHALL BE SPREAD OVER
ALL SEEDED AREAS AT THE RATE OF 2 TONS/ACRE. MULCH
SHALL BE APPLIED TO A UNIFORM LOOSE DEPTH OF
BETWEEN 1" AND 2", MULCH APPLIED SHALL ACHIEVE A
UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL
SURFACE IS NOT EXPOSED. IF A MULCH ANCHORING TOOL IS
TO BE USED, THE RATE SHOULD BE INCREASED TO 2.5
TONS/ACRE.

WOOD CELLULOSE FIBER USED AS A MULCH SHALL BE
APPLIED AT A NET DRY WEIGHT OF 1,500 LBS. PER ACRE. THE
WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER, AND
THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LBS. OF
WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

SECURING STRAW MULCH (MULCH ANCHORING), MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND OR WATER, THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON SIZE OR AREA AND EROSION HAZARD:

AZARD:

A MULCH ANCHORING TOOL IS A TRACTOR DRAWN
IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO
THE SOIL SURFACE A MINIMUM OF TWO (2) INCHES. THIS
PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS
LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN
OPERATE SAFELY. IF USED ON SLOPING LAND, THIS
PRACTICE SHOULD BE USED ON THE CONTOUR IF POSSIBLE. 2. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING
STRAW, THE FIBER BINDER SHALL BE APPLIED AT A NET DRY
WEIGHT OF 750 POUNDS/ACRE. THE WOOD CELLULOSE FIBER
SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL
CONTAIN A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE
FIBER PER 100 GALLONS OF WATER.

3. APPLICATION OF LIQUID BINDERS SHOULD BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. THE REMAINDER OF AREA SHOULD BE APPEAR UNIFORM AFTER FIBER APPLICATION, SYNTHETIC BINDERS — SUCH AS ACRYLIC DLR (AGRO—TACK). DCA—70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR

4. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATION. NETTING IS USUALLY AVAILABLE IN ROLLS 4' TO 15' FEET WIDE AND 300 TO 3,000 FEET LONG.

INCREMENTAL STABILIZATION - CUT SLOPES

1. ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL

CONSTRUCTION SEQUENCE (REFER TO FIGURE 4 THIS SHEET. SPEC PAGE G-20-6). A. EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO CONVEY RUNOFF FROM THE EXCAVATION.

PERFORM PHASE 1 EXCAVATION, DRESS, AND STABILIZE. PERFORM PHASE 1 EXCAVATION, DRESS AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.

D. PERFORM FINAL PHASE EXCAVATION, DRESS AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

ONCE EXCAVATION HAS BEGIN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

INCREMENTAL STABILIZATION OF EMBANKMENTS - FILL SLOPES 1. EMBANKMENTS SHALL BE CONSTRUCTED IN LIFTS AS PRESCRIBED ON THE PLANS. SLOPES SHALL BE STABILIZED IMMEDIATELY WHEN THE VERTICAL HEIGHT OF THE

MULTIPLE LIFTS REACHES 15', OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS. 3. AT THE END OF EACH DAY, TEMPORARY BERMS AND PIPE SLOPE DRAINS SHOULD BE CONSTRUCTED ALONG THE TOP EDGE OF THE EMBANKMENT TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER TO A

4. CONSTRUCTION SEQUENCE: (REFER TO FIGURE 5 THIS SHEET, SPEC PAGE G-20-7). A. EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL CONSTRUCT SLOPE FENCE ON LOW SIDE OF FILL AS SHOWN IN FIGURE 5, UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.

PLACE PHASE 1 EMBANKMENT, DRESS AND STABILIZE. PLACE PHASE 2 EMBANKMENT DRESS AND STABILIZE D. PLACE FINAL PHASE EMBANKMENT, DRESS AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

ONCE THE PLACEMENT FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

SECTION 2: TEMPORARY SEEDING

VEGETATION - ANNUAL GRASS OR GRAIN USED TO PROVIDE COVER ON DISTURBED AREA FOR UP TO 12 MONTHS. FOR LONGER DURATION OF VEGETATIVE COVER, PERMANENT SEEDING IS REQUIRED.

A. SEED MIXTURES — TEMPORARY SEEDING

1. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 26 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE 5 AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY. PAGE G-20-R ALONG WITH APPLICATION RATES. SEEDING DATES AND SEEDING

COMPLETED, THEN TABLE 26 MUST BE PUT ON THE PLANS.

2. FOR SITES HAVING SOILS TESTS PERFORMED, THE RATES SHOWN ON THIS TABLE SHALL BE DELETED AND THE RATES RECOMMENDED BY THE TESTING AGENCY SHALL BE WRITTEN IN. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLANS AND

SECTION 3: PERMANENT SEEDING

SEEDING GRASS AND LEGUMES TO ESTABLISH GROUND COVER FOR A MINIMUM PERIOD OF ONE YEAR ON DISTURBED AREAS GENERALLY RECEIVING LOW MAINTENANCE. A. SEED MIXTURES - PERMANENT SEEDING

1. SELECT ONE OR MORE OF THE SPECIES LISTED IN TABLE 25 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE 5) AND ENTER THEM IN THE PERMANENT SEEDING SUMMARY BELOW, ALONG WITH APPLICATION RATES AND SEEDING DATES. IF THIS SUMMARY IS NOT PUT ON THE CONSTRUCTION PLANS AND COMPLETED. THEN TABLE 25 MUST BE PUT ON THE PLANS. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAMBANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE. OR AESTHETIC TREATMENT MAY BE FOUND IN USDA—SCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342-CRITICAL AREA PLANTING. FOR SPECIAL LAWN MAINTENANCE AREAS, SEE SECTIONS SOD AND TURFGRASS.

2. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, THE RATES SHOWN ON THIS TABLE SHALL BE DELETED AND THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY SHALL BE WRITTEN II FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREAFORM FERTILIZER (40-0-0) AT 3 LBS/1000 S.F. (150 LBS/AC), IN ADDITION TO THE ABOVE SOIL AMÉNDMENTS SHOWN IN THE TABLE, PAGÉ G-20-9, TO

BE PERFORMED AT THE TIME OF SEEDING.

GENERAL SPECIFICATIONS

CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED OR APPROVED. SOD LABELS SHALL BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.

AVAILABLE TO THE JOB FOREMAN AND INSPECTION.

SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" PLUS OR MINUS 1/4" AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH, INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIERS WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.

STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.

SOD SHALL NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.

SOD SHALL BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD SHALL BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

B. SOD INSTALLATION DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, THE SUBSOIL SHALL BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD.

IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD.

THE FIRST ROW OF SOD SHALL BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY WEDGED AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH, ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.

WHEREVER POSSIBLE, SOD SHALL BE LAID WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. SOD SHALL BE ROLLED AND TAMPED, PEGGED OR OTHERWISE SECURED TO PREVENT SLIPPAGE ON SLOPES AND TO ENSURE SOLID CONTACT BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.

SOD SHALL BE WATERED IMMEDIATELY FOLLOWING ROLLING OR SOD SHALL BE WATERED IMMEDIATELY FOLLOWING ROLLING OR TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD SHALL BE COMPLETED WITHIN EIGHT HOURS.

C. SOD MAINTENANCE

IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE
PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST
WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO
A DEPTH OF 4". WATERING SHOULD BE DONE DURING THE HEAT OF
THE DAY TO PREVENT WILTING.

 AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT 3. THE FIRST MOWING OF SOD SHOULD NOT BE ATTEMPTED UNTIL
THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS
LEAF SHALL BE REMOVED BY THE INITIAL CUTTING OR
SUBSEQUENT CUTTINGS. GRASS HEIGHT SHALL BE MAINTAINED
BETWEEN 2" AND 3" UNLESS OTHERWISE SPECIFIED.

SECTION 5: TURFGRASS ESTABLISHMENT

AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE. AREAS TO RECEIVE SEED SHALL BE TILLED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVELED AND RAKED TO PREPARE A PROPER SEEDBED. STONES AND DEBRIS OVER 1 INCHES IN DIAMETER SHALL BE REMOVED. THE RESULTING SEEDBED SHALL BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NOT DIFFICULTY.

NOTE: CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.

A. TURF GRASS MIXTURES

1. KENTUCKY BLUEGRASS — FULL SUN MIXTURE — FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS/1000 SQUARE FEET. A MINIMUM OF THREE BLUEGRASS CULTIVARS SHOULD BE CHOSEN RANGING FROM A MINIMUM OF 10% TO A MAXIMUM OF 35% OF THE MIXTURE BY WEIGHT.

2. KENTUCKY BLUEGRASS/PERENNIAL RYE - FULL SUN MIXTURE - FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED Kentucky BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE/1000 SQUARE FEET. A MINIMUM OF 3 Kentucky BLUEGRASS CULTIVARS MUST BE CHOSEN, WITH EACH CULTIVAR RANGING FROM 10% TO 35% OF THE MIXTURE BY WEIGHT.

3. TALL FESCUE/KENTUCKY BLUEGRASS - FULL SUN MIXTURE - FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95-100% CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0-5%. SEEDING RATE: 5 TO 8 LB.1000 S.F. ONE OR MORE CULTIVARS MAY BE BLENDED.

4. KENTUCKY BLUEGRASS/FINE FESCUE - SHADE MIXTURE - FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30-40% AND CERTIFIED FINE FESCUE AND 60-70%. SEEDING RATE: 1 -3 LBS/1000 SQUARE FEET. A MINIMUM OF 3 KENTUCKY BLUEGRASS CULTIVARS MUST BE CHOSEN, WITH EACH CULTIVAR RANGING FROM A MINIMUM OF 10% TO A MAXIMUM OF 35% OF THE MIXTURE BY

NOTE: TURFGRASS VARIETIES SHOULD BE SELECTED FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION AGRONOMY MIMEO , "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND".

B. IDEAL TIMES OF SEEDING

(HARDINESS ZONE - 7A, 7B).

. WESTERN MD: MARCH 15 - JUNE 1, AUGUST 1 - OCTOBER 1 (HARDINESS

2. CENTRAL MD: MARCH 1 - MAY 15, AUGUST 15 - OCTOBER 15 (HARDINESS ZONE – 6B). 3. SOUTHERN MD, EASTER SHORE: MARCH 1 - MAY 15, AUGUST 15 - OCTOBER 15

IRRIGATION F SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2" EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

D. REPAIRS AND MAINTENANCE

INSPECT ALL SEEDED AREAS FOR FAILURES AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.

. ONCE THE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED. 2. IF THE STAND PROVIDES LESS THAN 40% GROUND COVERAGE, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER, SEEDBED, PREPARATION AND

SEEDING RECOMMENDATIONS 3. IF THE STAND PROVIDES BETWEEN 40% AND 94% GROUND COVERAGE, OVERSEEDING AND FERTILIZING USING HALF OF THE RATES ORIGINALLY APPLIED MAY BE NECESSARY

4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE 24. FOR LAWNS AND OTHER MEDIUM TO HIGH MAINTENANCE TURFGRASS AREAS, REFER TO THE UNIVERSITY OF MARYLAND PUBLICATION "LAWN CARE IN MARYLAND". MARYLAND" BULLETIN NO. 171.

STANDARD AND SPECIFICATIONS FOR TOPSOIL

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES HIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES

A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS. C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO

D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIME STONE IS NOT FEASIBLE. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS

CONSTRUCTION MATERIAL SPECIFICATIONS TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA—SCS IN COOPERATION WITH MARYLAND ACRICULTURAL EXPERIMENTAL STATION.

TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING: 1. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.

2. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

3. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRES (200 - 400 POUNDS PER 1,000 SQ. FT.) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTURBED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES: 1. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION — SECTION 1 — VEGETATIVE STABILIZATION METHODS AND MATERIALS.

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES: 1. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:

A. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.

B. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5% BY C. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

D. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNIT SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO—TOXIC MATERIALS. NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

1. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION -SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS. V. TOPSOIL APPLICATION

1. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS. 2. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4"-8"

HIGHER IN ELEVATION. 3. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEED CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

4. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

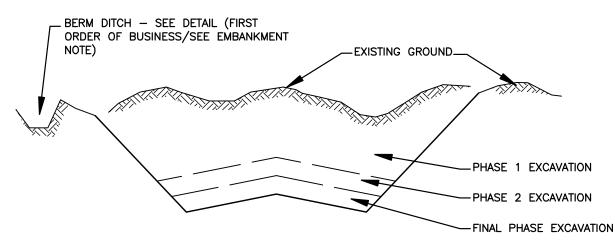


FIGURE 4 INCREMENTAL STABILIZATION -CUT

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY

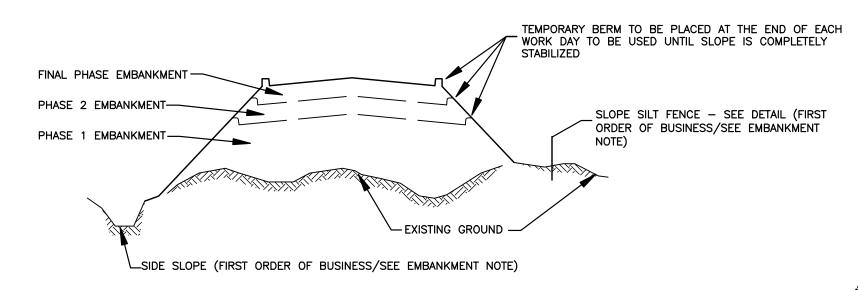


FIGURE 5 INCREMENTAL STABILIZATION -

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER 16597, EXPIRATION DATE: 08-15-2009

TEMPORARY SEEDING SUMMARY

	SEED MIXTURE (HARDINESS ZONE 7A) (FROM TABLE 26)					LIME
MIX NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATE *	SEEDING DEPTHS	(10–10–10)	RATE
T-1	BARLEY	122 LBS./AC.	2/1-4/30 8/15-10/15	1" - 2"		
T-1A	RYE	140 LBS./AC.	8/15-11/30 2/1-4/30	1" - 2"	600 LBS./AC. (15 LB/ 1000 SF)	2 TONS/AC. (100 LB/ 1000 SF)
T-2	ANNUAL RYEGRASS	50 LBS./AC.	2/1-4/30 8/15-11/1	1/4" - 1/2"	,	·

*FOR 5/1 TO 8/14: USE BARLEY OR RYE PLUS FOXTAIL MILLET (150lbs/ac.), PLANTING DEPTH: 1

PERMANENT SEEDING SUMMARY

CEED MINTURE (HARRINGCO TONE TA) FEDTILIZED DATE

	SEED MIXTURE (HARDINESS ZONE 7A) (FROM TABLE 25)			FERTILIZER RATE (10–20–20)			LIME	
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATE*	SEEDING DEPTHS	N	P205	K20	RATE
1	TALL FESCUE (75%) CANADA BLUEGRASS (10%) KENTUCKY BLUEGRASS (10%) REDTOP (5%)	150 lbs/ac. TOTAL COMBINED	3/1 - 5/15 8/15 - 11/15	1/4"-1/2"	90 LBS./AC. (2.0 LB/ 1000 S.F.)	(4 LB/	175 LBS./AC. (4 LB/ 1000 S.F.)	2 TONS/AC. (100 LB/ 1000 S.F.)
3	TALL FESCUE (85%) PERENNIAL RYEGRASS (10%) KENTUCKY BLUEGRASS (5%)	125 lbs/ac. 15 lbs/ac 10 lbs/ac	3/1 - 5/15 8/15 - 11/15	1/4"-1/2"	90 LBS./AC. (2.0 LB/ 1000 S.F.)		175 LBS./AC. (4 LB/ 1000 S.F.)	2 TONS/AC. (100 LB/ 1000 S.F.)
7	TALL FESCUE (83%) WEEPING LOVEGRASS (2%) SERECIA LESPEDEZA (15%)	110 lbs/ac. 3 lbs/ac 20 lbs/ac	3/1 - 5/15 5/16 - 8/14 8/15 - 11/15	1/4"-1/2"	90 LBS./AC. (2.0 LB/ 1000 S.F.)		175 LBS./AC. (4 LB/ 1000 S.F.)	2 TONS/AC. (100 LB/ 1000 S.F.)

NOTE: FOR STANDARD AND SPECIFICATION FOR VEGETATIVE STABILIZATION, SEE SECTION G — "VEGETATIVE PRACTICES IN THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL". *FOR 5/16 TO 8/14 ADD 10 LBS. OF MILLET PER ACRE IN EACH SEED MIXTURE.

ESD #5809

REVISIONS

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> **EROSION & SEDIMENT** CONTROL NOTES FOR

LETITIA AVENUE TOWNHOMES

WARD 25, SECTION 02, BLOCK 7762, LOT 1-7

BALTIMORE CITY, MARYLAND

LETITIA AVENUE @ HERKIMER STREET

SCALE: DESIGNED BY: DRAWN BY: BTKAS SHOWN DATE: OB NO.: SHEET NO.: 10-30-08 08057 5 OF 5