LAYOUT 2/14/03 1PM INSP 4 3/25/03 Anytime

INSP 2 2/25/03 12:30 INSP 5 4/1/03 2:30pm

INSP 3 3/24/03 PM Anytime INSP 6 5/16/03 11 Am

ISSUE DATE: 2/3/2003

APPROVAL DATE: 5/16/03

PERMIT

INDEXED

P 518530

A 513119-A

ON-SITE SEWAGE DISPOSAL SYSTEM
HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH

05-436338

Emory's Backhoe Service IS PERMITTED TO INSTALL ☒ ALTER ☐

ADDRESS: _____ PHONE NUMBER: _____

SUBDIVISION: Kneeland Property LOT NUMBER: 1

ADDRESS: 12986 Brighton Dam Road PROPERTY OWNER: Paul Kneeland

SEPTIC TANK CAPACITY (GALLONS): 1500 OUTLET BAFFLE FILTER REQUIRED ☐

PUMP CHAMBER CAPACITY (GALLONS): 1500 COMPARTMENTED TANK REQUIRED ☒

NUMBER OF BEDROOMS: 5

SQUARE FEET PER BEDROOM: 180 900

LINEAR FEET OF TRENCH REQUIRED: 250 HOUSE SERVED BY PUBLIC WATER ☐

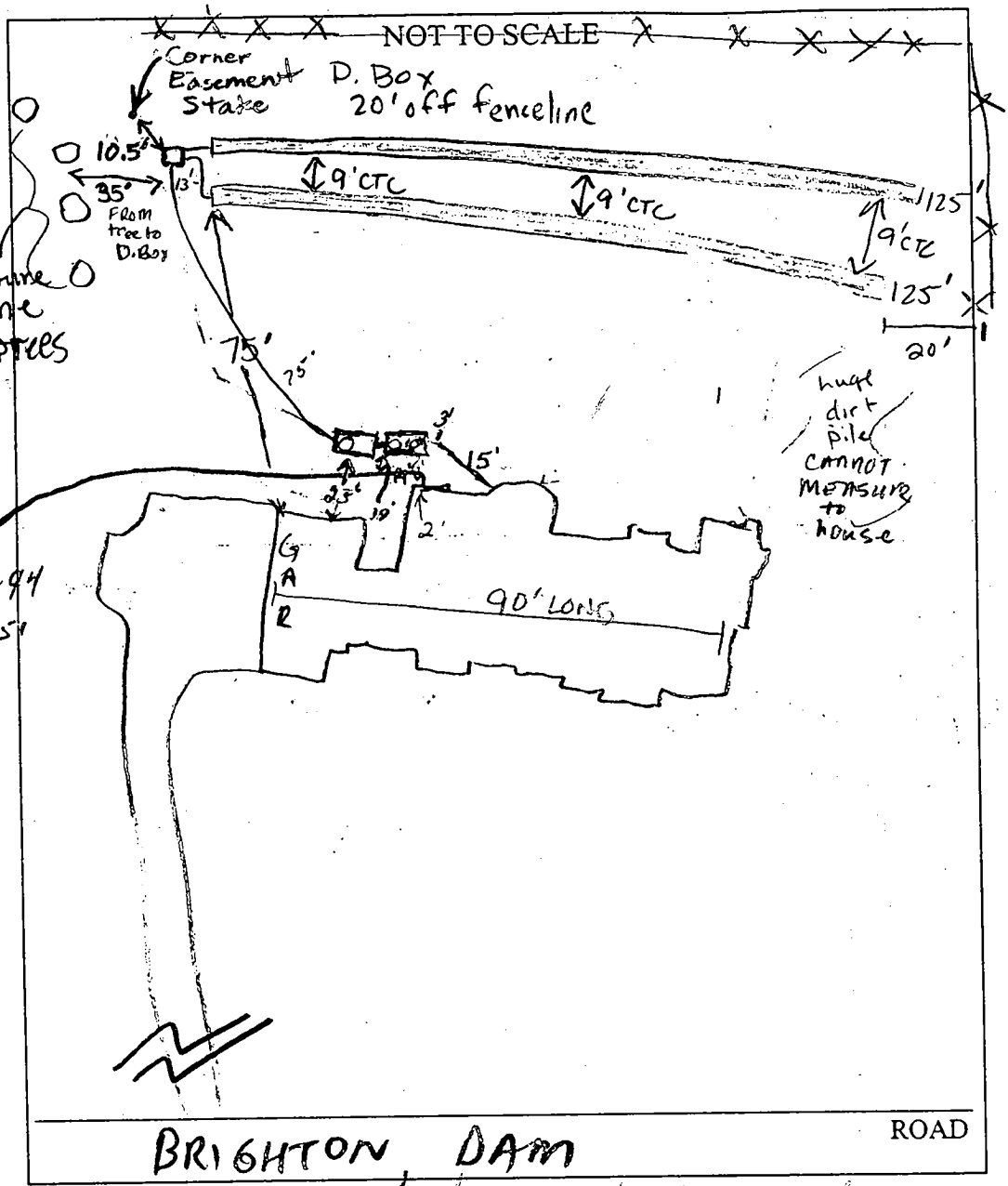
TRENCHES:	Trench to be 3.0 feet wide. Inlet 2.0 feet below original grade. Bottom maximum depth 4.0 feet below original grade. Effective area begins at 3.0 feet below original grade. 2.0 feet of stone below distribution pipe.
LOCATION:	Place the distribution box as shown on the approved site plan. Run trenches on contour. If septic force main runs through 100' well radius, sleeve force main w/pvc.
NOTES:	Shallow system only high water table. SLAG STONE NOT USEABLE

PLANS APPROVED: Steven R. Krieg DATE: 11/7/2002

NOTES: PERMIT VOID AFTER 2 YEARS
CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS
WATERTIGHT SEPTIC TANKS REQUIRED
ALL PARTS OF SEPTIC SYSTEM SHALL BE 100 FEET FROM ANY WATER WELL UNLESS SPECIFICALLY AUTHORIZED
MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS UNLESS SPECIFICALLY AUTHORIZED
CONTRACTOR RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE REGULATIONS, GUIDELINES AND THE TERMS OF THIS PERMIT

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM
PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT
ALL 410-313-2640 FOR INSPECTION OF SEPTIC SYSTEM

A513119-A



TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3	2	4

NUMBER OF TRENCHES 2
TOTAL LENGTH 250'
ABSORPTION AREA 750ft²
DISTRIBUTION BOX LEVEL yes
DISTRIBUTION BOX BAFFLE yes
DISTRIBUTION BOX PORT soon

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL ✓
CAPACITY 1500 GAL
SEAM LOC Top
TANK LID DEPTH 3'
BAFFLES ✓
BAFFLE FILTER —
MANHOLE LOC F & B
6" PORT LOC —
WATERTIGHT TEST —

SEPTIC TANK 2 LEVEL ✓
CAPACITY 1500 GAL
SEAM LOC Top
TANK LID DEPTH 3'
BAFFLES ✓
BAFFLE FILTER —
MANHOLE LOC Back
6" PORT LOC —
WATERTIGHT TEST —

PRE-CONSTRUCTION 2/19/03 WR dowell in SRA. OK to set tanks, don't start trenches (SO) 2/14/03 After consult w/ SRK, dig hole

INSTALLATION : 5' off D.w. to verify dry soils. If so get 1st trench 10' off D.w. Abandon D.w. (SO) 2/25/03 S.T set (SO)

2/27/03 - ST set, house conn made, OK to cover (SO)

3/24/03 First tank needs baffles. O.K. to install 2 - 120' to 130' trenches across the top of easement. (BB)

3/25/03 D.Box SET. Will leave stake at end of trench for measurement to house during pump test. Will call when line from pump tank to D box is done (KN)

FINAL INSPECTOR _____ DATE OF APPROVAL 5/16/03

See Attached

12926 Brighton Dam Rd

4/1/03 - Builder said old D.W was actually a small cistern. Was dry, collapsed & filled in w/ dirt
- S.T needs Manhole, Pump & Alarm tests needed
- OK to cover all work
- Builder to get measurement from back of the house to end of closest trench (SO)
- Well line in ground, no house conn or well conn made (SO)
5/16/03 - Pump and alarm test OK (SO)
Contractor to fax measurement to the trench. Not able to get today - Mad/Dirt Pile

20/80/100

Total linear feet of trench required 250 feet

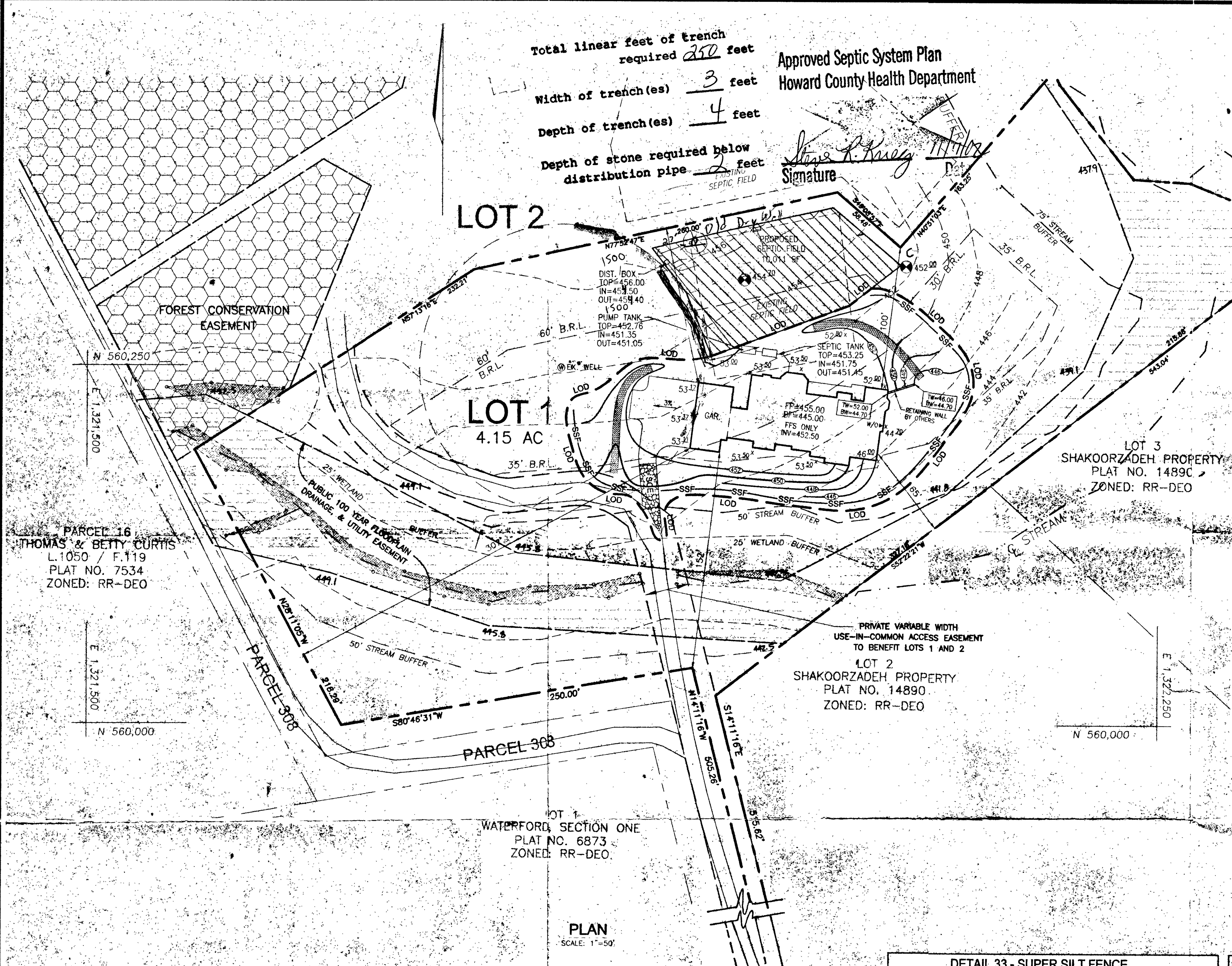
Width of trench(es) 3 feet

Depth of trench(es) 4 feet

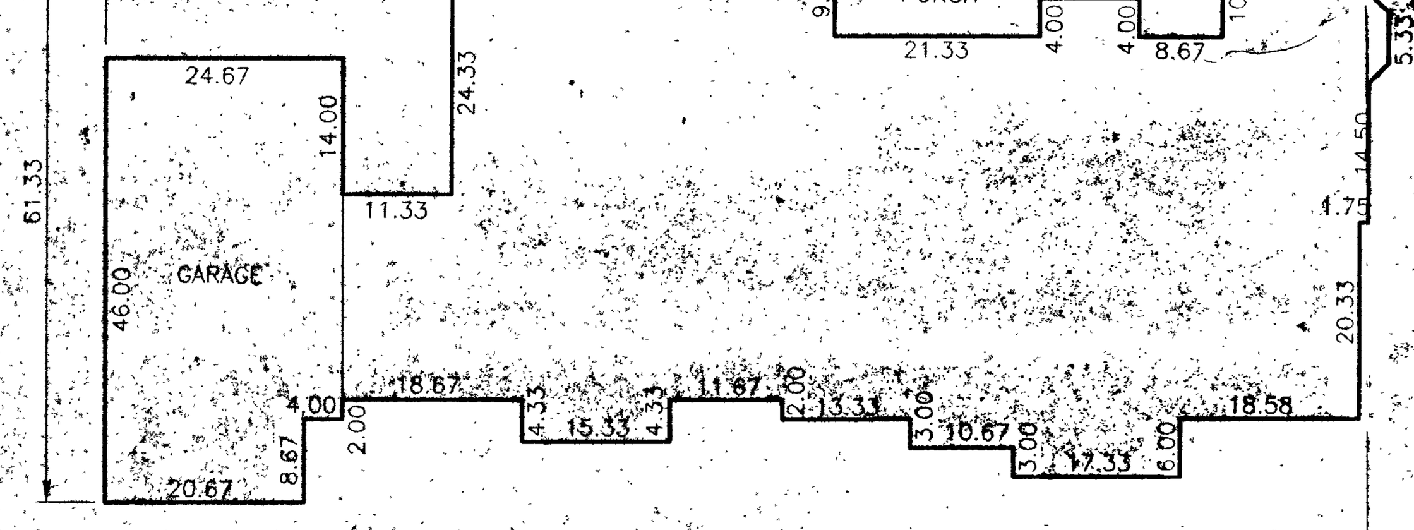
Depth of stone required below distribution pipe 2 feet

Approved Septic System Plan
Howard County Health Department

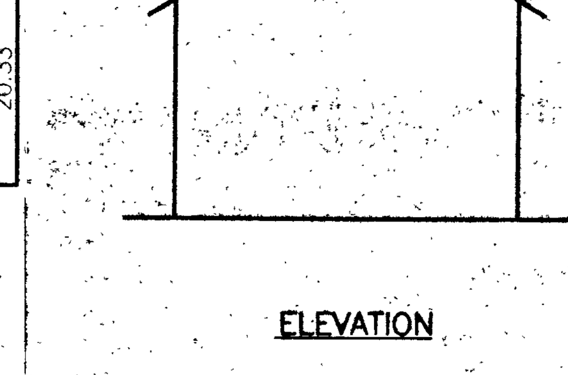
Signature ______ Date ______



PLAN
SCALE: 1"=50'



PLAN



ELEVATION

HOUSE TYPE
NOT TO SCALE

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETABLE 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

I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

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 PLANT GROWTH.

D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

II. 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 AND MATERIAL SPECIFICATIONS

I. 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 AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOIL SPECIFICATIONS – SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

I. 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 A 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 THAT 1 AND 1/2" IN DIAMETER.

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

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

II. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

I. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION – SECTION I – VEGETATIVE STABILIZATION METHODS AND MATERIALS.

III. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

I. 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 PERCENT BY WEIGHT.

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 SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL 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.

II. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMMENDMENTS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION–SECTION I–VEGETATIVE STABILIZATION METHODS AND MATERIALS.

V. TOPSOIL APPLICATION

I. 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.

II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" – 8" HIGHER IN ELEVATION.

III. 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 SEEDING 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.

IV. TOPSOIL SHALL NOT BE PLACE 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.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1) PREFERRED–APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/100 SQ.FT.) AND 600 LBS PER ACRE 10–10–10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT THE TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30–0–0 UREAFORM FERTILIZER (9 LBS/1000 SQ.FT.)

2) ACCEPTABLE–APPLY 2 TONS PER ACRE DOLOMATIC LIMESTONE (92 LBS/1000 SQ.FT.) AND APPLY 1000 LBS. PER ACRE 10–10–10– FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313–1855).
2. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: (A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1, (B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS :

TOTAL AREA	4.15 AC
AREA DISTURBED	0.69 AC
AREA TO BE ROOFED OR PAVED	0.19 AC
AREA TO BE VEGETATIVELY STABILIZED	0.46 AC
TOTAL CUT	700 CY
TOTAL FILL	700 CY
OFFSITE WASTE/BORROW AREA LOCATION	N/A

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

* TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

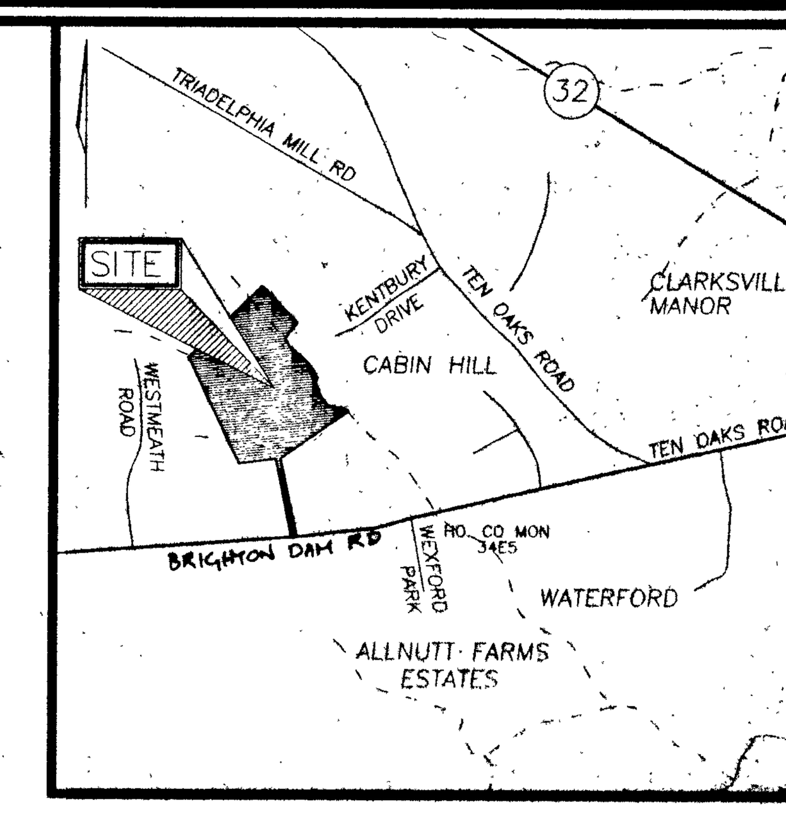
SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10–10–10 FERTILIZER (14 LBS./1000 SQ.FT).

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 1 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SRK



VICINITY MAP
SCALE: 1"=2000'

LEGEND

336	EXISTING 2 FT CONTOUR
380	EXISTING 10 FT CONTOUR
336	PROPOSED CONTOUR
LOD — LOD	LIMIT OF DISTURBANCE
SF — SF	SILT FENCE
SCE	STABILIZED CONSTRUCTION ENTRANCE
	SEPTIC EASEMENT
	EROSION CONTROL MATTING

NOTES

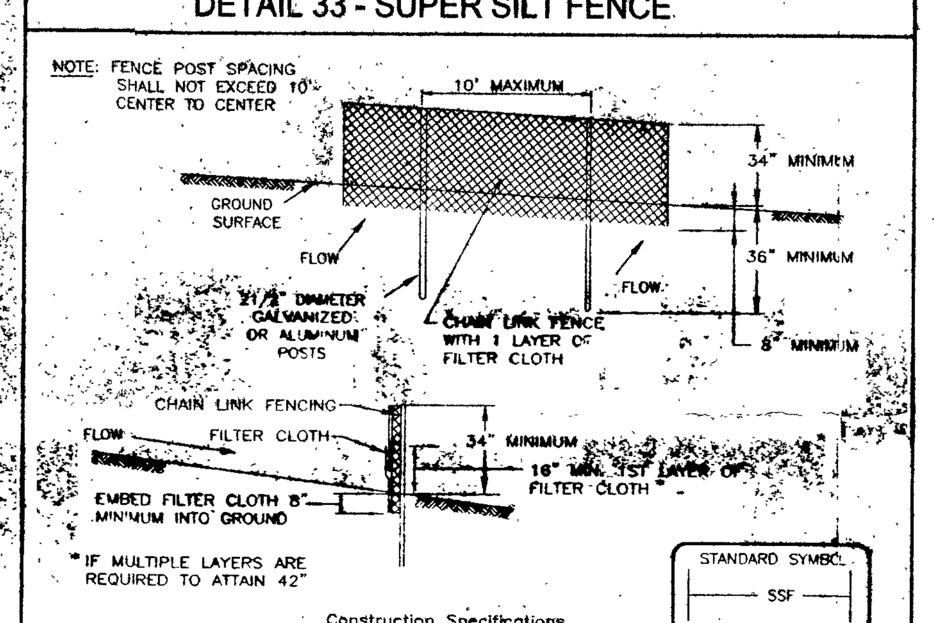
THE PROPERTY OUTLINE IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY VOGEL AND ASSOCIATES, INC. IN APRIL, 2000.

THE EXISTING FEATURES AND CONTOURS SHOWN HEREON ARE BASED ON FIELD RUN TOPOGRAPHY AND HOWARD COUNTY DIGITAL TOPOGRAPHY

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. THIS PROPERTY FULFILLS ITS LANDSCAPE REQUIREMENT BY RETENTION OF PERIMETER TREES ALONG THE ENTIRE BOUNDARY.

THE LOWEST LEVEL BUILDING ELEVATION SHALL BE A MINIMUM OF TWO FEET ABOVE THE PLATTED FLOODPLAIN ELEVATION.

DETAIL 33 - SUPER SILT FENCE



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

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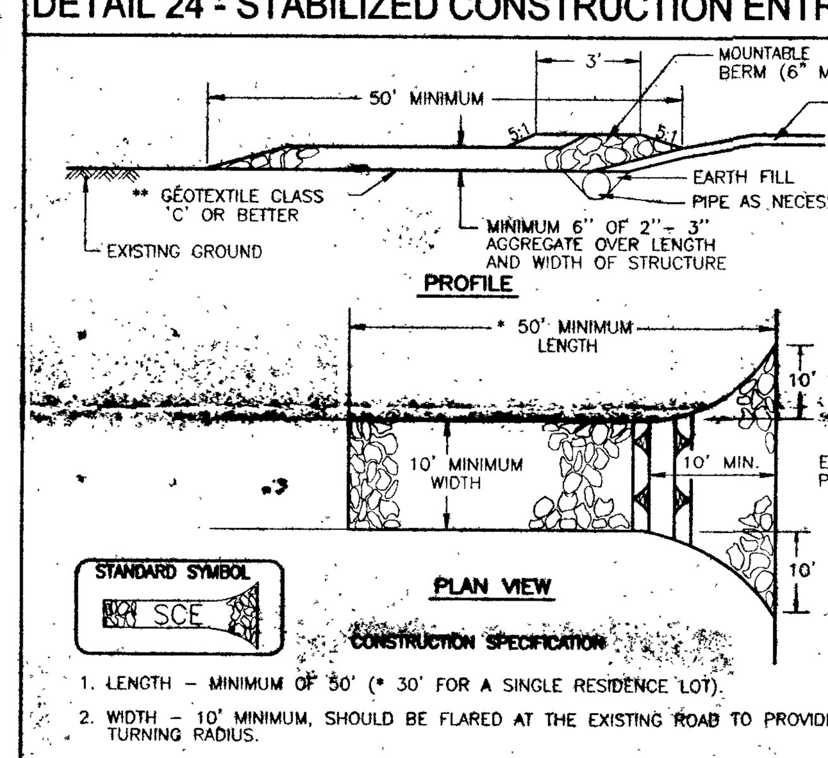
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION SPECIFICATION

1. LENGTH – MINIMUM OF 50' (* 30' FOR A SINGLE RESIDENCE LOT).
2. WIDTH – 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. ** THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
4. STONE – CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
5. SURFACE WATER – ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
6. LOCATION – A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

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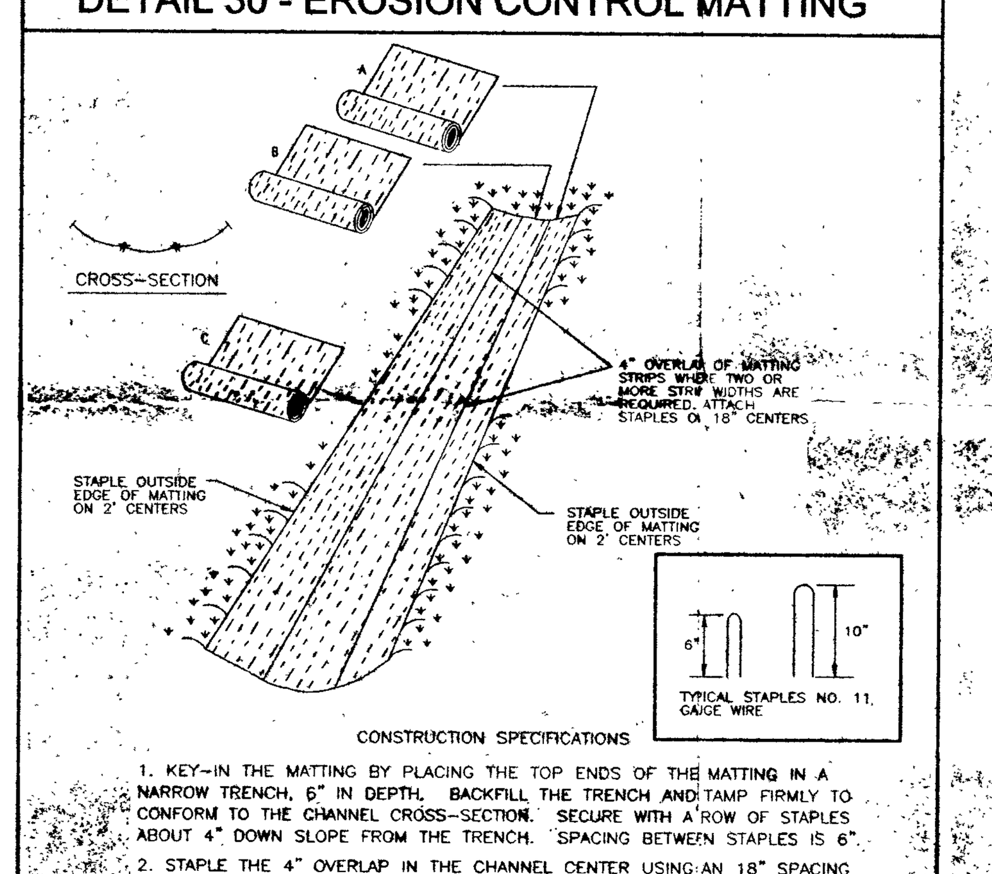
DETAIL 30 - EROSION CONTROL MATTING



CONSTRUCTION SPECIFICATIONS

1. KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH, 6" IN DEPTH. BACKFILL THE TRENCH AND TAMP FIRMLY TO CONFORM TO THE CHANNEL CROSS-SECTION. SECURE WITH A ROW OF STAPLES ABOUT 4" DOWN SLOPE FROM THE TRENCH. SPACING BETWEEN STAPLES IS 6".
2. STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING between staples.
3. BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SMOOTH AND IN FIRM CONTACT WITH THE SOIL.
4. STAPLES SHALL BE PLACED 2' APART WITH 4 ROWS FOR EACH STRIP, 2 OUTER ROWS, AND 2 ALTERNATING ROWS DOWN THE CENTER.
5. WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4", SHIPLAP FASHION. REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
6. THE DISCHARGE END OF THE MATTING LINER SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.

NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE FLOW MUST BE KEYED-IN.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G - 22 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. INSTALL SEDIMENT CONTROL AS SHOWN ON PLAN IN ACCORDANCE WITH DETAILS.(1 DAY)
3. CLEAR AND ROUGH GRADE SITE.(1 WEEK)
4. CONSTRUCT HOUSE.(4 MONTHS)
5. FINE GRADE AND STABILIZE THE SITE WITH TOPSOIL AND SEEDING (SEE NOTES THIS PLAN).(3 DAYS)
6. AFTER THE SITE IS PERMANENTLY STABILIZED AND AND PERMISSION IS GRANTED FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS.

THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

John R. Rlouter 10/24/02
SOIL CONSERVATION DISTRICT — DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Jim Myers 10/24/02
H. SOIL CONSERVATION DISTRICT — DATE

ENGINEERS CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

10/22/02
SIGNATURE OF ENGINEER — DATE
ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

10/22/02
SIGNATURE OF DEVELOPER — DATE

OWNER/ DEVELOPER

PAUL D. KNEELAND
SUSANNE F. KNEELAND
12990 BRIGHTON DAM ROAD
CLARKSVILLE, MD. 21029-1411

PLOT PLAN

KNEELAND PROPERTY

LOT 1

TAX MAP 34 — PARCEL 299
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS ARCHITECTS SURVEYORS
7125 Riverwood Drive Columbia, Maryland 21046–2354
Phone: 410–290–9550 Fax: 410–720–6226
Bel Air, Maryland — Columbia, Maryland — Warrenton, Virginia

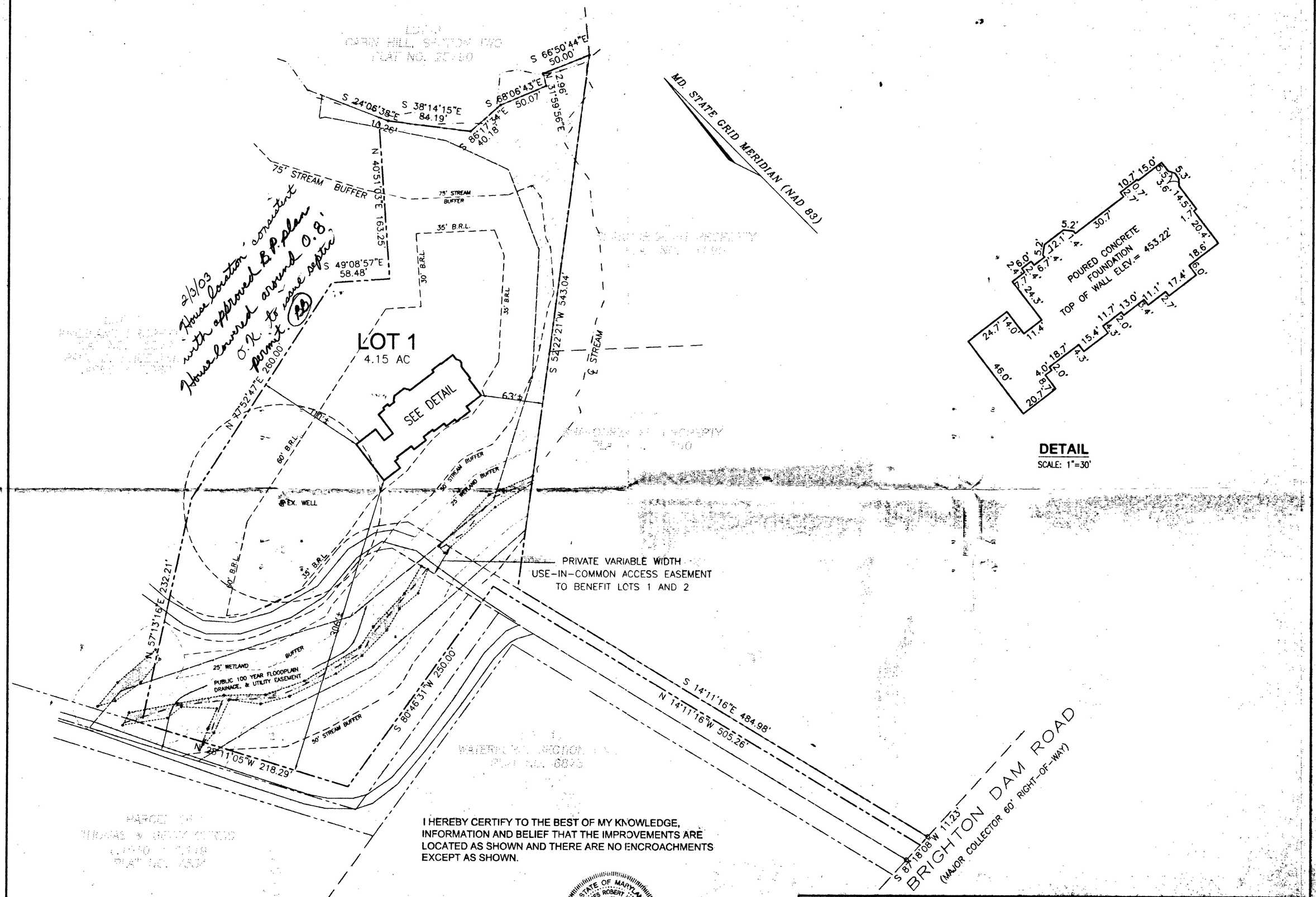
STATE OF MARYLAND — ROBERT HARRIS VOGEL — No. 16193 — PROFESSIONAL ENGINEER
ROBERT H. VOGEL, PE No.16193

DESIGN BY:	JT
DRAWN BY:	JT
CHECKED BY:	RHV
DATE:	OCT. 17, 2002
SCALE:	1"=50'
W.O. NO.:	2019153

SHEET 1 OF 1

GP-03-19

M:\PROJECTS\2019153\ENGR\dwg\lot01_plot.dwg Tue Oct 22 16:00:37 2002 JT



I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF THAT THE IMPROVEMENTS ARE LOCATED AS SHOWN AND THERE ARE NO ENCROACHMENTS EXCEPT AS SHOWN.

STATE OF MARYLAND
JAMES ROBERT MEEKS
No. 10857
REGISTERED
PROFESSIONAL LAND SURVEYOR

James R. Meeks 12/03/02

JAMES ROBERT MEEKS, PROFESSIONAL LAND SURVEYOR #10857 DATE

WALL CHECK

FOR

KNEELAND PROPERTY

LOT 1

6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.

ENGINEERS ARCHITECTS SURVEYORS

7125 Riverwood Drive Columbia, Maryland 21046-2384

Phone: 410-720-6900 or 410-209-9556 Fax: 410-720-6226

Bel Air, Maryland Warrenton, Virginia

PLAT: 15577	SCALE: 1"= 60'	DATE: 12/02/02	DRAWN BY: BDA	CHECKED BY: JRM	FWA JOB NO.: 2019153