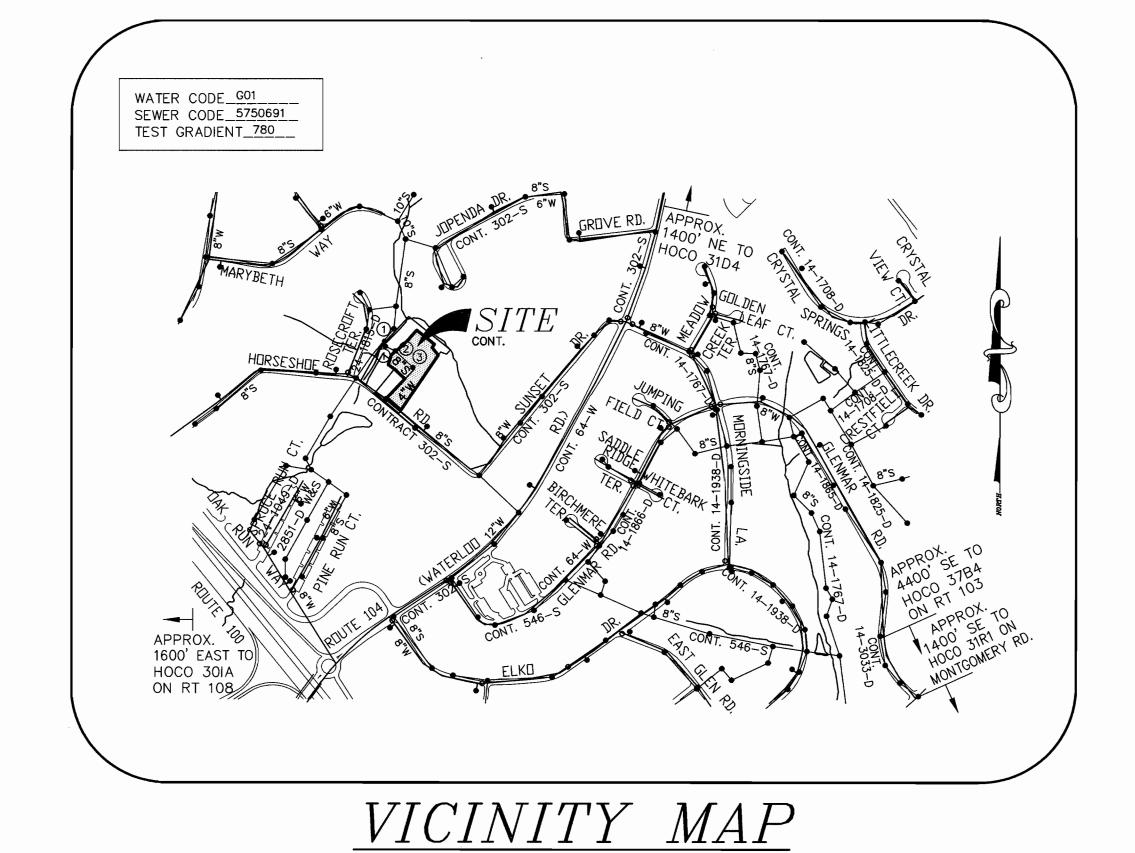
QUANTITY TABLE

ITEMS	QUANTITIES ESTIMATED	QUANTITIES TYPE MANUFACTURER/SUPPLI					
STANDARD MH	2	QUANTITIES	IIFE	MANUFACTORER/SOFFEIER			
WATERTIGHT MH	2						
8" SEWER MAIN	219 L.F.						
8" DIP SEWER	34 L.F.						
4" SEWER HOUSE CONNECTION	146 L.F.						
# SEWER HOUSE CONNECTIONS	5						
# MH CONNECTIONS	1						
4" WATER	260 L.F.						
1" WHC	151 / L.F.						
# WHC	6						
8"X4" TS&V	1						
4" CAP & BUTTRESS	1						
1/32 HB	1						
1 1/2" DRAIN	1						
NAME OF UTILITY CONTRACTO	DR:						
SURVEY AND DRAFTING DIVIS	ION AS-BUILT	DATE					

INDEX OF DRAWINGS

NO.	DESCRIPTION		
1	TITLE SHEET		
_ 2	WATER & SEWER PLAN		
3	WATER & SEWER PROFILES		
4	SEDIMENT CONTROL PLAN		
5	SEDIMENT CONTROL NOTES & DETAILS		



SCALE: 1' = 600'TYPE OF BUILDING __SFD_ No. OF UNITS___6__ No. OF WATER HOUSE CONNECTION____

No. OF TWIN WATER HOUSE CONNECTION N/A

No. OF SEWER HOUSE CONNECTIONS__6

TREATMENT PLANT LITTLE PATUXENT WATER RECLAMATION PLANT

DRAINAGE AREA LITTLE PATULENT-

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 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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. 7/9/01 ENGINEER'S SIGNATURE R. JACOB HIKMAT ENGINEER'S NAME REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS. m Maus THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION

WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY

DPZ FILE NOS. F-00-158 F-01-53 4P-01-193

CONTRACT NO.: 24-3954-D BOCK PROPERTY, LOTS 1 & 3 THRU 8 WATER & SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.

ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.

- 4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- 5. CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- 6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAIL FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- 7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.

8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS: STATE HIGHWAY ADMINISTRATION (410) 531-5533 BG & E CO. CONTRACTOR SERVICES (410) 850-4620

BG & E CO. UNDERGROUND DAMAGE CONTROL (410) 787-9068 MISS UTILITY 1-800-257-7777 COLONIAL PIPELINE CO. (410) 795–1390

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES (410) 313-4900

- 9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED OUTSIDE THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED
- 10. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE
- 11. ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- 12. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE
- 13. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- 14. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE
- STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS. 15. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL
- FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- 16. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER
- 17. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
- 18. ALL SEWER MAINS SHALL BE P.V.C. OR D.I.P. UNLESS OTHERWISE NOTED.
- 19. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- 20. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- 21. FORCE MAINS SHALL BE D.I.P. ONLY.
- 22. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY. 23. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1' - 6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 24. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
- 25. ALL WATER METERS TO BE LOCATED INSIDE PROPOSED UNITS.
- 26. STATIONING SHOWN IS WATER MAIN AND CENTER LINE STATIONING.
- 27. ALL CLEANOUTS AND BALL VALVES ARE TO BE LOCATED AT THE WATER, SEWER AND UTILITY EASEMENT LINE. 28. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PROIR TO COMMENCING CONSTRUCTION.
- 29. ON-SITE SEDIMENT CONTROL TO BE PROVIDED UNDER THIS PLAN, SEE SHEET 4 OF 5 AND 5 OF 5.
- 30. ALL SEWER HOUSE CONNECTIONS TO BE 4" IN SIZE.
- 31. ALL WATER HOUSE CONNECTIONS TO BE 1" IN SIZE UNLESS OTHERWISE NOTED.
- 32. ALL CELLARS WILL HAVE SERVICE TO LOWEST FLOOR UNLESS OTHERWISE NOTED. 33. THERE WILL BE NO TWIN SEWER HOUSE CONNECTIONS ON SITE UNLESS
- APPROVED BY HOWARD COUNTY.
- 34. ALL WATER MAINS TO BE 8", 6", OR 4" DIP CLASS 52.
- 35. STORM DRAIN SYSTEM INDICATED FOR INFORMATIONAL PURPOSES ONLY, SEE ROAD PLANS FOR CONSTRUCTION DATA.
- 36. COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.
- 37. IF MATERIAL IS WITHIN 8% OF OPTIMUM MOISTURE, WORKING THE MATERIAL UNTIL REQUIRED COMPACTION IS ACHIEVED IS CONTRACTOR'S RESPONSIBILITY. 38. THE CONSTRUCTION IS TO BE LIMITED TO THAT WHICH CAN BE BACKFILLED AND STABILIZED IN ANY ONE
- 39. THE SPOIL FROM THE TRENCH OPERATIONS IS TO BE PLACED ON THE UPHILL SIDE OF CONSTRUCTION
- 40. APPLICATION WAS APPROVED ON MAY 10, 2001, BY THE MDE NON-TIDAL WETLANDS & WATERWAYS DIVISION FOR THE TEMPORARY DISTURBANCE OF THE WETLANDS, STREAM, AND THEIR BUFFERS FOR THE INSTALLATION OF AN 8" SEWER MAIN UNDER TRACKING # 01-NT-0115/200163041.

OWNER

ROBERT A. WILDMAN & ROSE E. WILDMAN C/O MILDENBERG, BOENDER & ASSOCIATES, INC. 5072 DORSEY HALL DRIVE, SUITE 202 ELLICOTT CITY, MARYLAND 21042

> BOCK PROPERTY WATER & SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND CONTRACT No. 24-3954-D

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

EROSION AND SEDIMENT CONTROL BY THE SOIL

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

MILDENBERG, BOENDER & ASSOC., INC. 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

SJDSJDapproval 99077 ote JULY 2001

REVISION

TITLE SHEET

BLO**C**K NO.<u>13</u>

600' SCALE MAP NO. 31

BOCK PROPERTY, LOTS 1 & 3 THRU 8 CONTRACT NO. 24-3954-D

AS SHOWN 1 of 5

TAX MAP 31 PARCEL 279 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

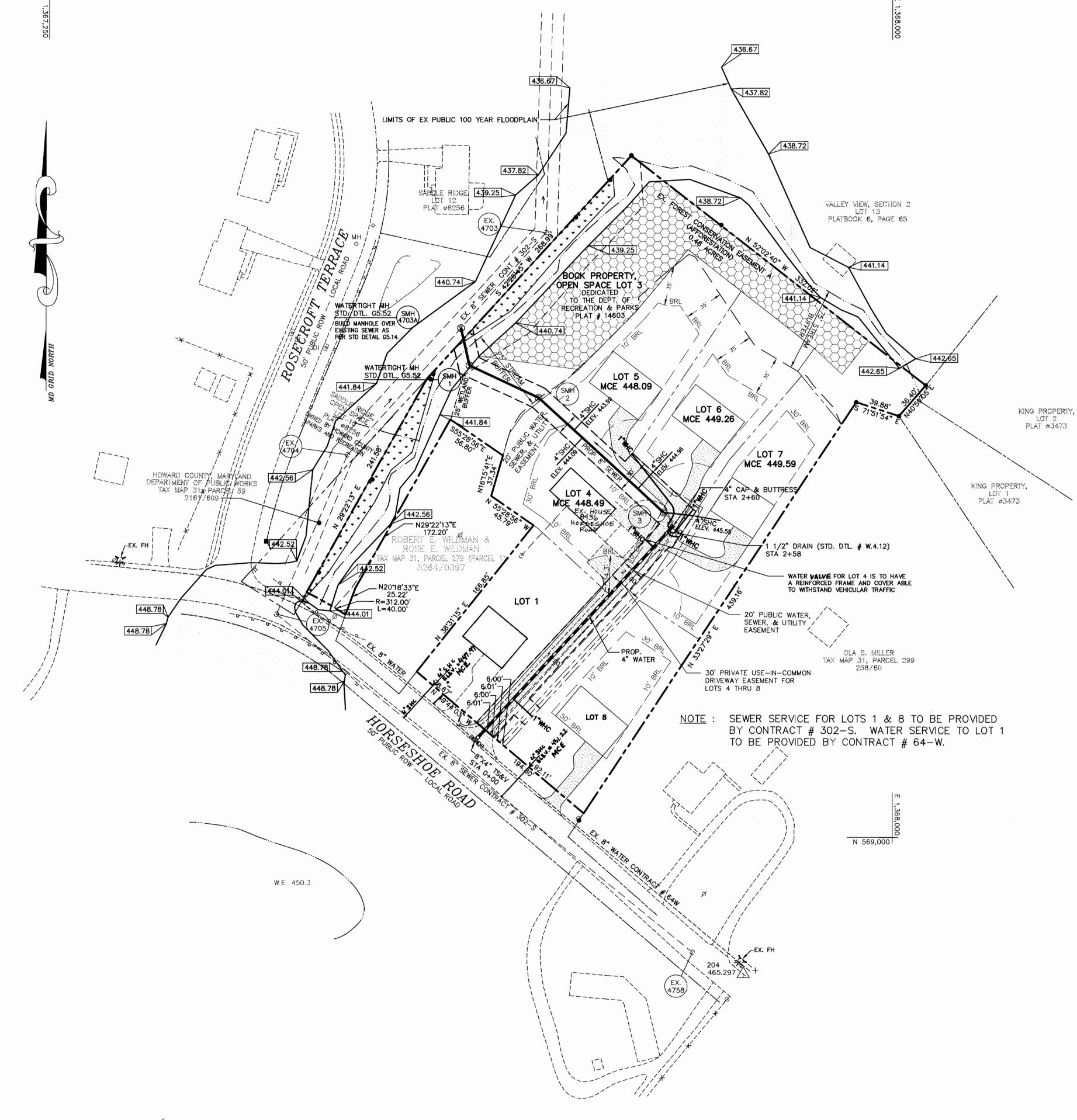
WATER MAIN TABUL	ATION CHART			
JAMESTOWN COURT				
NORTHING & EASTING	APPURTENANCE			
N 569,086.243	8"X4" TS&V			
E 1,367,629.226 N 569,271.099	1 1/2" DRAIN			
E 1,367,809.400 N 569,277.495 E 1,367,805.358	4" CAP & BUTTRESS			

CONTRACTOR TO VERIFY THE LOCATION OF APPURTENANCES WITHIN EASEMENTS.

MAN.	HOLE LOCATION CHART
MH #	NORTHING & EASTING
EX 4703	N 569,538.122
EX. 4704	E 1,367,691.944 N 569,339.946
4703A	E 1,367,515.345 N 569,454.966
1	E 1,367,615.890 N 569,419.956 E 1,367,623.848
2	N 569,391.283
3	E 1,367,685.316 N 569,289.209 E 1,367,796.594

NOTE : CONTRACTOR TO VERIFY THE LOCATION OF APPURTENANCES WITHIN EASEMENTS.

SHC TABLE						
LOT #	STATION SLOPE ELEVATION AT PL				TYPE OF CONNECTION	
4	0+53	2%	444.09	448.49	SHC	
5	0+43	2%	443.99	448.09	SHC	
6	1+20	2%	444.96	449.26	SHC	
7	@ MH3	2%	445.55	449.59	MSHC	
1	_	2%	444.11	447. 97	SHC	
8	1	2%	446.92	451.22	SHC	



DPZ FILE NOS. F-00-158 F-01-53 GP-01-193

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

MILDENBERG,
BOENDER & ASSOC., INC. 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

N 569,750

JD					
on I D					WATER & SEWER
_					PLAN
99077					1 13211
7 2001	BY	NO.	REVISION	DATE	600' SCALE MAP NO 31 BLOCK NO 13

WATER & SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND CONTRACT No. 24-3954-D scale

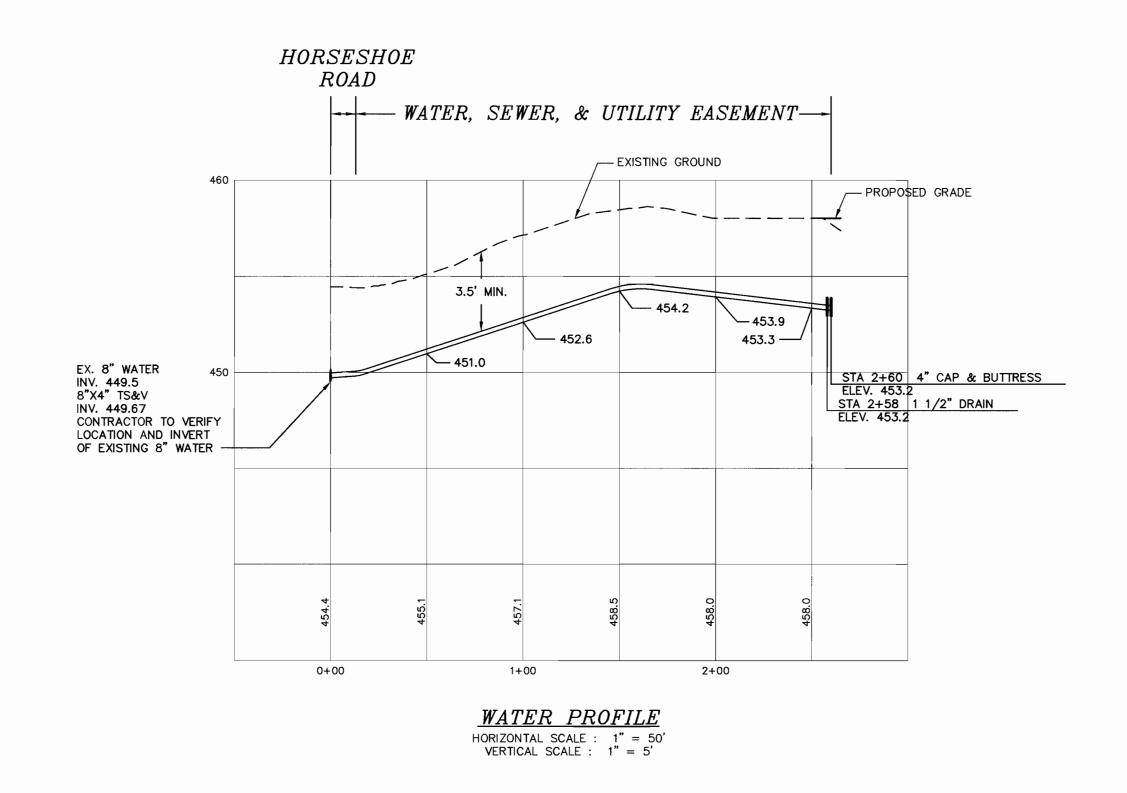
BOCK PROPERTY

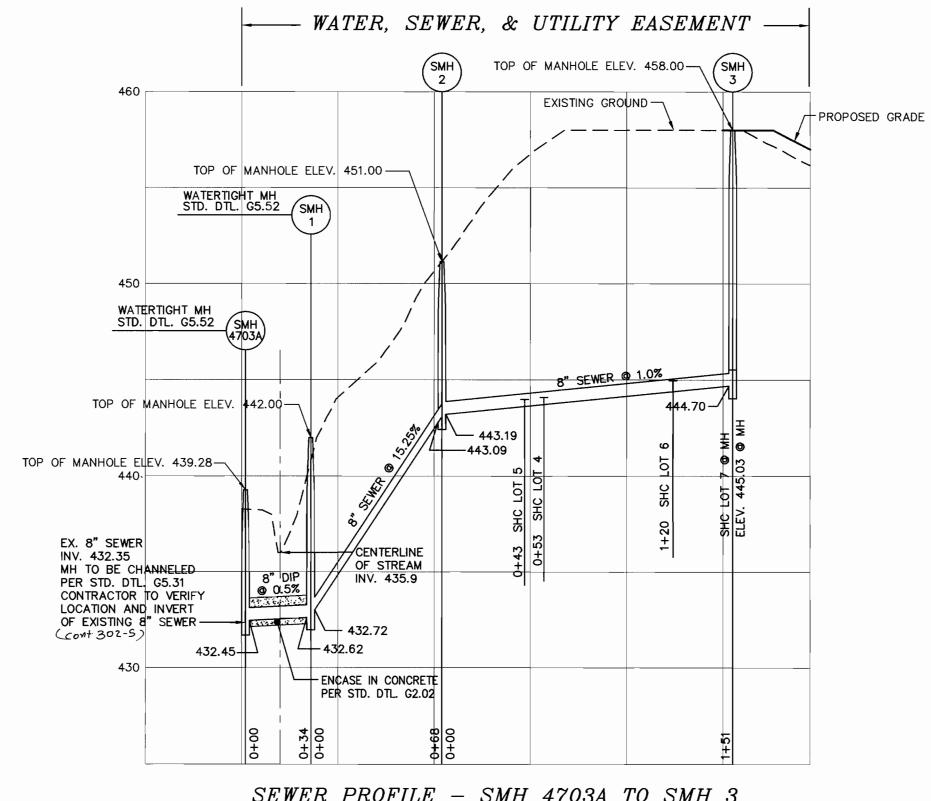
BOCK PROPERTY, LOTS 1 & 3 THRU 8 CONTRACT NO. 24-3954-D TAX MAP 31 PARCEL 279 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

N 569,750

1'' = 50'

2 of 5





SEWER PROFILE - SMH 4703A TO SMH 3

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

DPZ FILE NOS. F-00-158 F-01-53 4P-01-193

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

MILDENBERG,
BOENDER & ASSOC., INC.

Engineers Planners Surveyors

5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.



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WATER & SEWER PROFILES

BLOCK NO. 13

600' SCALE MAP NO. 31

HOWARD COUNTY, MARYLAND CONTRACT No. 24–3954–D

BOCK PROPERTY,
LOTS 1 & 3 THRU 8

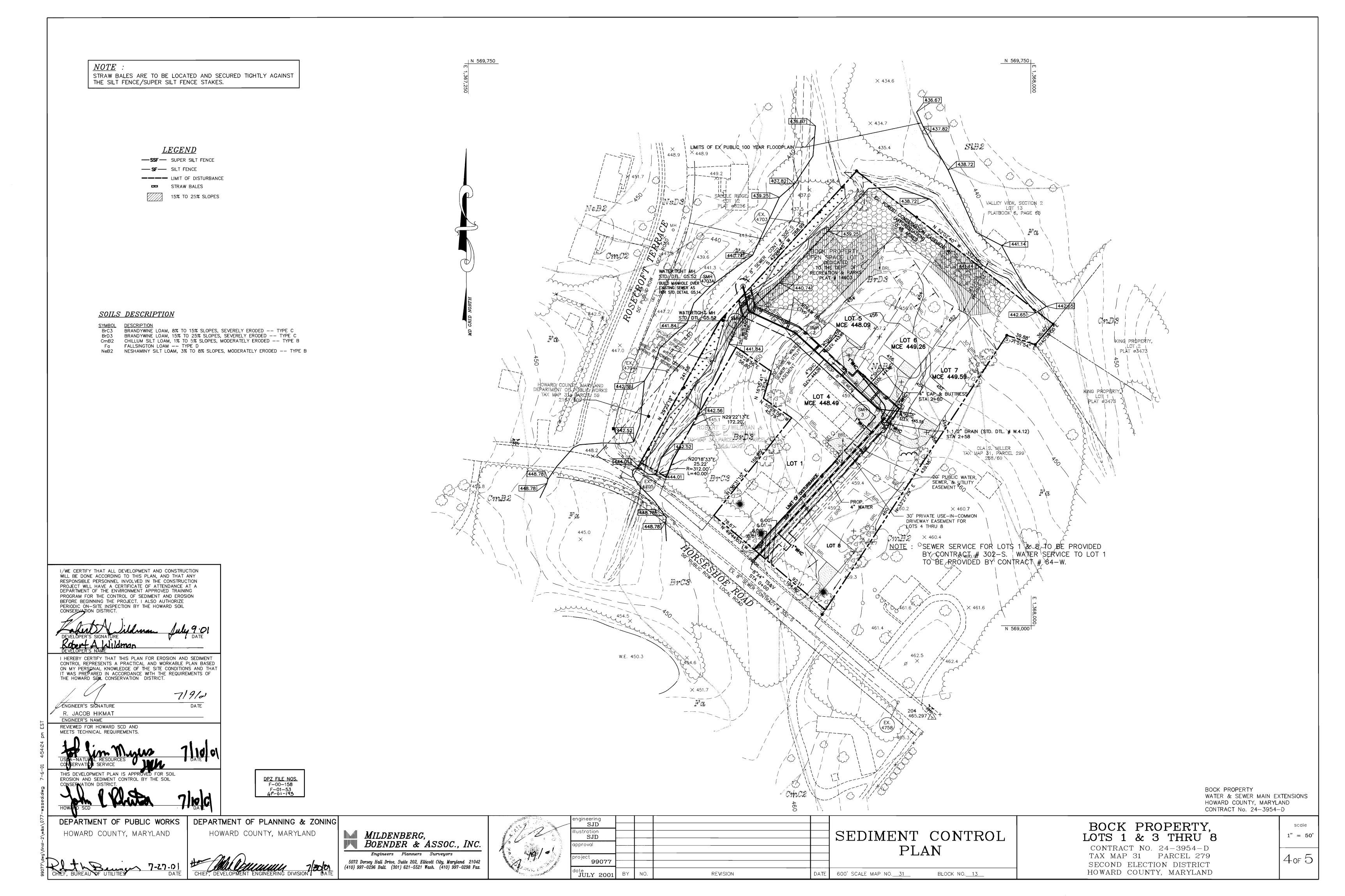
BOCK PROPERTY

WATER & SEWER MAIN EXTENSIONS

CONTRACT NO. 24-3954-D
TAX MAP 31 PARCEL 279
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

AS SHOWN

3 of 5



HOWARD SOIL CONSERVATION DISTRICT

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, DISKING 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 ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT 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 DOLOMITIC LIMESTONE (92 LBS./1000 SO.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK 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 LOBS. 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 OF 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 TONE/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 SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED. SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, FOR 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 OCTOBER 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 16 THRU NOVEMBER 28. PROTECT SITE BY APPLYING 2 TONS PER ACRÉ 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 WEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

STANDARD SEDIMENT CONTROL NOTES

- 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF NAY CONSTRUCTION, (313-1855).
- 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "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.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE
- 5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC.51), SOD (SEC 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC.52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY 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.

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY 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. HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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. 7/9/01 NGINEER'S SIGNATURE R. JACOB HIKMAT REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS CONSERVATION SERVICE THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.

DPZ FILE NOS. F-00-158

7) SITE ANALYSIS: TOTAL AREA OF SITE: _ ACRES AREA DISTURBED. ACRES AREA TO BE ROOFED OR PAVED ACRES AREA TO BE VEGITATIVELY STABILIZED: . ACRES TOTAL CUT: CU. YDS. TOTAL FILL: _ CU. YDS. TOTAL WASTE/BORROW AREA LOCATION

THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITIES MEASUREMENTS.

SEDIMENT CONTROL INSPECTOR.

- 8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF LITHITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY
- 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 CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

STANDARD 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 VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT. LOW NUTRIENT LEVELS. LOW DH. MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES

- 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
- 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.
- 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

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATION. 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:
 - 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 CON-TRASTING 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
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSON-SON GRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - 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 HE 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.
- III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION i - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

DISSIPATION OF PHYTO-TOXIC MATERIALS.

- ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
- g. ph for topsoils shall be between 6.0 and 7.5. If the tested soil demonstrates a ph of LESS THAN 6.0, SUFFICIENT LIME SHALL BE PERSCRIBED 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 WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT

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

- ii. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- V. TOPSOIL APPLLICATION
 - 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" TO 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 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
- VI. ALTERNATIVE FOR PERMANENT SEEDING INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
- COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - a. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM. A PERSON OR PERSONS WHO ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 - b. COMPOSTED SLUDGE SHALL CONTAIN AT LEASE 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHOURUS, AND 0.2 PERCENT POTASSIUM AND HAVE A Ph OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
 - c. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
- iv. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILLIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

SEQUENCE OF CONSTRUCTION

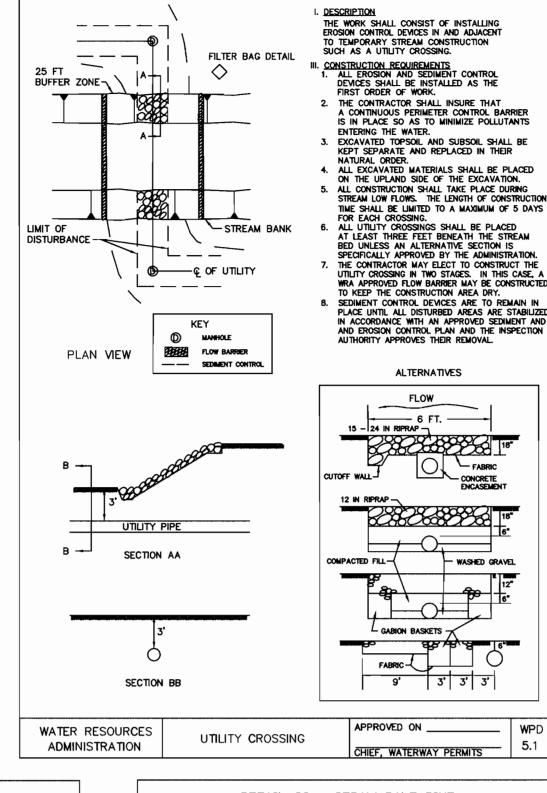
OBTAIN GRADING PERMIT. (1 DAY)

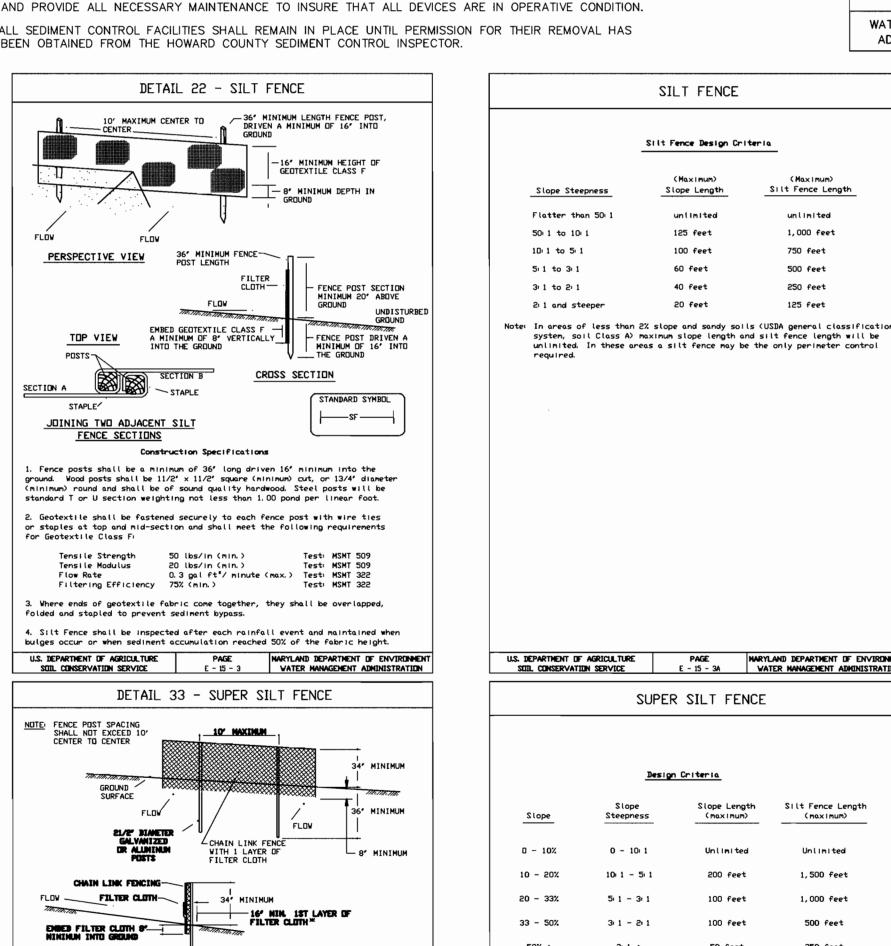
INDICATED ON PLANS.

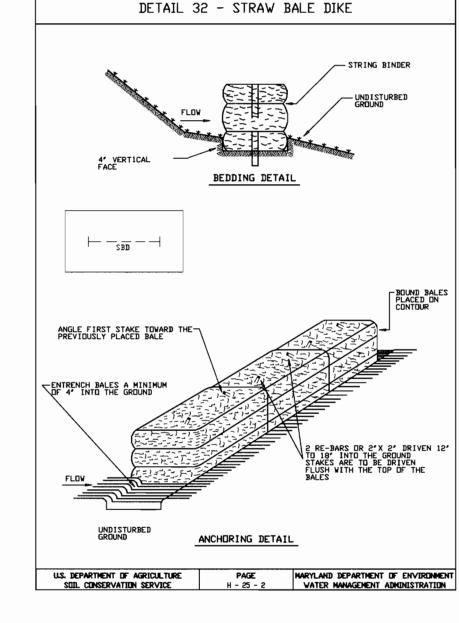
- 2. SEDIMENT AND EROSION CONTROL DEVICES INSTALLED UNDER F-98-61 WILL BE USED FOR INSTALLATION OF WATER AND SEWER MAINS WITHIN PROJECT LIMITS, EXCEPT AS NOTED HEREIN. INSPECT AND REPAIR ALL SEDIMENT AND EROSION CONTROL DEVICES, AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR PRIOR TO COMMENCEMENT OF WORK. (2 DAYS)
- FOR WATER AND SEWER CONSTRUCTION OUTSIDE LIMITS OF F-98-61, ALL WORK SHALL CONFORM TO THE FOLLOWING
- CLEAR AND GRUB FOR STRAW BALE DIKES AND SILT FENCES. (2 DAYS) INSTALL STRAW BALE DIKES AND SILT FENCES AS INDICATED. (3 DAYS)
- EXCAVATION SHALL BE LIMITED TO THE AMOUNT OF TRENCH WHICH CAN BE COMPLETED, BACKFILLED, AND STABILIZED WITHIN ONE WORKING DAY.
- REPAIR AND/OR REPLACE ANY DISTURBED STRAW BALE DIKES AND SILT FENCES AT END OF EACH WORKING DAY.
- 4. FOR STREAM CROSSING, REFER TO STREAM DIVERSION DETAIL WPD 2.3 AND THE FOLLOWING
 - A. PRIOR TO COMMENCEMENT OF ANY WORK WITHIN THE BANKS OF THE STREAM, PLACE SANDBAG DIVERSIONS AS INDICATED ON DETAIL.
 - COMPLETE INSTALLATION OF UTILITY CROSSING WITHIN THE AREA OF DIVERSION AND BACKFILL AS INDICATED ON PLAN.
 - RELOCATE SANDBAG DIVERSION TO OPPOSITE SIDE OF STREAM.
 - COMPLETE INSTALLATION AND BACKFILL FOR UTILITY CROSSING WHEN INSTALLATION IS COMPLETE AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SANDBAG DIVERSION AND STABILIZE STREAM AREA AND BANKS AS
- 5. UPON STABILIZATION OF AREA, AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR. REMOVE ALL SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS.

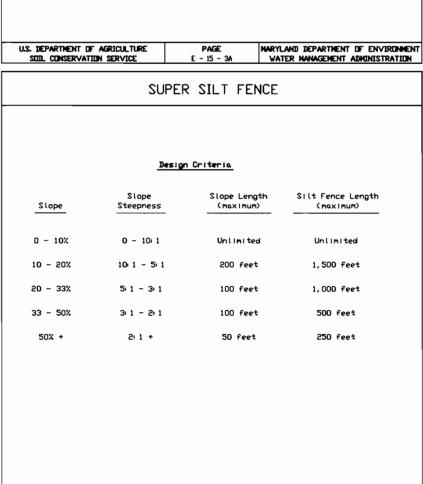
EROSION AND SEDIMENT CONTROL NOTES

- 1. ALL SEDIMENT CONTROL OPERATIONS ARE TO BE DONE IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY VOLUME IV DESIGN MANUAL AND THE STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL IN DEVELOPING AREAS.
- 2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF BUSINESS.
- 3. ALL EXCAVATED MATERIALS SHALL BE STOCKPILED ON THE UPGRADE SIDE OF THE MAIN TRENCH.
- 4. EXCAVATION AND BACKFILL SHALL BE LIMITED TO THAT WHICH CAN BE STABILIZED WITHIN ONE WORKING DAY. 5. IMMEDIATELY FOLLOWING BACKFILL OF THE SEWER TRENCH, ALL DISTURBED AREAS ARE TO BE STABILIZED
- IN ACCORDANCE WITH THE PERMANENT STABILIZATION AND SEEDING NOTES SHOWN ON THIS SHEET. 6. THROUGHOUT THE PROJECT, THE CONTRACTOR SHALL REGULARLY INSPECT ALL SEDIMENT CONTROL DEVICES
- 7. ALL SEDIMENT CONTROL FACILITIES SHALL REMAIN IN PLACE UNTIL PERMISSION FOR THEIR REMOVAL HAS
- BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.









BOCK PROPERTY WATER & SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND CONTRACT No. 24-3954-D

LOTS 1 & 3 THRU 8 CONTRACT NO. 24-3954-D TAX MAP 31 PARCEL 279 SECOND ELECTION DISTRICT

BOCK PROPERTY,

scale NOT TO SCALE O OF O

DEPARTMENT OF PUBLIC WORKS

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND HOWARD COUNTY, MARYLAND

MILDENBERG, BOENDER & ASSOC., INC 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

SJD SJD99077 JULY 2001

REVISION

SEDIMENT CONTROL NOTES & DETAILS

Test: MSMT 509 Test: MSMT 509

PAGE
H - 26 - 3

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

Fencing shall be 42' in height and constructed in accordance with the

4. Filter cloth shall be embedded a minimum of 8° into the ground.

develop in the silt fence, or when silt reaches 50% of fence height

Tensile Modulus

latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42' fabric and 6' length

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

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24' at the top and mid section.

5. When two sections of filter cloth adjoin each other, they shall be overlapped

6. Maintenance shall be performed as needed and silt buildups removed when 'bulges

staples at top and mid section and shall meet the following requirements for

50 lbs/in (min.) 20 lbs/in (min.)

0.3 gal/ft*/minute (max.) Test: MSMT 322 75% (min.) Test: MSMT 322

600' SCALE MAP NO. 31

HOWARD COUNTY, MARYLAND BLOCK NO. 13