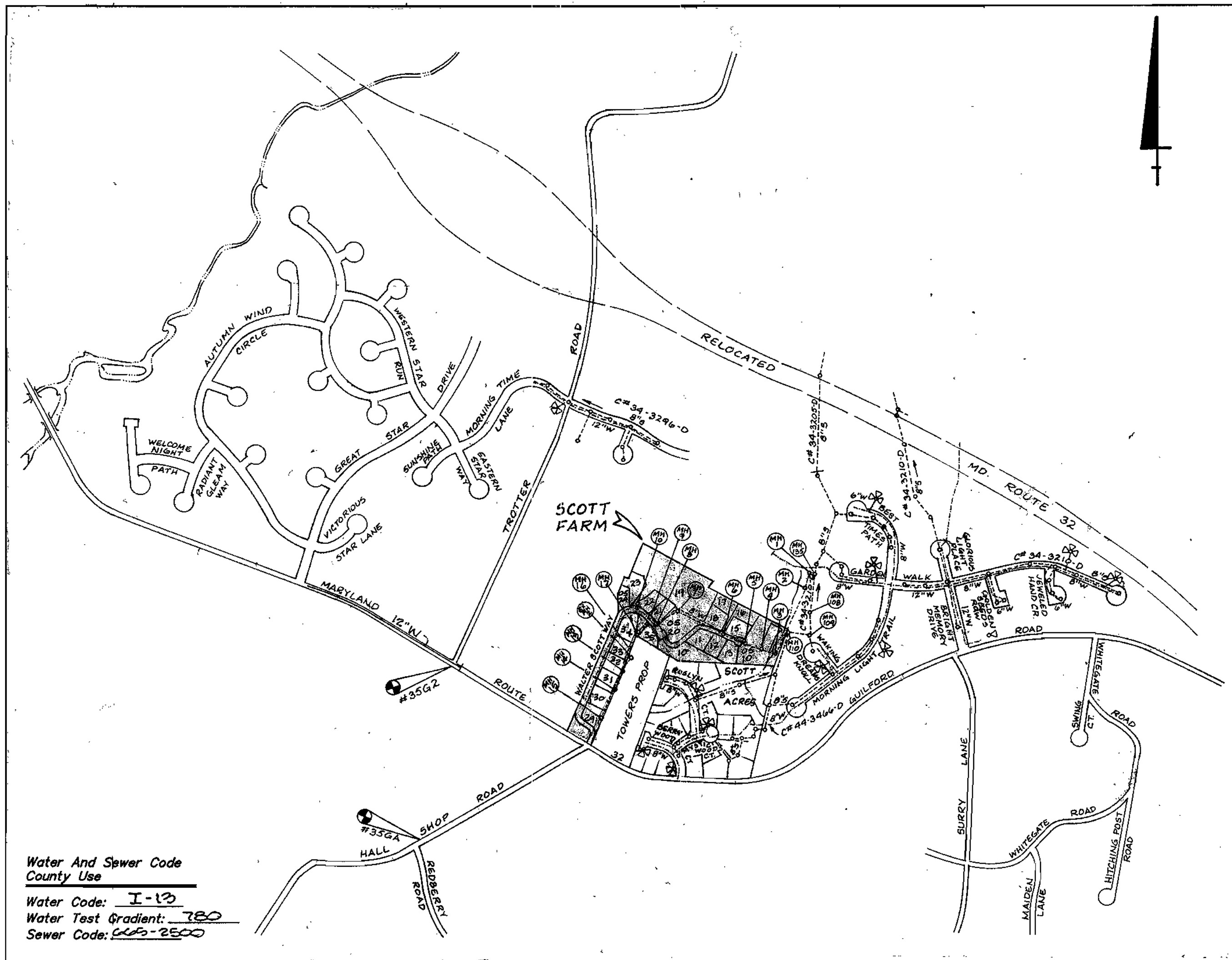


Bench Marks:

Ho. Co. Monument # 35G2
Elev 477.63
Concrete Monument NW Corner of Inter-section of Guilford Road & Trotter Road.

Ho. Co. Monument # 35GA
Elev 482.11
Concrete Monument N Side of Hall Shop Road Past Redberry Road.

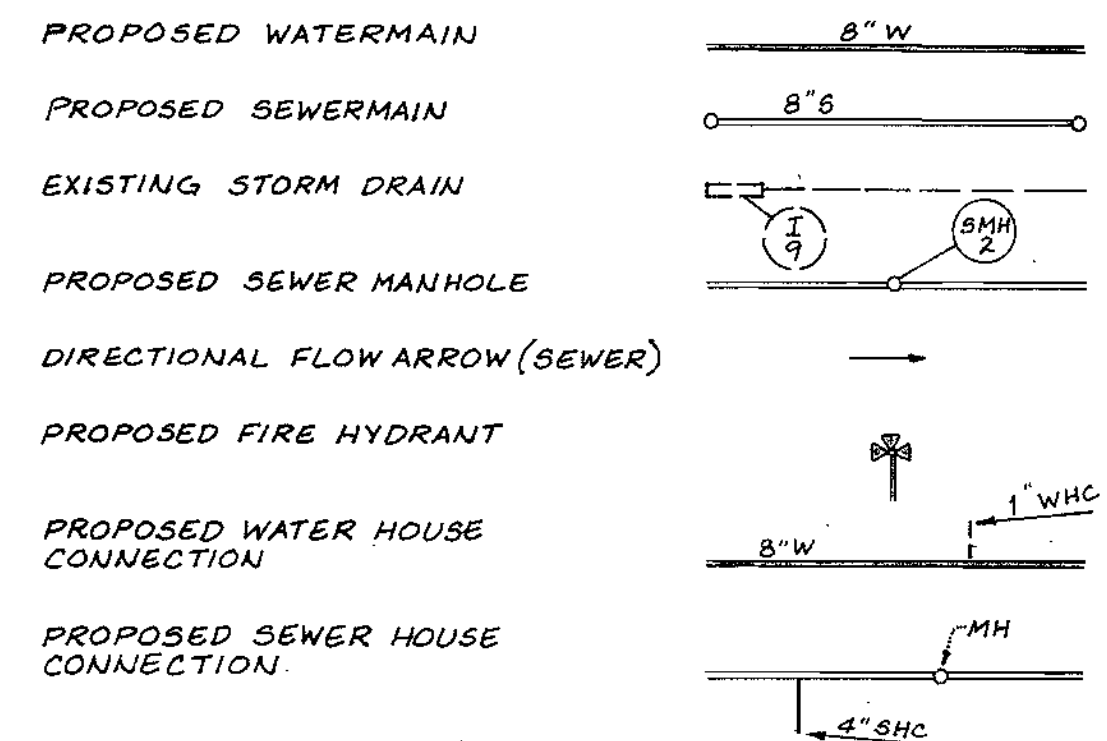


Water And Sewer Code
County Use
Water Code: I-13
Water Test Gradient: 1.80
Sewer Code: 665-2500

Type of Buildings: Single Family Detached
Number of Lots/Parcels: 14 Lots (2 Lots with Existing Dwellings, 12 New Dwellings, 2 S.O.S. Lots)
Number of W.H.C.'S: 14
Number of S.H.C.'S: 14
Drainage Area: Middle Patuxent
Treatment Plant: Little Patuxent Water Reclamation Plant, Savage, Howard County, MD

Vicinity Map
Scale: 1"=600'

LEGEND



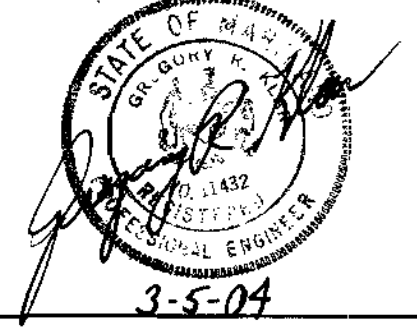
Water & Sewer Construction Plans
Scott Farm
Lots 10-24, 27-35
Tax Map No. 35 P/O Parcel 354
5th Election District Howard County, Maryland
Contract No. 34-3793-D

Sheet No.	Title
1	Cover Sheet
2	Plan View (Lots 27-35)
3	Plan View (Lots 10-24)
4	Water Profiles
5	Sewer Profiles
6	Soil Erosion & Sediment Control Plan, Details & Notes

General Notes

- PART I**
- 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.
 - All pipe elevations shown are Invert Elevations.
 - Clear all utilities by a minimum of 8". 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 owned the Contractor. The Contractor shall coordinate with the utility companies to schedule the bracing of the poles.
 - For details not shown on the drawings and for materials and construction methods, use Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction (latest edition). The Contractor shall have a copy of Volume IV on the job.
 - 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.
 - Contractor shall notify the following utility companies or agencies at least five (5) working days before starting work shown on these plans:
 - a. SHA: (410) 531-5533
 - b. BGE (Contractor Services): (410) 850-4820
 - c. BGE (Underground damage control): (410) 787-9068
 - d. Waste Utility: 1-800-257-7777
 - e. Colonial Pipeline Company: (410) 795-1390
 - f. Howard County Dept. of Public Works, Bureau of Utilities: 313-4900
 - Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs within the construction strip are not to be removed or damaged by the Contractor.
 - 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 main.
- PART II: WATER**
- All water mains to be D.I.P. Class 52 unless otherwise noted.
 - Top of all water mains to have a minimum of 3 1/2' cover unless otherwise noted.
 - Valves adjacent to the tees shall be strapped to the tees.
 - All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
 - 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 the Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
 - The Contractor shall not operate any water main valves on the existing water system.
 - All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- PART III: SEWER**
- All sewer mains to be D.I.P., and P.V.C. unless otherwise noted.
 - All proposed sewers shall be public.
 - All manholes shall be 4'0" inside diameter unless otherwise noted.
 - Force mains shall be D.I.P. only.
 - Manholes designated W.T. in plan and profile shall have water tight frame and covers; Standard Detail 05-52. Where water-tight manhole frame and cover is used, set top of frame 1'8" above finished grade unless otherwise noted on the drawings.
 - Houses with the symbol "C.N.S." indicates that cellar cannot be served.
 - Manholes shown with 12" and 18" wells are for brick manholes only.
 - Off-site Public Utility Easement from the Columbia Association to Howard County recorded among the Land Records of Howard County on _____ in L. _____.
 - The Maryland Department of the Environment granted Permit No. 99-NT-0424/199966191 on April 3, 2000 to construct Sewermain across Montida Wetlands and adjacent Buffers between SMH Nos. 243.
 - All S.H.C.'s shall be constructed at a 2% grade to the Right-of-Way line, Property line or edge of Easement.

Revision No. 3 By:
GREENHORNE & O'MARA, INC.
200 HARRY S. TRUMAN PKWY. SUITE 200
ANNAPOLIS, MD. 21401
(410) 266-0066
THIS SEAL FOR REVISION # 3 ONLY



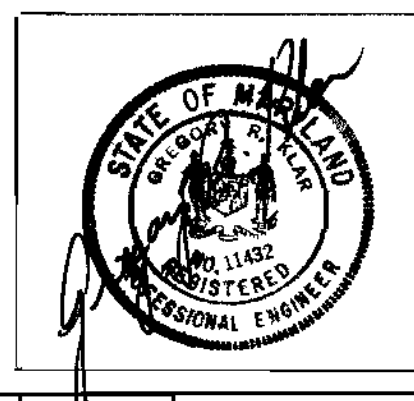
Quantities				
Item	Quantities Estimated	Quantities	Type	Manufacturer/Supplier
1" WHC	430 L.F.			
4" SHC	283 L.F.			
8" San Sewer	2499 L.F.			
8" Watermain	1765 L.F.			
6" Watermain	68 L.F.			
Std. Fire Hydrant	4 Ea.			
8"x6" F.H.T.	4 Ea.			
8"x8" Tee	2 Ea.			
8" Plug & Buttress	2 Ea.			
Horz. Bends	9 Ea.			
4" Watermain	257 L.F.			
8"x4" Tee	1 Ea.			
4" Plug & Buttress	2 Ea.			
Type 'A' Drop Connection	2			
Type 'B' Drop Connection	2			
12"x18" Repair Tee V.I.V.	1			
Name of Utility Contractor:				

Reviewed For Howard Soil Conservation District And Meet Technical Requirements.
Cheryl Simmons 6/27/00
Signature Date
Natural Resources Conserv. Service

This Development Plan is Approved For Soil Erosion And Sediment Control By The Howard County Soil Conservation District.
John Robertson 6/27/00
Signature Date
HOWARD SOIL CONSERVATION DISTRICT

Sediment Control Measures for this Contract Will Be Implemented in Accordance With Section 219 of The Standard Specification. Sediment Control Measures For The Onsite Portion of The Proposed Utility Alignments Will Be Implemented Under Final Road Construction Plans (F-00-73). Sediment Control Measures For The Offsite Portion of The Proposed Sewer Alignment Are Shown Hereon.

REVISION NO. 1 BY:
CENTURY ENGINEERING INC.
32 WEST ROAD
TOWSON, MARYLAND 21284
410-823-8070
THIS SEAL FOR REVISION #1 ONLY



Department of Public Works
Robert S. ... 6-30-00
Signature Date
Chief-Bureau of Utilities

Department of Planning & Zoning
John Robertson 7/3/00
Signature Date
Chief-Development Engineering Division

LDE, INC.
9250 Rumsey Road, Suite 106
Columbia, Maryland 21045
(410) 715-1070 (301) 596-3424

Frank D. ... 6/23/00
Signature Date

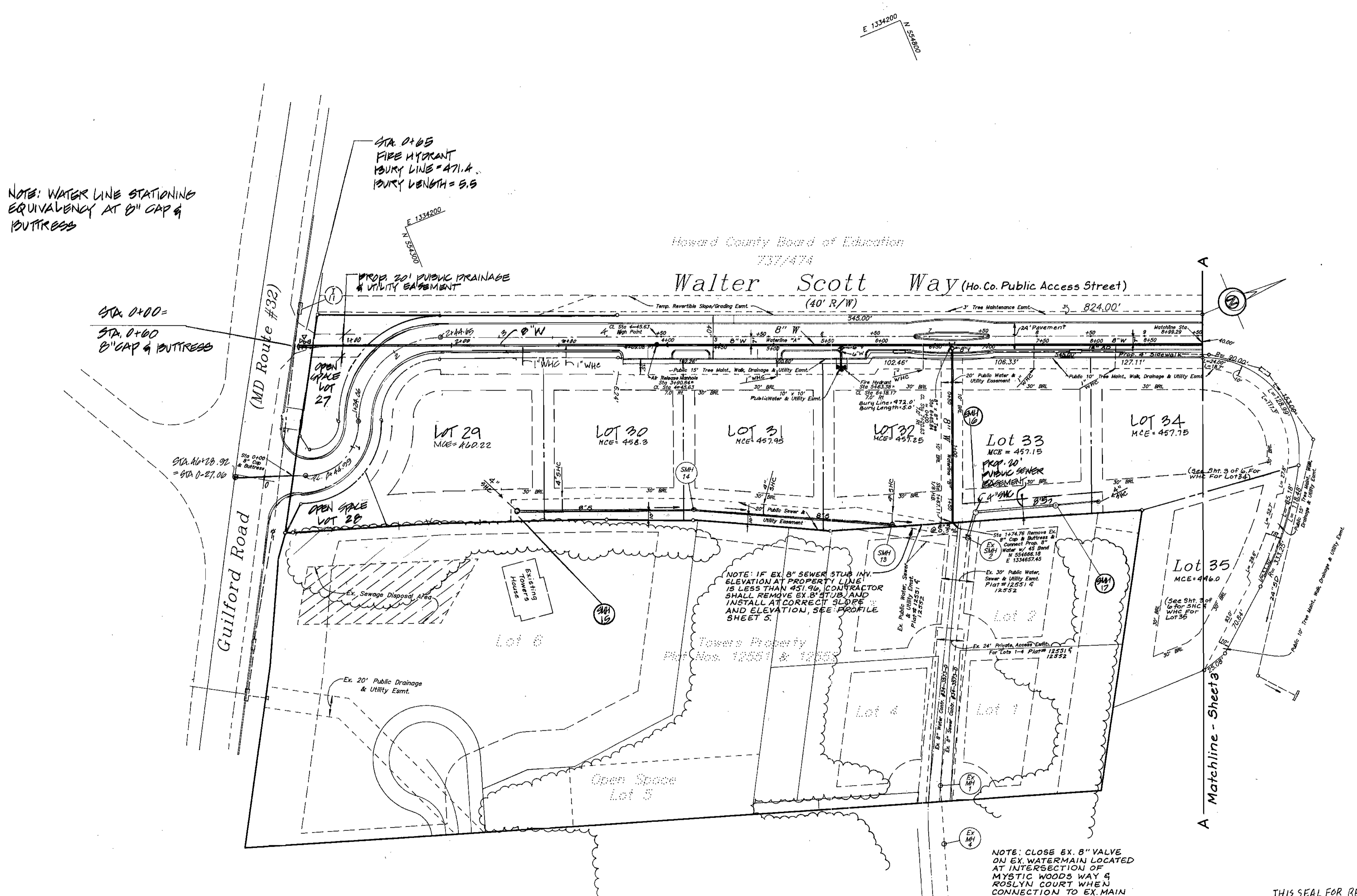
Designed	Drawn	Checked	Date
SDH	STB	BY NO.	2/00
Revision			
BY NO.	3	REVISE LOT LAYOUT, LOT NUMBER & QUANTITIES	3-09-04
BY NO.	1	REVISED QUANTITIES	9-19-04

Title Sheet

Scott Farm
Lots: 10-24, 27-35
Tax Map No. 35 P/O PARCEL 354
5th Election District Howard County, Maryland
Contract No. 34-3793-D

Scale: As Shown
Sheet: 1 of 6

NOTE: WATER LINE STATIONING EQUIVALENCY AT 8" GAP & BUTTRESS



Revision No. 3 BY:
GREENHORNE & OMARA, INC.
200 HARRY S. TRUMAN PKWY. SUITE 200
ANNAPOLIS, MD. 21401
(410) 266-0066
SEAL FOR REVISION # 3 ONLY



LOT NO.	INV. @ MAIN	INV. @ P.U. EASMT	MIN. C.E.
29	455.22	455.42	460.22
30	454.75	454.95	458.00
31	452.75	452.95	457.95
32	452.10	452.20	457.25
33	452.15	452.25	457.15
34	452.04	453.22	457.75
35	441.00	441.62	446.00
10	OPEN SPACE LOT		
11	424.16	424.52	428.50
12	422.00	422.20	426.50
13	413.02	413.22	417.50
14	401.78	401.98	406.50
15	414.31	414.71	419.00
16	416.50	416.76	421.00
17	424.50	424.82	429.00
18	423.81	424.21	428.50
19	427.35	427.75	434.50
20	OPEN SPACE LOT		
21	436.18	436.58	441.30
22	449.50	449.80	454.00
23	456.10	456.36	463.00
24	OPEN SPACE LOT		

MANHOLE NO.	TOP RIM ELEV.	INV. IN	INV. OUT	LOCATION	REMARKS
1	393.15	385.10	384.95	N 555270.27 E 1335896.27	See Ho. Co. Sid. G-5.11
2	394.80	386.90	386.80	N 555079.84 E 1335830.63	See Ho. Co. Sid. G-5.11
3	403.90	390.58	390.40	N 544728.08 E 1335878.70	See Ho. Co. Sid. G-5.11
4	400.80	398.10	391.11	N 554756.29 E 1335578.14	See Ho. Co. Sid. S-1.32
5	419.30	411.00	405.00	N 554795.06 E 1335449.13	See Ho. Co. Sid. S-1.32
6	431.55	421.70/415.80	415.70	N 554880.61 E 1335310.80	See Ho. Co. Sid. S-1.32
7	440.60	432.20/433.10	433.00	N 555013.39 E 1334987.71	See Ho. Co. Sid. G-5.11
8	446.62	440.70	437.70	N 554907.38 E 1334956.37	See Ho. Co. Sid. S-5.11
9	451.72	444.10/444.50	444.00	N 554953.99 E 1334802.86	See Ho. Co. Sid. S-1.32
10	462.30	456.33	456.00	N 555040.84 E 1334703.16	See Ho. Co. Sid. S-1.31
11	422.50/430.20	416.93	416.5	N 554986.95 E 1335370.63	See Ho. Co. Sid. S-1.31
12	454.90	448.67	448.50	N 554846.17 E 1334706.03	See Ho. Co. Sid. S-1.31
13	467.50	457.56	456.23	N 554321.64 E 1334466.00	See Ho. Co. Sid. G-5.11
14	460.80	453.10	452.99	N 554445.82 E 1334546.46	See Ho. Co. Sid. G-5.11
15	484.00	452.02	451.96	N 554610.85 E 1334630.62	See Ho. Co. Sid. G-5.11
EX. MH# 2	464.50	451.60	451.50	N 554670.82 E 1334669.70	Existing Manhole
EX. MH# 135	397.40	384.90	384.70	N 555270.27 E 1335896.27	Existing Manhole

* The 'Inverts' shown on this schedule are for the public 8" main only. No SHC inverts are shown. Refer to the sewer house connection table for SHC inverts at the main.

** Sewer Manhole # 11 has an ultimate top elevation of 430.20. This elevation will not be established until fill for lots 15-18 is imported. Contractor shall set the manhole cover at a temporary elevation of 422.50. In conjunction with the fill operation for the surrounding lots, the contractor shall raise the manhole to its ultimate elevation.

15	463.00	459.32	459.32	N 554831.42 E 1334488.20	See Ho. Co. Sid. S-1.31
16	462.00	451.95	451.75	N 554823.16 E 1334460.16	See Ho. Co. Sid. S-1.31
17	457.00	452.30	452.30	N 554818.90 E 1334428.52	See Ho. Co. Sid. S-1.31

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION. SEDIMENT CONTROL MEASURES FOR THE ONSITE PORTION OF THE PROPOSED UTILITY ALIGNMENTS WILL BE IMPLEMENTED UNDER FINAL ROAD CONSTRUCTION PLANS: F-00-73. SEDIMENT CONTROL MEASURES FOR THE OFFSITE PORTION OF THE PROPOSED SEWER ALIGNMENT ARE SHOWN HEREON.

DEPARTMENT OF PUBLIC WORKS
DEPARTMENT OF PLANNING & ZONING

LDE, INC.
9250 RUMSEY ROAD, SUITE 106
COLUMBIA, MARYLAND 21045
(410) 715-1070 (301) 598-3424
Fax: (410) 715-9540

DESIGNED SDH
DRAWN STB/BEI
CHECKED RDB
DATE 2/00

REVISION NO. 1 BY: CENTURY ENGINEERING INC. 32 WEST ROAD TOWSON, MARYLAND 21284 410-823-8070

REVISION NO. 2 BY: CENTURY ENG. INC. 32 WEST ROAD TOWSON, MD 21204 410-823-8070

THIS SEAL FOR REVISION #1 ONLY

THIS SEAL FOR REV. #2 ONLY

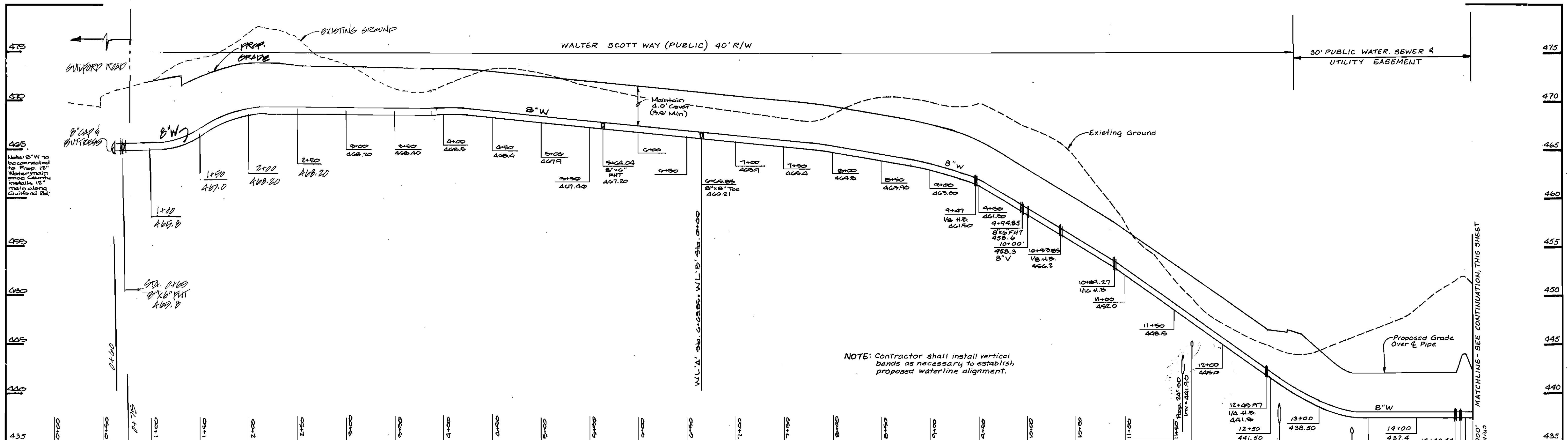
WATER & SEWER CONSTRUCTION PLANS

Scott Farm
Lots 10, 24, 27-35
A Resubdivision of Wilkinson Acres Lots 5 & 10
5th Election District Howard County, Maryland
CONTRACT NO. 34-3793-D

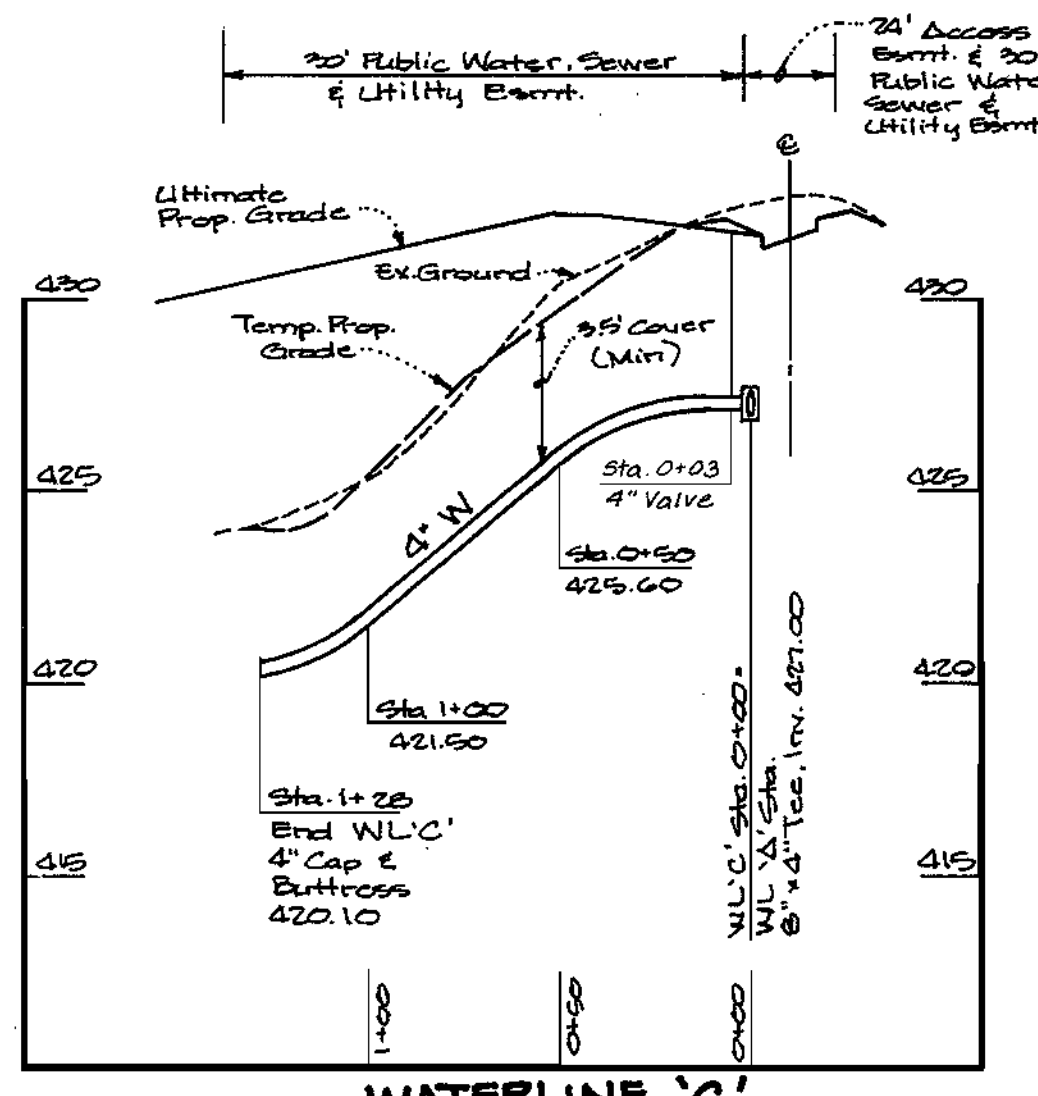
SCALE 1" = 50'

SHEET 2 of 6

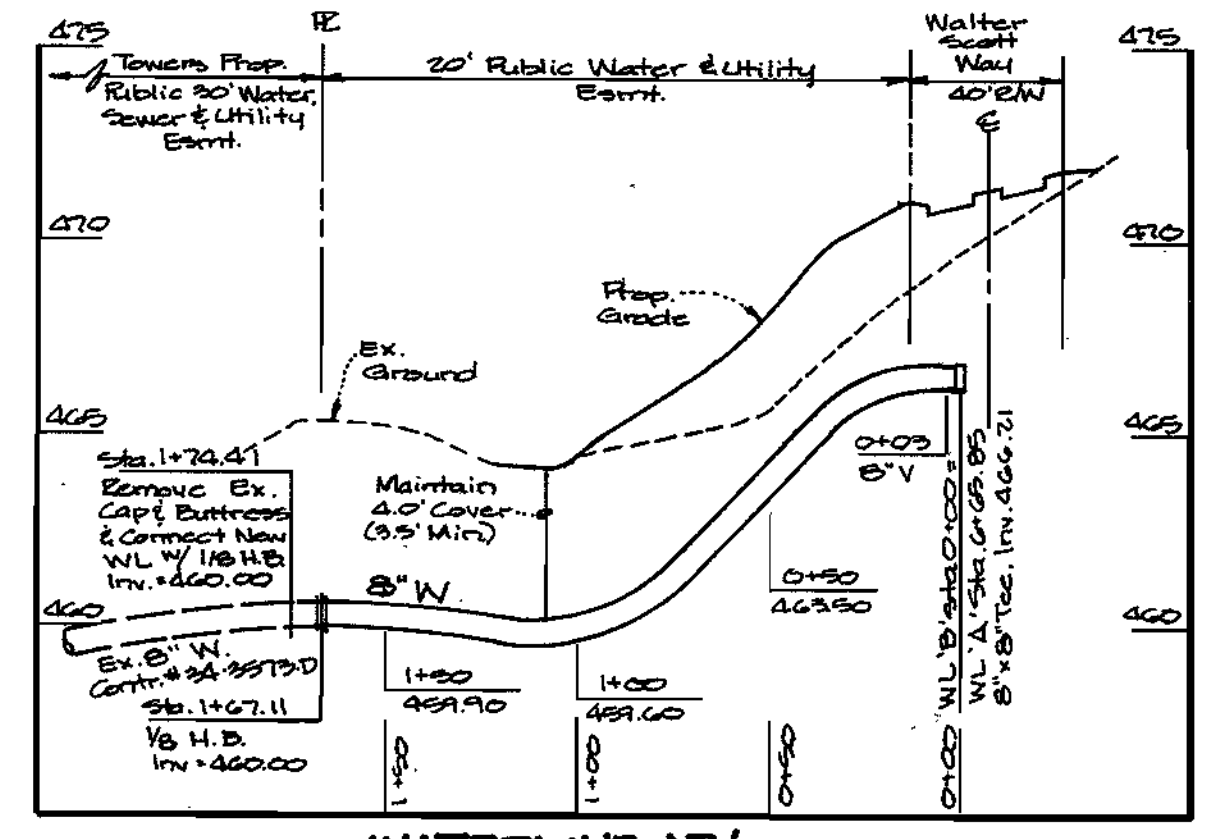
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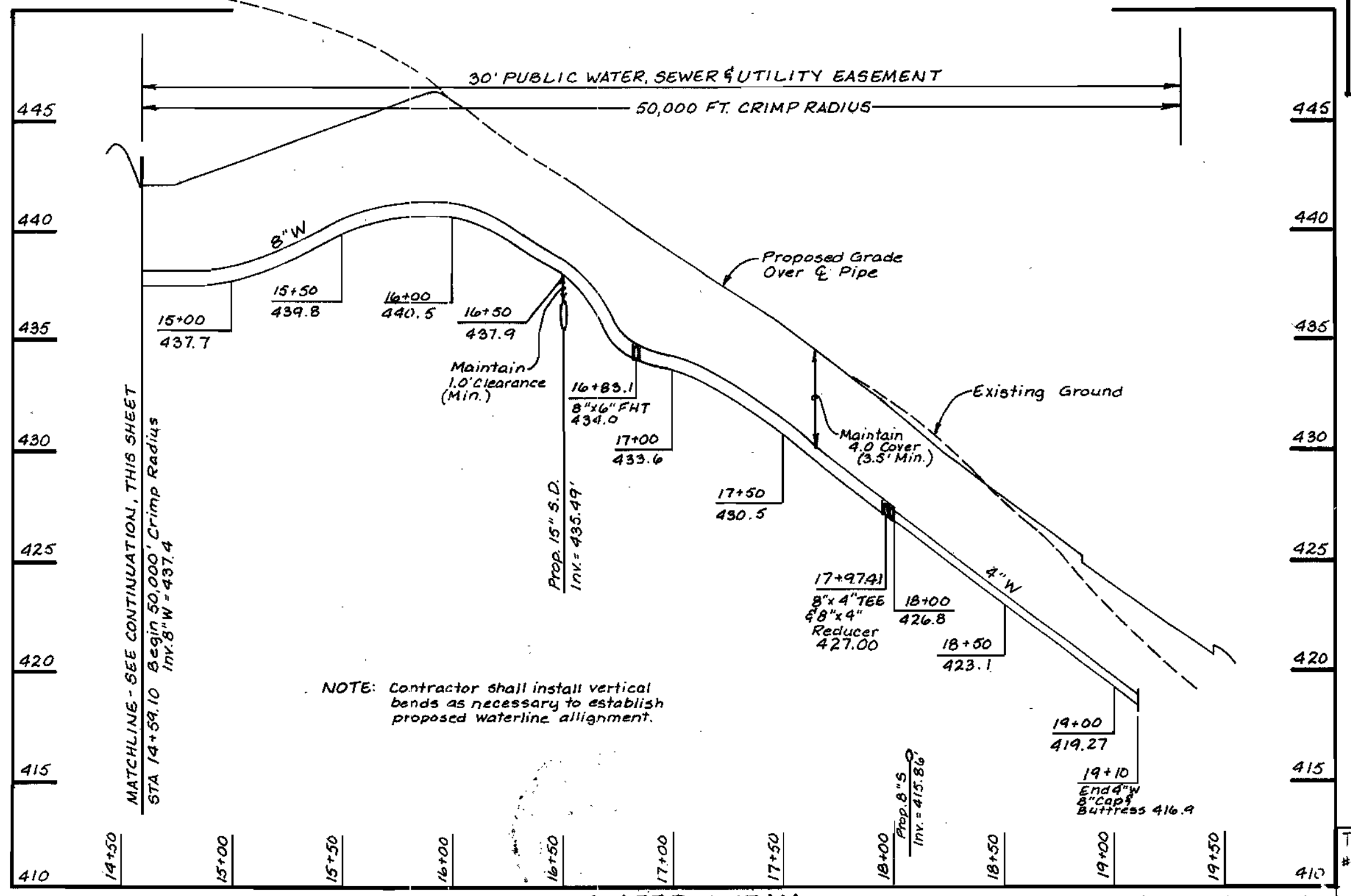
WATERLINE 'A'
8" PUBLIC WATER PROFILE
 H: 1" = 50'
 V: 1" = 5'



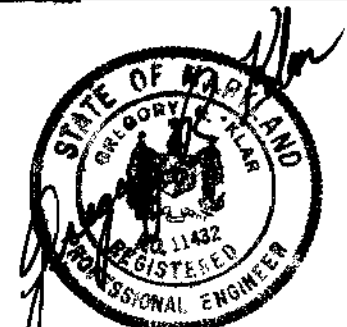
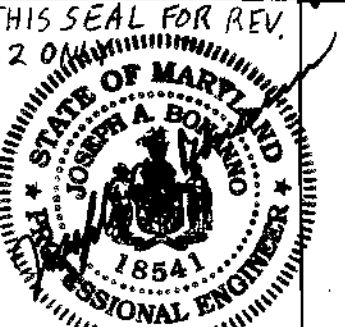
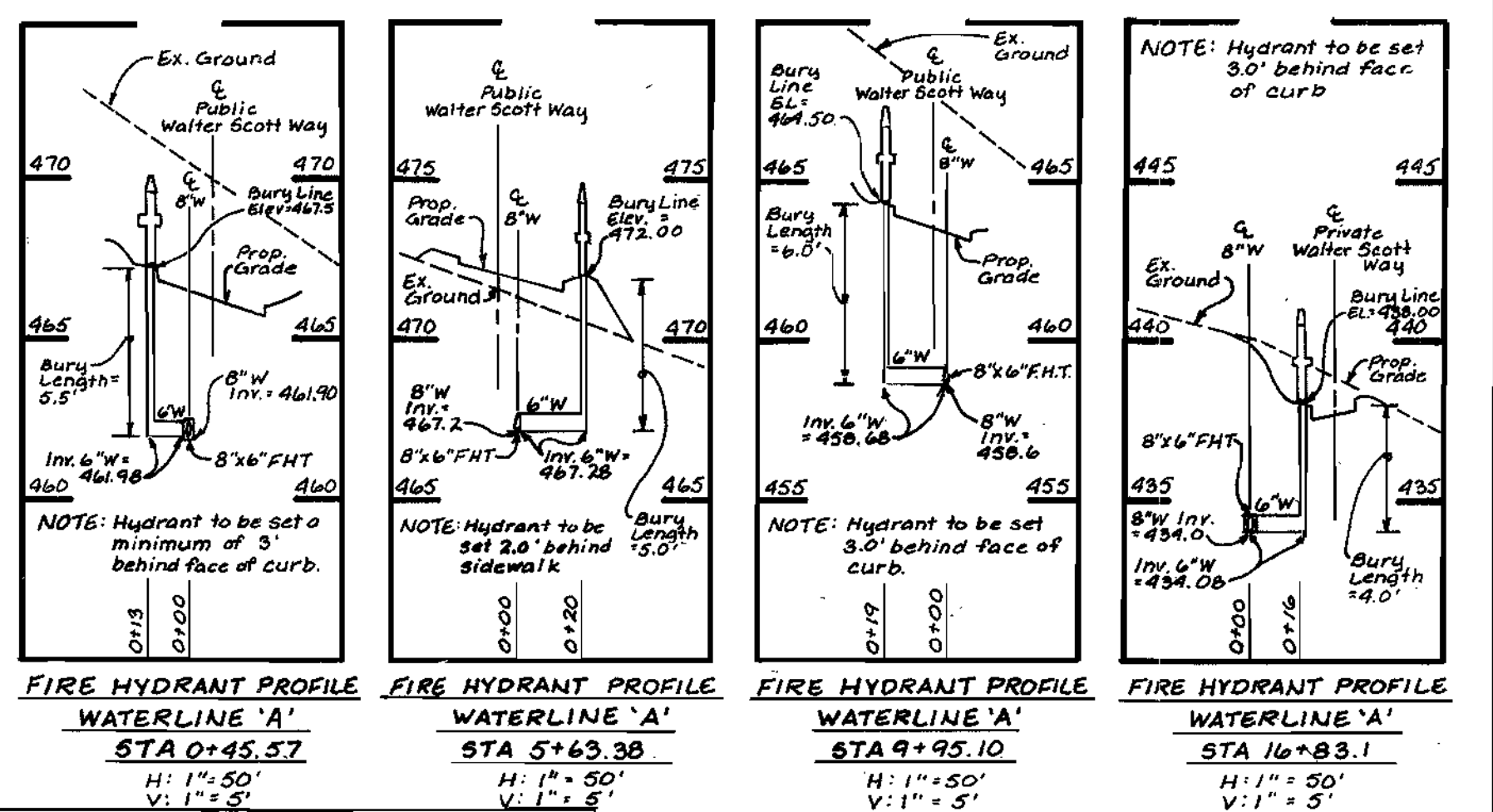
WATERLINE 'C'
4" PUBLIC WATER PROFILE
 H: 1" = 50'
 V: 1" = 5'



WATERLINE 'B'
8" PUBLIC WATER PROFILE
 H: 1" = 50'
 V: 1" = 5'



WATERLINE 'A'
8" PUBLIC WATER PROFILE
 H: 1" = 50'
 V: 1" = 5'



REVISION NO. 1 BY:
 CENTURY ENGINEERS INC.
 32 WEST ROAD
 TOWSON, MD 21284
 410-823-8070

THIS SEAL FOR REVISION #1 ONLY

DEPARTMENT OF PUBLIC WORKS
 6-30-00
 DATE

DEPARTMENT OF PLANNING & ZONING
 7/5/00
 DATE

LDE, INC.
 9250 RUMSEY ROAD, SUITE 106
 COLUMBIA, MARYLAND 21045
 (410) 715-1070 (301) 598-3424
 Fax: (410) 715-9540

DESIGNED SDH
 DRAWN BE1/STB
 CHECKED BDB
 DATE 2/00

BY	NO.	REVISION	DATE
CEI	2	REMOVE AIR RELEASE MH @ STA. 3+90.85	6-19-02
CEI	1	REVISED ALIGNMENT WATER LINE 'A' PROFILE	8-19-01

REVISION NO. 2 BY:
 CENTURY ENG. INC.
 32 WEST ROAD
 TOWSON, MD 21204
 410-823-8070

WATER & SEWER CONSTRUCTION PLANS
Scott Farm
 Lots 10-24, 27-35
 A Resubdivision of Wilkinson Acres Lots 5 & 10
 5th Election District
 CONTRACT NO. 34-3793-D

SCALE AS SHOWN
 SHEET 4 of 6

**HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES**

- 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 any construction, (313-1855).
- 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.
- Following initial disturbance or disturbance, 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 for 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 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 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 (Section 6) for permanent seeding, sod, temporary seeding, and mulching. Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 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.
- Site Analysis: (Applies to Offsite work only. See F-00-73 for Onsite Sediment Control Measures.)

Total Area of Site	0.22 Acres
Area Disturbed	0.21 Acres
Area to be roofed or paved	0.0 Acres
Area to be vegetatively stabilized	0.21 Acres
Total	1567 Cu. Yds.
Offsite waste/borrow area location N/A	
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- 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 sediment control structures, but before proceeding with any other earth disturbance or grading. Other disturbing or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- 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.

21.0 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 pH, 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 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.

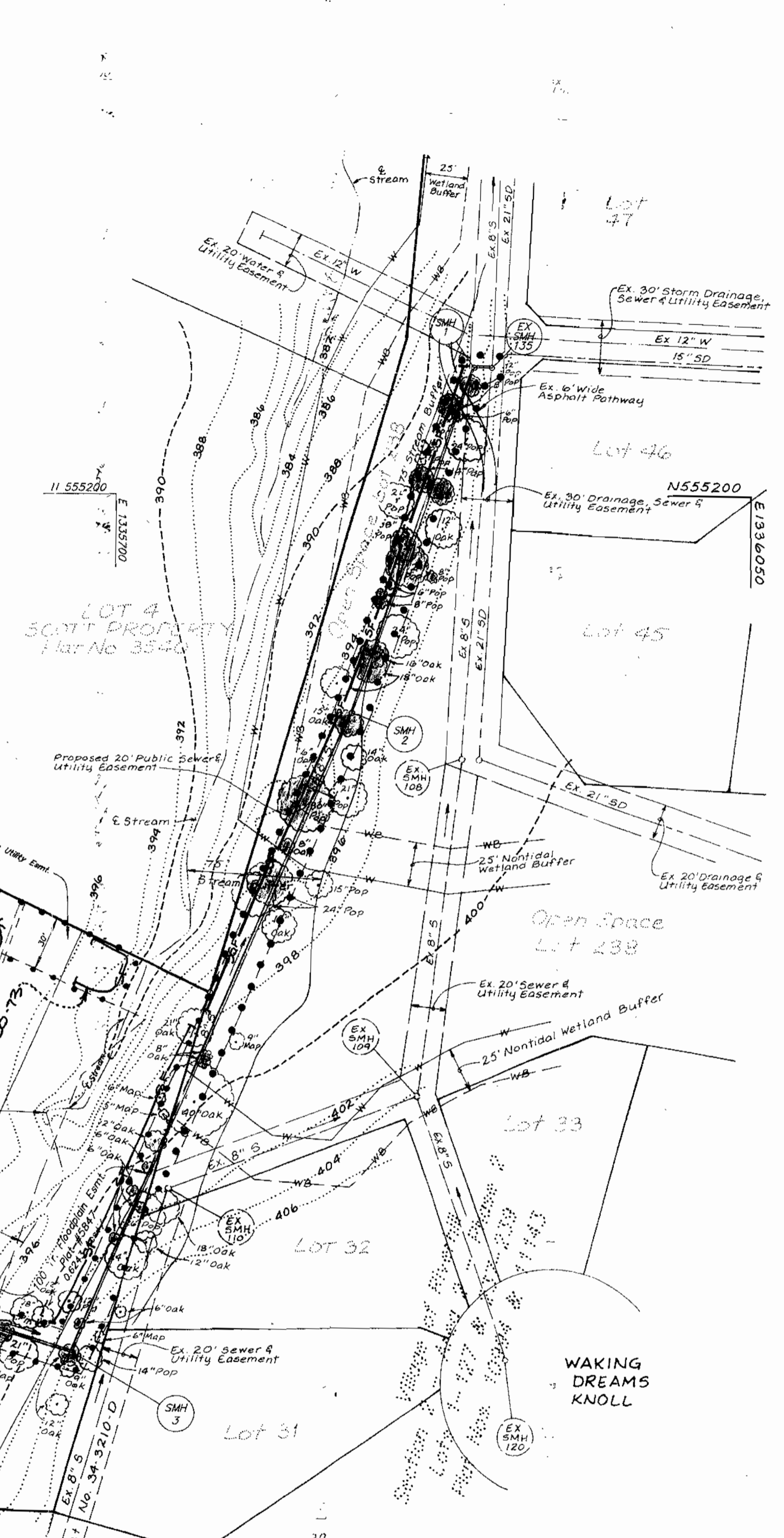
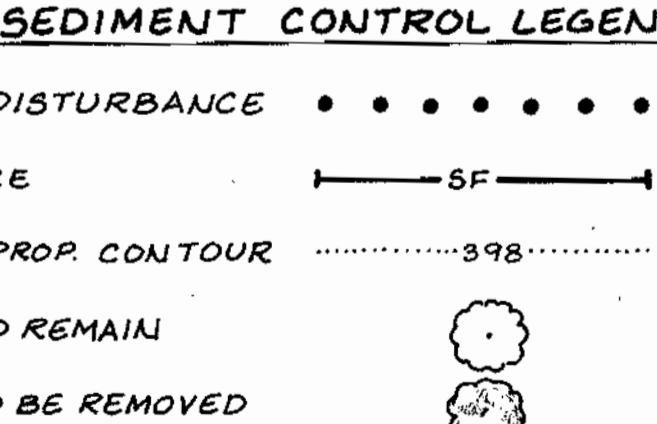
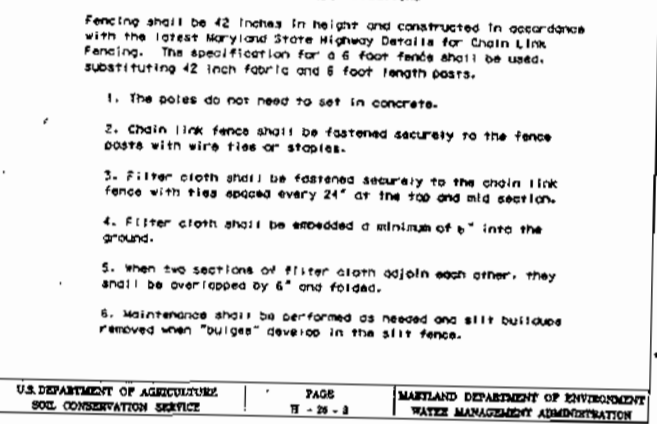
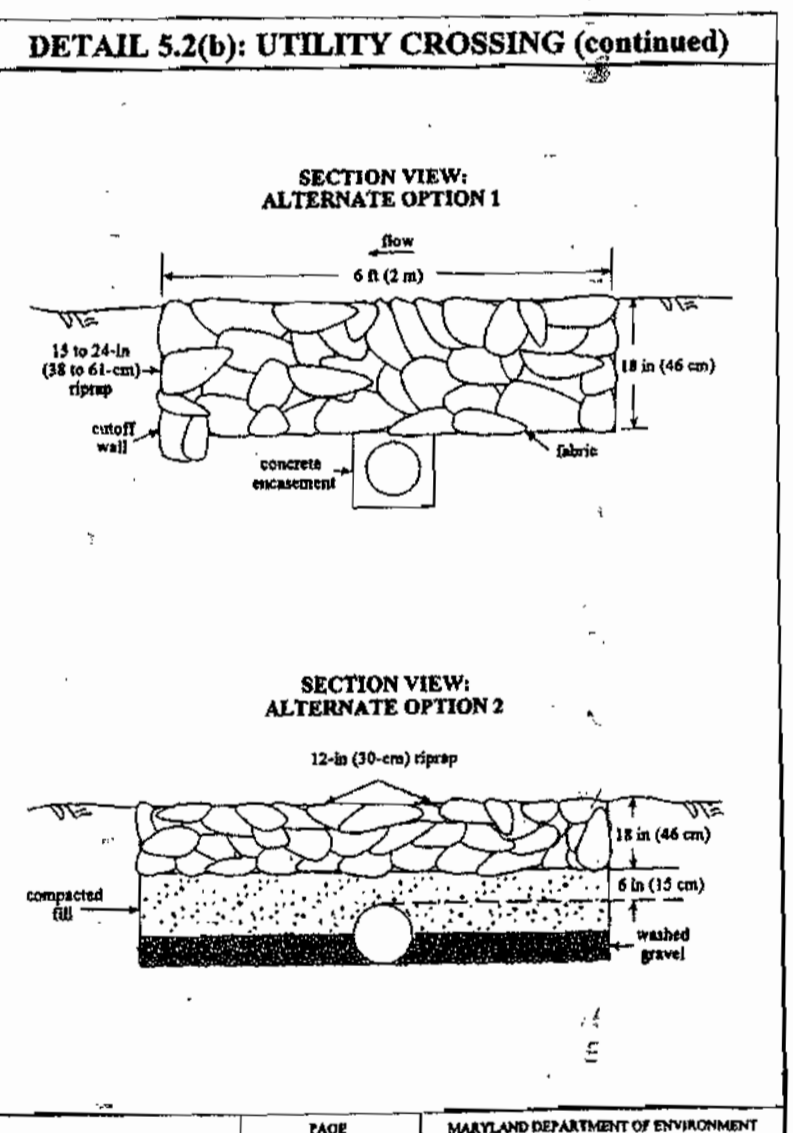
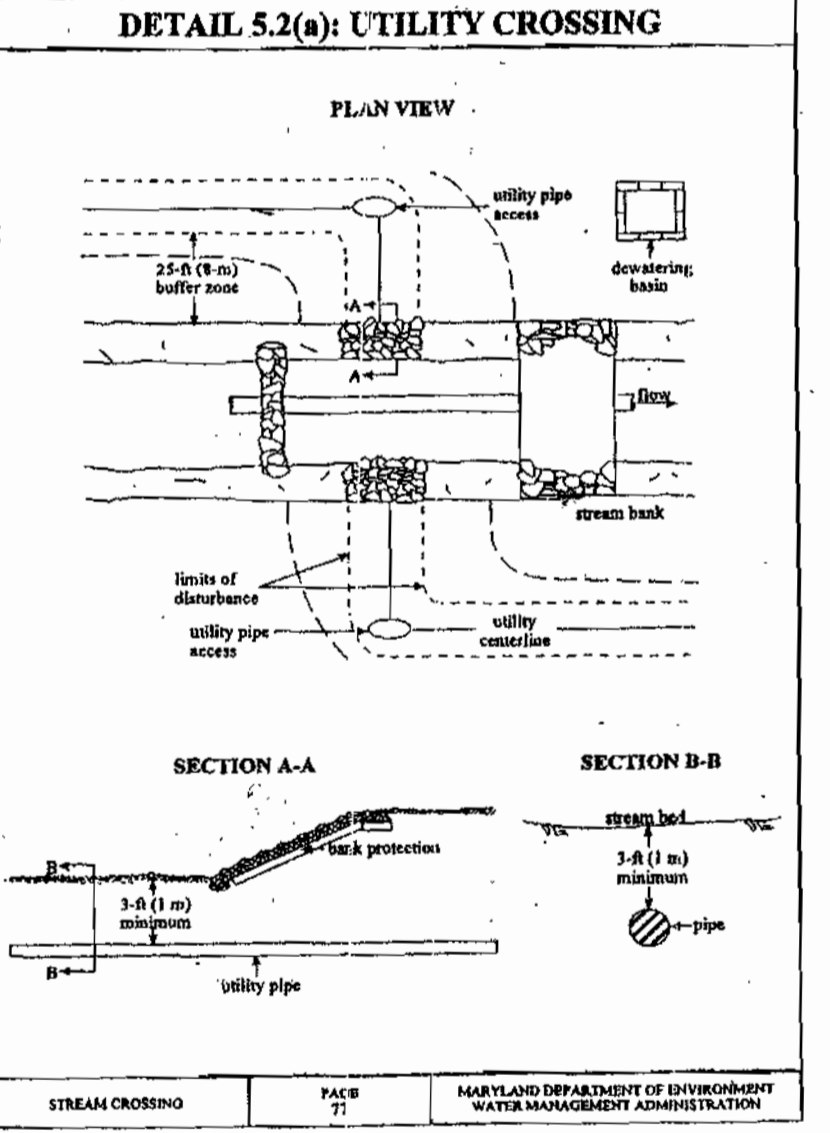
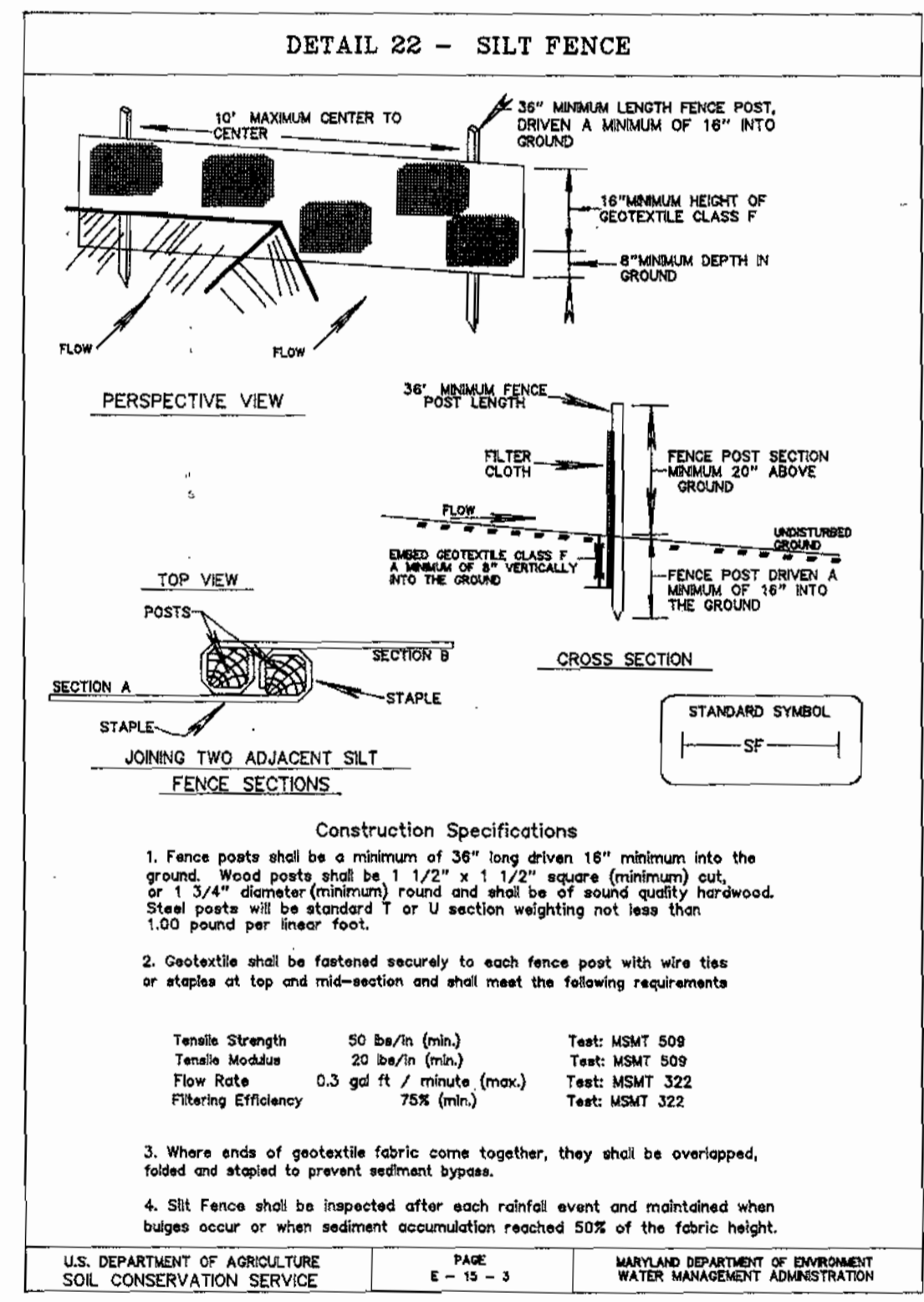
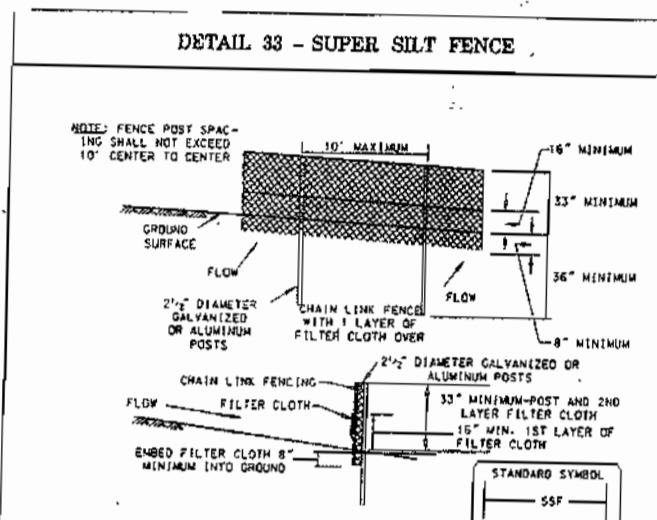
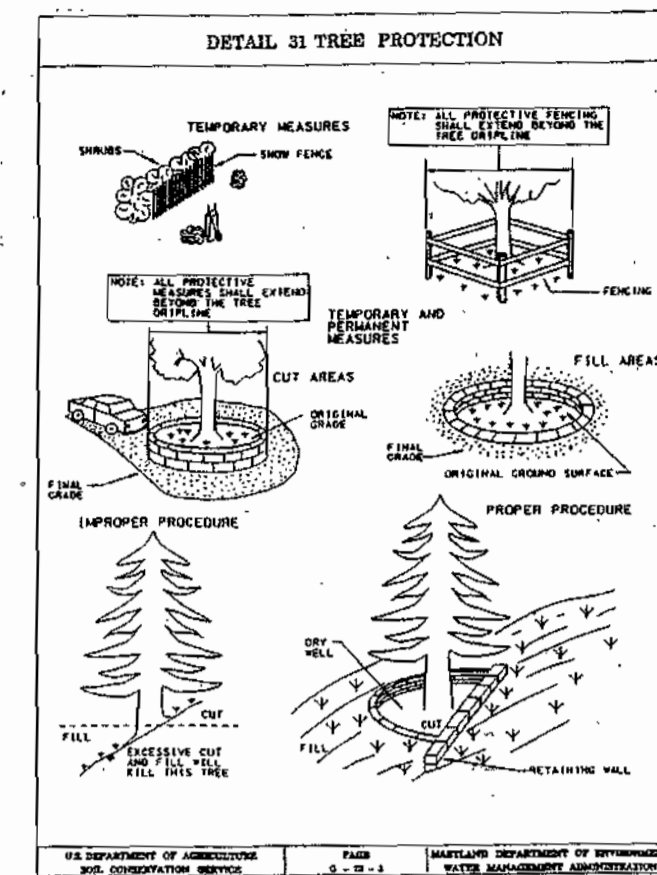
For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these 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-SSC in cooperation with Maryland Agricultural Experiment Station.
- 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 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.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutgrass, 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 foot) 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.
- 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.

- For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - 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.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient lime has elapsed (74 days min.) to permit dissipation of phytotoxic materials.
 - 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.
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
- Topsoil Application
 - 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.
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 8" higher in elevation.
 - 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.
 - 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.
- 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 disturbed areas under 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, 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.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb./1,000 square feet, and 1/3 the normal lime application rate.

References: Guidelines Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1. Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute. Revised 1973.



NOTE: THIS PLAN FOR SEDIMENT CONTROL IS FOR THE OFFSITE PORTION OF THE PROPOSED SEWER ONLY. ONSITE SEDIMENT CONTROL MEASURES ARE SHOWN ON F-00-73.

Note: On April 3, 2000 the MD Dept. of the Environment issued a letter of Authorization # 99-NL-022/1999-0191 and related Water Quality Certification for the construction of the 8" Public Sewer through Non-Tidal Wetlands & Buffers.

**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:
- PREFERRED** - Apply 2 tons per acre dolomitic limestone (92 lbs/1000sq. 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 ureamform fertilizer (9 lbs/1000sq. ft.).
 - ACCEPTABLE** - Apply 2 tons per acre dolomitic limestone (92 lbs/1000sq. 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/1000sq. ft.) of Kentucky 31 Tall Fescue May 1 thru July 31, seed with 80 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue and 2 lbs. per acre (.05 lbs/1000sq. 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 per acre Kentucky 31 Tall Fescue and mulch 2 tons / acre well anchored straw.

MULCHING - Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of untreated small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. 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, if not previously loosened.

SOIL AMENDMENTS: - Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000sq. ft.).

SEEDING - For periods March 1 thru April 30, and from August 15 thru October 15 seed with 2-12 bushels per acre of annual rye (3.2 lbs/1000sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.7 lbs/1000sq. ft.). For the period November 15 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/1000sq. ft.) of untreated small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

Reviewed For Howard Soil Conservation District And Meet Technical Requirements.

Signature _____ Date _____
Natural Resources Conservation Service

This Development Plan is Approved For Soil Erosion And Sediment Control by The Howard County Soil Conservation District.

HOWARD SOIL CONSERVATION DISTRICT _____ DATE _____

SEQUENCE OF CONSTRUCTION
(FOR SEWER CONSTRUCTION ON OPEN SPACE LOT #238)

NO.	DESCRIPTION	DATE
1.	Obtain grading permit.	1 Day
2.	Notify the Howard County Department of Public Works Construction Inspection Division at 410-313-1855 at least 48 hours prior to beginning construction.	1 Day
3.	Install tree protection fence, silt fence and super silt fence on downstream side of proposed sewer alignment on open space lot #238.	2 Days
4.	Insure all sediment controls are installed and obtain permission from the Sediment Control Inspector prior to trenching for proposed sewer.	1 Day
5.	Trench for sewer and install sewer. Inure that the disturbed area is stabilized in accordance with the temporary seeding notes at the end of each work day.	5 Days
6.	Once sewer is complete, stabilize all remaining disturbed areas in accordance with the permanent seeding notes.	1 Day
7.	Obtain permission from the Sediment Control Inspector and remove the silt fence and super silt fence.	1 Day

WPD 5.2 UTILITY CROSSING
Temporary Stream Construction

The work shall consist of installing erosion control devices in and adjacent to the construction of utility crossings.

Materials for seepage and stone stream diversion shall meet the following requirements:

- Alloy: Riprap shall be washed and have a minimum diameter of 4 inches (13 centimeters).
- Geotextile: Sackings shall consist of materials which are resistant to ultraviolet radiation, tearing, and puncture and shall be woven tightly enough to prevent leakage of the fill material (i.e., sand, gravel, etc.).

All erosion and sediment control devices, including diversifying basins, shall be implemented as the first order of business according to a plan approved by the Water Management Administration (WMA). The Maryland Standards and Specifications for Sediment Control. The proposed construction sequence is as follows (refer to the attached figures):

- The contractor shall ensure that a continuous perimeter control barrier is in place to maintain the stream of pollution entering the flow.
- Excavated topsoil and subsoil shall be kept separate, placed on the upland side of the excavation, and replaced in their natural order.
- All construction shall take place during seasons low flows. The length of construction time shall be limited to a maximum of 5 days for each crossing.
- All utility crossings shall be placed a minimum of 3 feet (1 meter) beneath the streambed unless an alternative action is specifically approved by the WMA. (For instances where a 3 foot cover is not viable, two alternate stabilization options are given in the attached details.)
- The stream shall be diverted by an approved temporary stream diversion, the construction area shall be dewatered, and any diversifying basins shall be stabilized. (The contractor may elect to construct the utility crossing in two stages. In this case, a WMA approved flow barrier may be constructed to keep the construction area dry.)
- Once the crossing is completed, the diversion shall be removed from upstream to downstream. Sediment control devices, including perimeter erosion controls, are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspection authority approves their removal.

DEPARTMENT OF PUBLIC WORKS
6-30-00
CHIEF-BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
7/6/00
CHIEF-DEVELOPMENT ENGINEERING DIVISION

LDE, INC.
9250 RUMSEY ROAD, SUITE 106
COLUMBIA, MARYLAND 21045
(410) 715-1070 (301) 596-3424
Fax: (410) 715-9540

DESIGNED SDH
DRAWN STB
CHECKED BDB
DATE 3 / 00

BY	NO.	REVISION	DATE

Soil Erosion & Sediment Control Plan, Details & Notes

Water and Sewer Construction Plans
SCOTT FARM
Lots 10 - 24, 27-35
A Resubdivision of Wilkinson Acres Lots 5 & 10
5th Election District Howard County, Maryland
CONTRACT NO. 34-3793-D

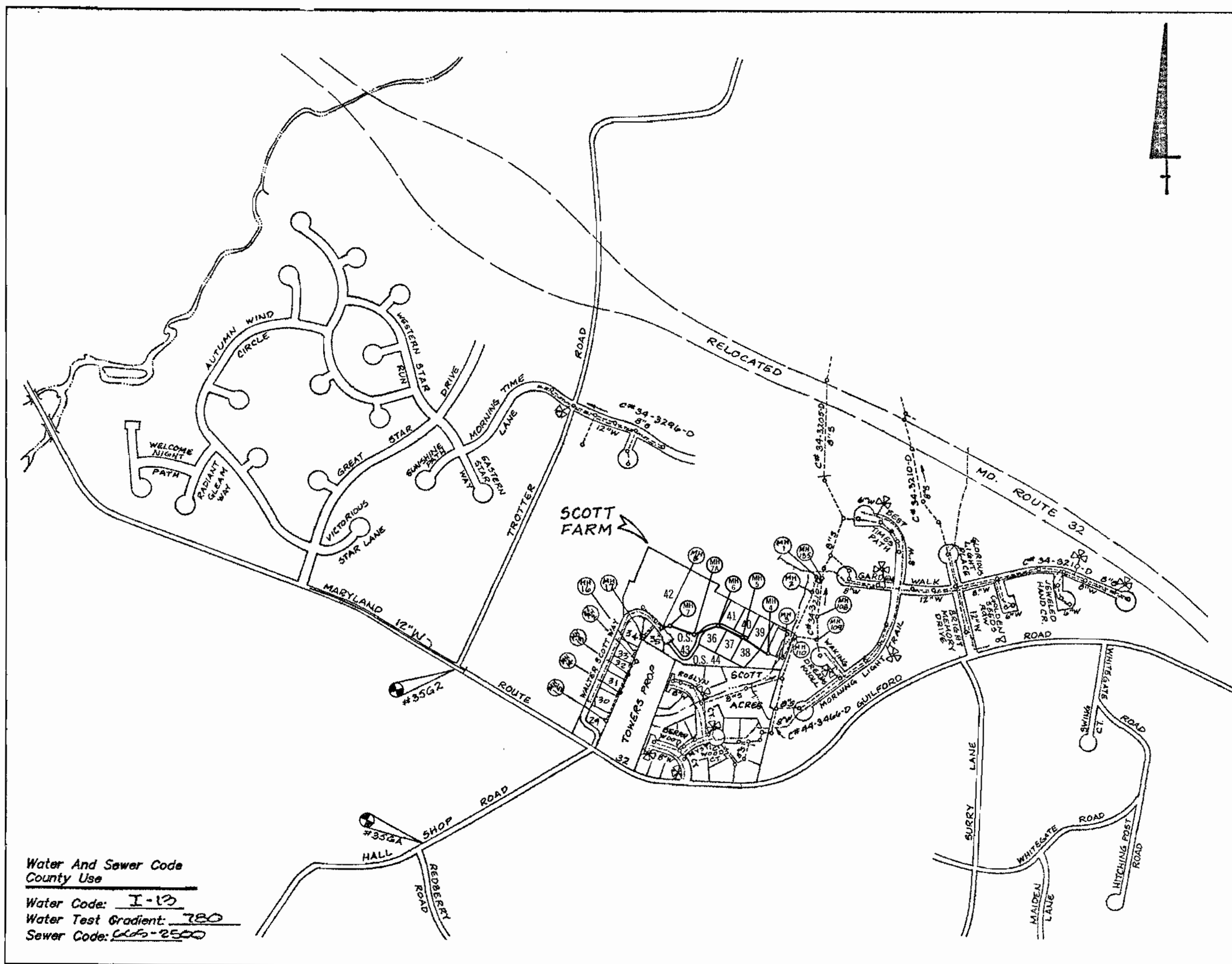
SCALE 45 SHEET SHEET 6 OF 6

Bench Marks:

Ho. Co. Monument # 35G2
Elev 477.63
Concrete Monument NW Corner of Inter-section of Guilford Road & Trotter Road.

Ho. Co. Monument # 35GA
Elev 482.11
Concrete Monument N Side of Hall Shop Road Past Redberry Road.

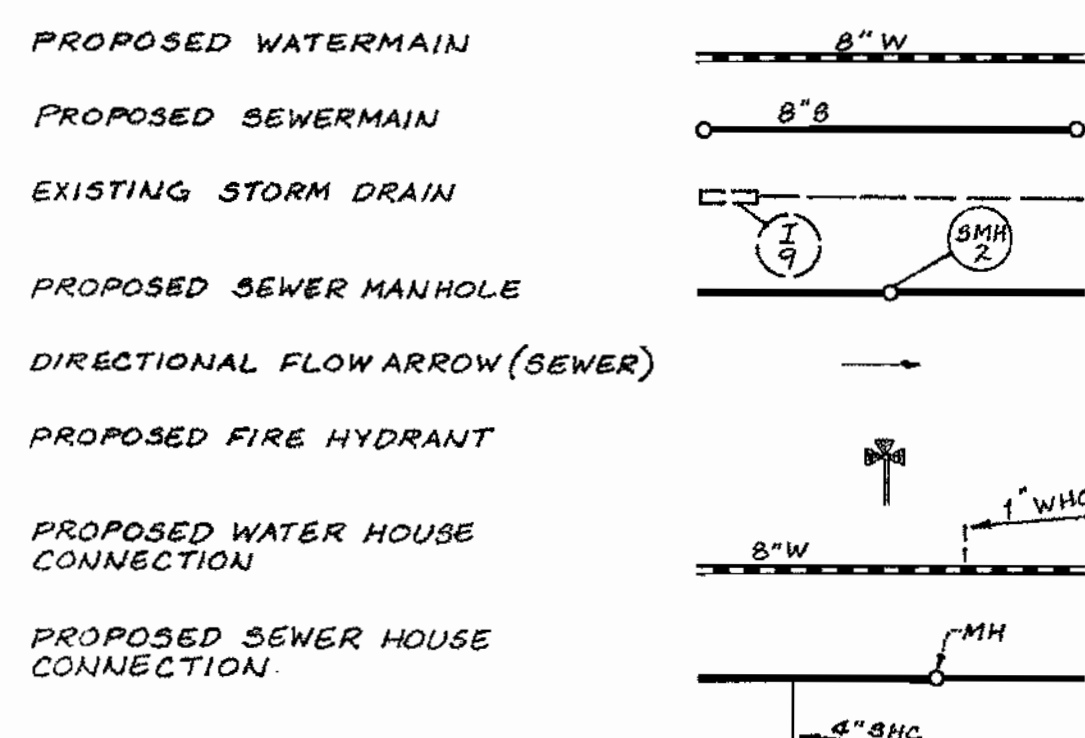
Index of Sheets	
Sheet No.	Title
1	Cover Sheet
2	Plan View (Lots 29-35)
3	Plan View (Lots 36-44)
4	Water Profiles
5	Sewer Profiles
6	Soil Erosion & Sediment Control Plan, Details & Notes



General Notes

- PART I**
- 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.C.S. data.
 - All pipe elevations shown are invert elevations.
 - 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 owned the Contractor. The Contractor shall coordinate with the utility companies to schedule the bracing of the poles.
 - For details not shown on the drawings and for materials and construction methods, use Howard County Design Manual, Volume IV Standard Specifications and Details for Construction (latest edition). The Contractor shall have a copy of Volume IV on the job.
 - 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.
 - Contractor shall notify the following utility companies or agencies at least five (5) working days before starting work shown on these plans:
 - SHA: (410) 531-5553
 - BGE (Contractor Services): (410) 850-4600
 - BGE (Underground damage control): (410) 787-9068
 - Miss Utility: 1-800-257-7777
 - Colonial Pipeline Company: (410) 785-1390
 - Howard County Dept. of Public Works, Bureau of Utilities: 313-4900
 - Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs within the construction strip are not to be removed or damaged by the Contractor.
 - 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 main.
- PART II: WATER**
- All water mains to be D.I.P. Class 52 unless otherwise noted.
 - Top of all water mains to have a minimum of 3 1/2' cover unless otherwise noted.
 - Valves adjacent to the tee shall be strapped to the tee.
 - All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
 - Fire hydrants shall be set to the survey line elevations shown on the drawings. All fire hydrants shall be strapped and buttressed with concrete in accordance with the Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1005 of the Standard Specifications.
 - The Contractor shall not operate any water main valves on the existing water system.
 - All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- PART III: SEWER**
- All sewer mains to be D.I.P. and P.V.C. unless otherwise noted.
 - All proposed sewers shall be public.
 - All manholes shall be 4'0" inside diameter unless otherwise noted.
 - Force mains shall be D.I.P. only.
 - Manholes designated W.T. in plan and profile shall have water tight frame and covers; Standard Detail 05-52. Where watertight manhole frame and cover is used, set top of frame 1'6" above finished grade unless otherwise noted on the drawings.
 - Houses with the symbol "C.N.S." indicates that cellar cannot be served.
 - Manholes shown with 12" and 18" walls are for brick manholes only.
 - Offsite Public Utility Easement from the Columbia Association to Howard County recorded among the Land Records of Howard County on _____ in L. _____.
 - The Maryland Department of the Environment granted Permit No. 49-NT-0424/19996b191 on April 3, 2000 to construct Sewermain across Nontidal Wetlands and adjacent Buffers between SMH Nos. 243.
 - All BHC's shall be constructed at a 2% grade to the Right-of-Way line, Property line or edge of easement.

LEGEND



Water And Sewer Code
County Use
Water Code: I-12
Water Test Gradient: 1/80
Sewer Code: L-2500

Type of Buildings:
Number of Lots/Parcels: 14
Number of W.H.C.'S: 14
Number of S.H.C.'S: 14
Drainage Area: Middle Patuxent
Treatment Plant: Little Patuxent Water Reclamation Plant
Somers, Howard County, MD

Single Family Detached
8 Lots (1 Lot with Existing Residential & New Single-Family Lots)
14
Middle Patuxent
Little Patuxent Water Reclamation Plant
Somers, Howard County, MD

Vicinity Map
Scale: 1"=600'

Water & Sewer Construction Plans
Scott Farm
Lots 27-44

Tax Map No. 35 P/O Parcel 354
5th Election District
Contract No. 34-3793-D
Howard County, Maryland

Item	Quantities Estimated	As Built		
		Quantities	Type	Manufacturer/Supplier
1" WHC	350 L.F.			
4" SHC	210 L.F.			
8" San Sewer	2023 L.F.			
8" Watermain	1068 L.F.			
6" Watermain	68 L.F.			
Std. Fire Hydrant	2 Ea.			
8"x6" F.H.T.	4 Ea.			
8"x8" Tee	2 Ea.			
8" Plug & Buttress	2 Ea.			
Horz. Bends	9 Ea.			
Type 'A' Drop Connection	1			
Type 'B' Drop Connection	2			
Manholes	14			
Check Box: Survey & Drafting Division As Built Date:				

Reviewed For Howard Soil Conservation District
And Meets Technical Requirements.
Jim Meyer 4/16/04
Signature
Natural Resources Conservator

This Development Plan is Approved For Soil Erosion And Sediment Control
By The Howard County Soil Conservation District.
John R. Robinson 4/16/04
HOWARD SOIL CONSERVATION DISTRICT

Sediment Control Measures for this Contract will be implemented in accordance with
Section 214 of The Standard Specification. Sediment Control Measures for the Onsite
Portion of the Proposed Utility Alignments will be implemented under Final Road
Construction Plans F-00-13. Sediment Control Measures for the Offsite Portion
of the Proposed Sewer Alignment are shown hereon.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
R. B. Berman 11-4-04
CHIEF - BUREAU OF UTILITIES - DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
John R. Robinson 4/16/04
CHIEF - DEVELOPMENT ENGINEERING DIVISION - DATE

No.	REVISION	DATE	BY



ENGINEERS • PLANNERS • SCIENTISTS • SURVEYORS
GREENHORNE & O'MARA, INC.
200 HARRY S TRUMAN PKWY. SUITE-200 ANNAPOLIS, MARYLAND 21401
(410) 266-0066
Greenbelt, MD - Annapolis, MD - Atlanta, GA - Fairfax, VA - Fredericksburg, VA - Mechanicsburg, PA
Raleigh, NC - Rockville, MD - Tampa, FL - West Palm Beach, FL

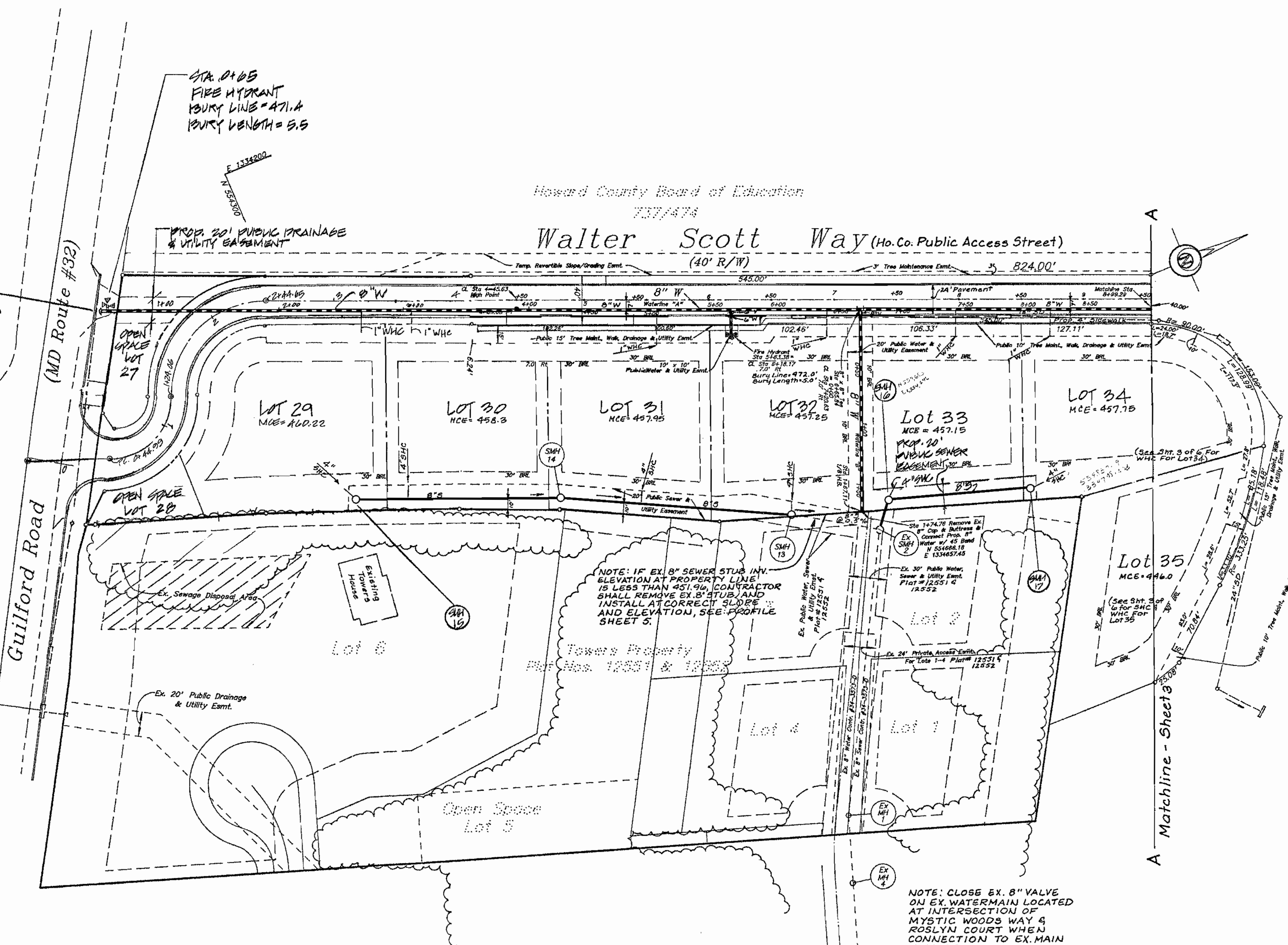
FINAL WATER AND SEWER CONSTRUCTION PLANS
SCOTT FARM
LOTS 27-44
WALTER SCOTT WAY AT GUILFORD ROAD
TAX MAP NO. 35 P/O PARCEL 354
CONTRACT NO. 34-3793-D

CVF DESIGN	SCALE	AS SHOWN
LMW DRAWN	1	OF 6
GRK CHECKED	SHEET	
NOV., 2004 DATE	PROJ. No.	FILE No.

NOTE: WATER LINE STATIONING EQUIVALENCY AT 8" CAP & OUTRESS

STA. 0+00 =
STA. 0+60
8" CAP & OUTRESS

STA. 0+65
FIRE HYDRANT
BURY LINE = 471.4
BURY LENGTH = 5.5



SEWER HOUSE CONNECTION TABLE				
LOT NO.	INV. @ MAIN	INV. @ FLU EASMT	MIN. C.E.	
29	455.22	455.42	420.22	
30	454.75	454.95	459.00	
31	452.75	452.95	457.75	
32	452.10	452.26	457.25	
33	452.15	452.55	457.15	
34	452.04	453.32	457.75	
35	437.60	438.30	442.00	
36	422.16	422.26	426.50	
37	416.50	416.60	421.00	
38	400.33	400.43	406.00	
39	398.25	398.35	404.00	
40	407.20	407.60	412.00	
41	420.24	420.64	423.00	
42	427.00	427.40	434.50	
43		OPEN SPACE		
44		OPEN SPACE		

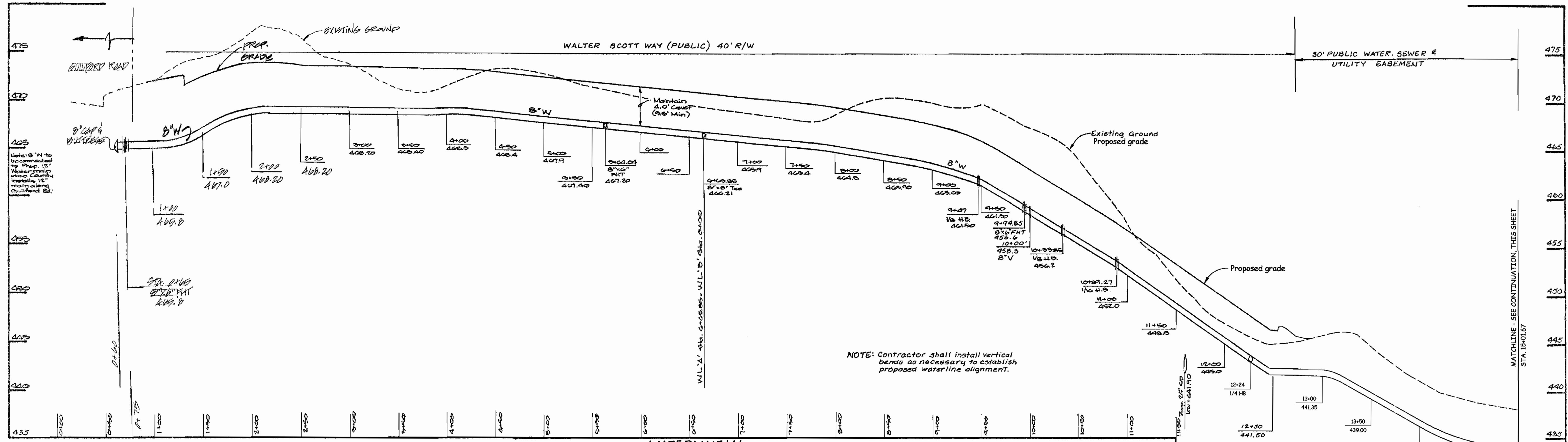
SEWER STRUCTURE SCHEDULE						
MANHOLE NO.	TOP RIM ELEV.	INV. IN	INV. OUT	LOCATION	REMARKS	
1	393.15	395.10	394.95	N 554270.27 E 13358898.27	See Ho. Co. St. G-5.11	
2	394.80	395.21	395.11	N 555079.04 E 13358930.53	See Ho. Co. St. G-5.11	
3	403.90	399.24	399.14	N 544728.08 E 1335378.70	See Ho. Co. St. G-5.11	
4	400.80	391.31	391.11	N 554758.29 E 1335578.14	See Ho. Co. St. G-5.11	
5	418.30	413.80	407.00	N 554877.88 E 1335420.88	See Ho. Co. St. G-5.11	
6	434.70	425.10	424.80	N 554998.04 E 1335254.15	See Ho. Co. St. G-5.11	
7A	437.10	428.60	428.40	N 554998.60 E 1335090.62	See Ho. Co. St. G-5.11	
7	445.80	438.20	438.00	N 554957.90 E 1334928.39	See Ho. Co. St. G-5.11	
8	444.90	437.80	437.60	N 554906.70 E 1334894.08	See Ho. Co. St. G-5.11	
14	460.90	453.10	452.95	N 554445.62 E 1334546.48	See Ho. Co. St. G-5.11	
15	464.00	452.00	451.95	N 554610.85 E 1334630.82	See Ho. Co. St. G-5.11	
EX. MH# 2	464.50	451.60	451.50	N 554570.82 E 1334669.70	Existing Manhole	
EX. MH# 135	397.40	394.90	394.70	N 555270.27 E 1335908.27	Existing Manhole	

* The 'Inverts' shown on this schedule are for the public 8" main only. No SHC inverts are shown. Refer to the sewer house connection table for SHC inverts at the main.
 ** Sewer Manhole # 11 has an ultimate top elevation of 430.20. This elevation will not be established until fill for lots 15-18 is imported. Contractor shall set the manhole cover at a temporary elevation of 422.50, in conjunction with the fill operation for the surrounding lots, the contractor shall raise the manhole to the ultimate elevation.

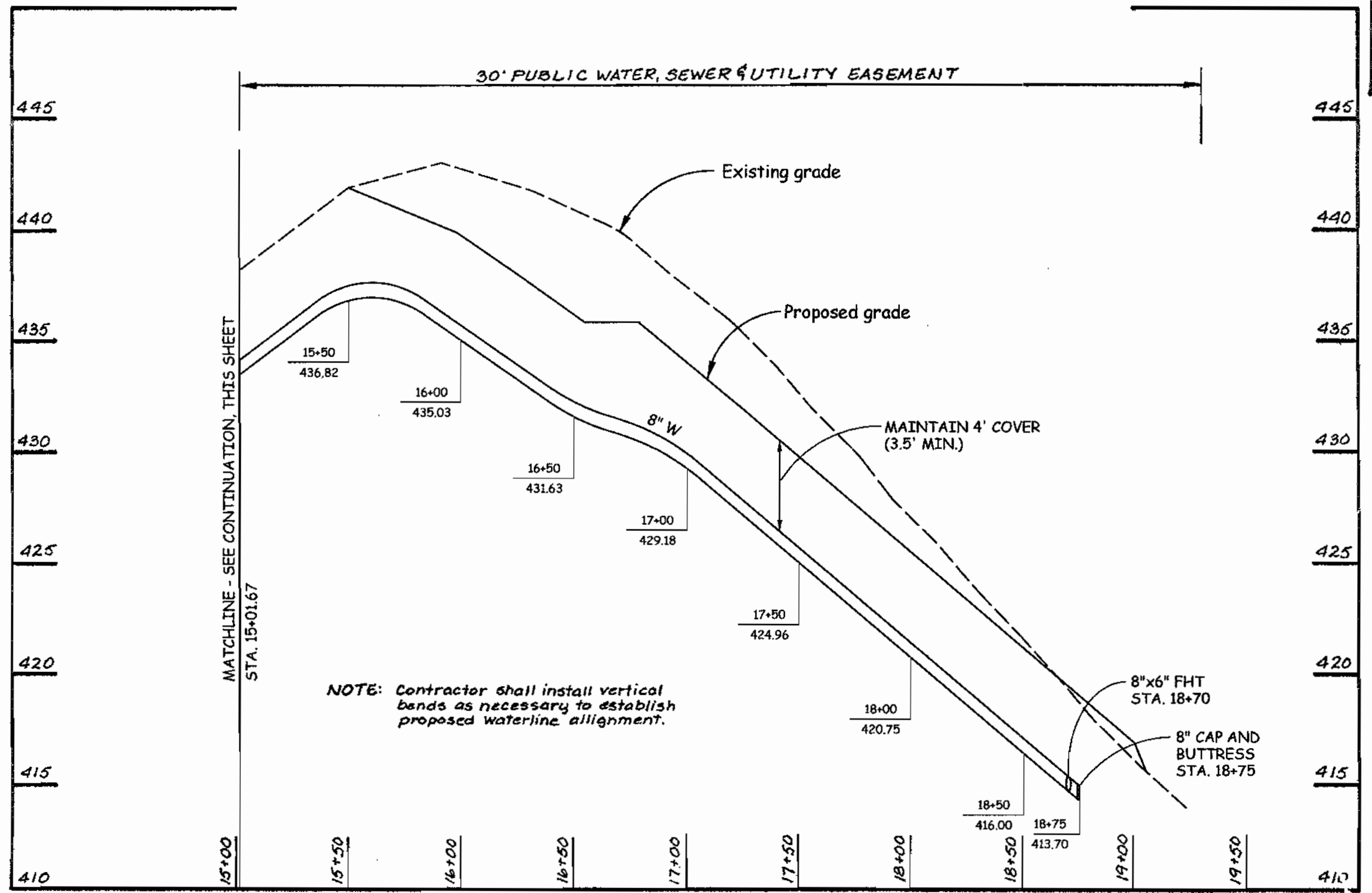
15	460.00	460.00	460.00	N 554430.12 E 1334498.20	See Ho. Co. St. G-5.11
16	462.00	461.00	461.00	N 554430.12 E 1334498.20	See Ho. Co. St. G-5.11
17	467.00	467.00	467.00	N 554430.12 E 1334498.20	See Ho. Co. St. G-5.11

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION. SEDIMENT CONTROL MEASURES FOR THE ONSITE PORTION OF THE PROPOSED UTILITY ALIGNMENTS WILL BE IMPLEMENTED UNDER FINAL ROAD CONSTRUCTION PLANS: F-00-73. SEDIMENT CONTROL MEASURES FOR THE OFFSITE PORTION OF THE PROPOSED SEWER ALIGNMENT ARE SHOWN HEREBY.

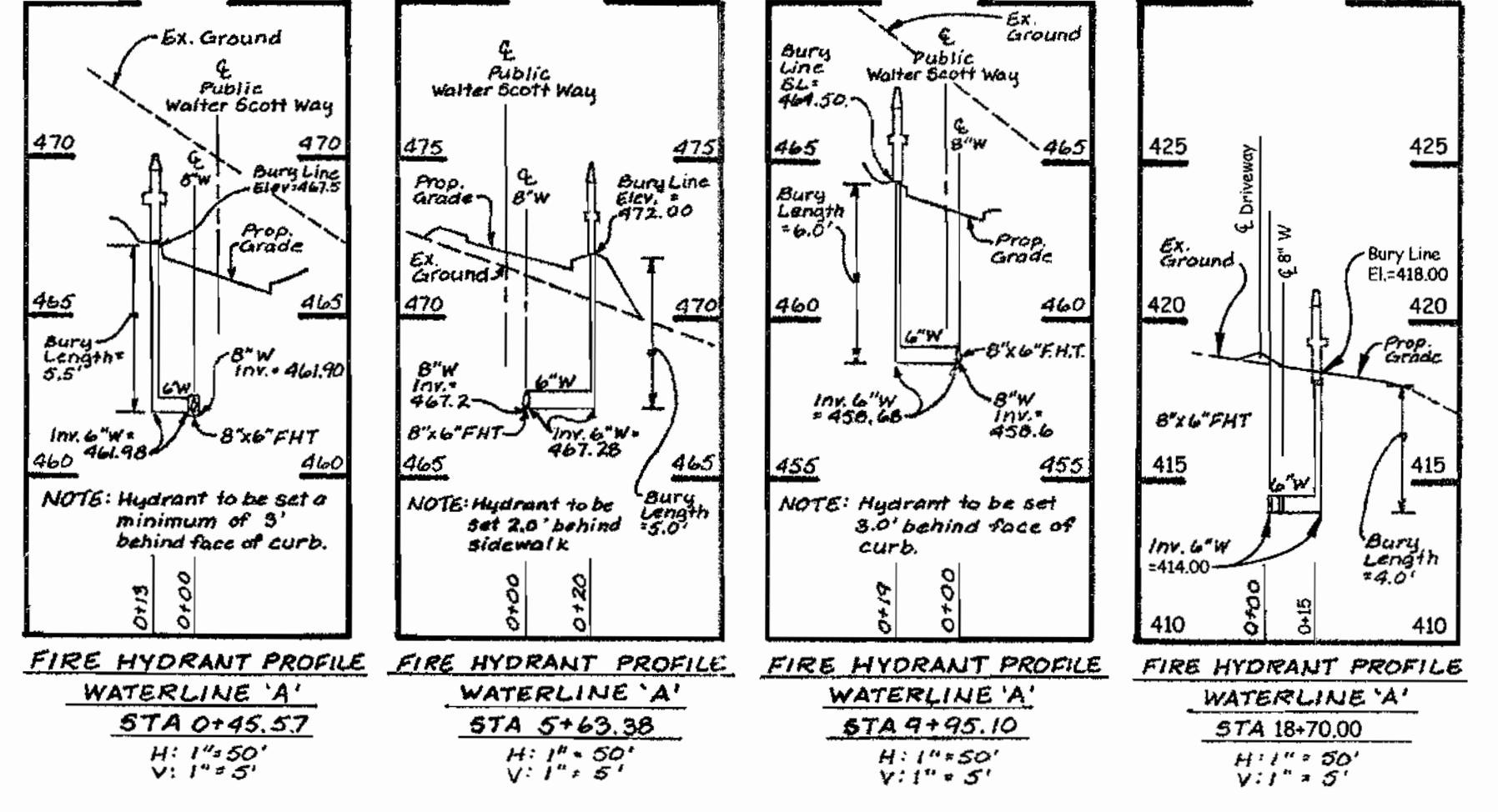
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Ruth Beiner</i> 11-2-04 CHIEF - BUREAU OF UTILITIES - DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND <i>[Signature]</i> 11/2/04 CHIEF - DEVELOPMENT ENGINEERING DIVISION - DATE	<table border="1"> <thead> <tr> <th>No.</th> <th>REVISION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	No.	REVISION	DATE	BY											ENGINEERS • PLANNERS • SCIENTISTS • SURVEYORS GREENHORNE & O'MARA, INC. 200 HARRY S TRUMAN PKWY. SUITE 200 ANNAPOLIS, MARYLAND 21401 (410) 266-0066 <small>Greenbelt, MD - Annapolis, MD - Atlanta, GA - Fairfax, VA - Fredericksburg, VA - Mechanicsburg, PA Raleigh, NC - Rockville, MD - Tampa, FL - West Palm Beach, FL</small>	FINAL WATER AND SEWER CONSTRUCTION PLANS SCOTT FARM LOTS 27-44 WALTER SCOTT WAY AT GUILFORD ROAD TAX MAP NO. 35 P/D PARCEL 354 <small>OWNER/DEVELOPER: SCARLET WILKINSON AND EARL OWER 6701 GUILFORD ROAD CLARKVILLE, MARYLAND 21029 CONTRACT NO. 34-3793-D</small>	C/VF DESIGN SCALE 1" = 50' LMM DRAWN 2 OF 6 GRK CHECKED SHEET NOV. 2004 DATE PROJ. No. FILE No.
			No.	REVISION	DATE	BY													
REPLACES SHEET SIGNED IN JUNE, 2000																			



WATERLINE 'A'
8" PUBLIC WATER PROFILE
 H: 1" = 50'
 V: 1" = 3'



WATERLINE 'A'
8" PUBLIC WATER PROFILE
 H: 1" = 50'
 V: 1" = 3'



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert Benjamin 11-4-04
 CHIEF - BUREAU OF UTILITIES - DATE

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 [Signature] 11/2/04
 CHIEF - DEVELOPMENT ENGINEERING DIVISION - DATE

No.	REVISION	DATE	BY

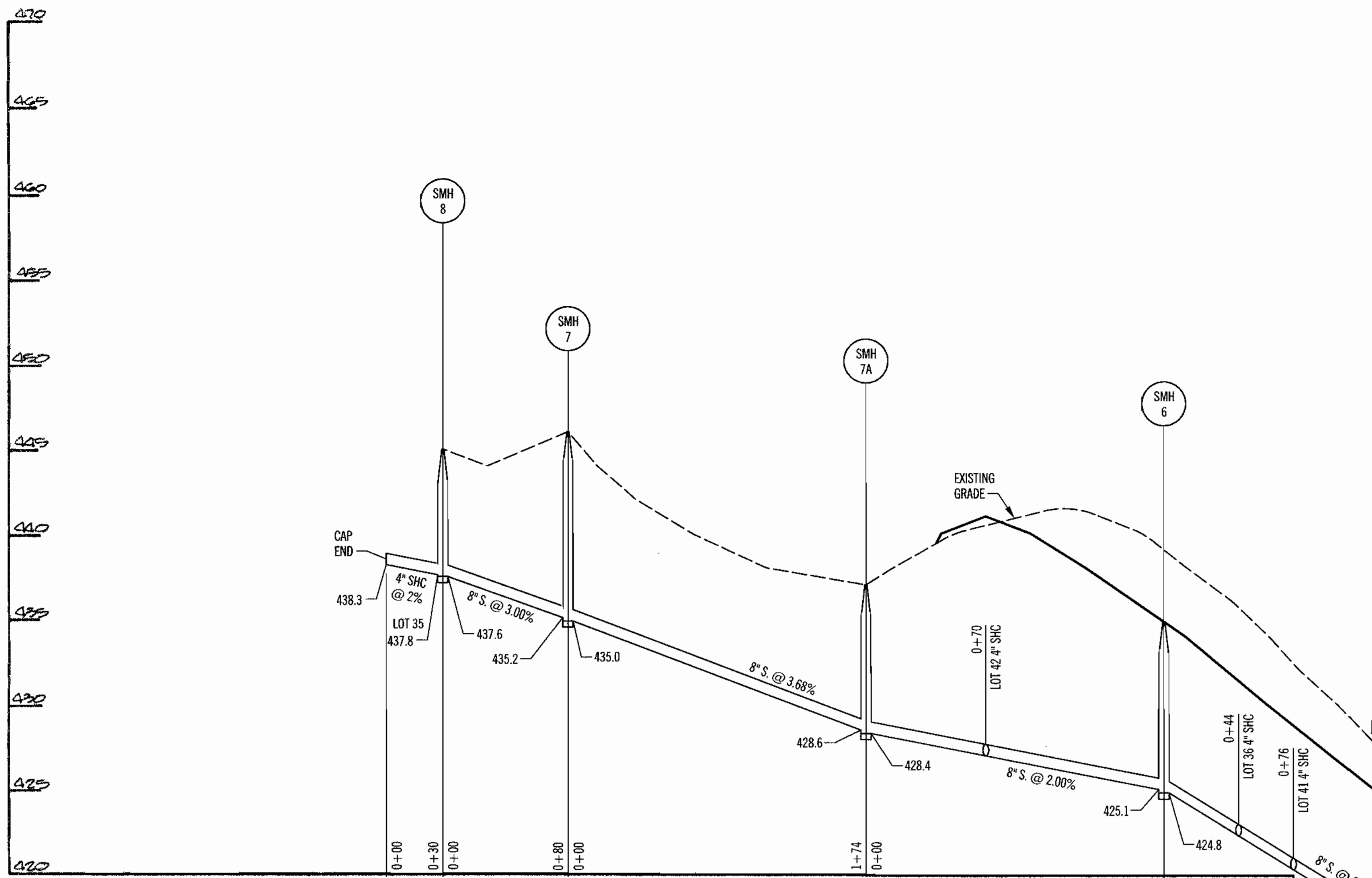


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GREENHORNE & O'MARA, INC.
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 (410) 266-0066
 Greenbelt, MD - Annapolis, MD - Atlanta, GA - Fairfax, VA - Fredericksburg, VA - Mechanicalburg, PA
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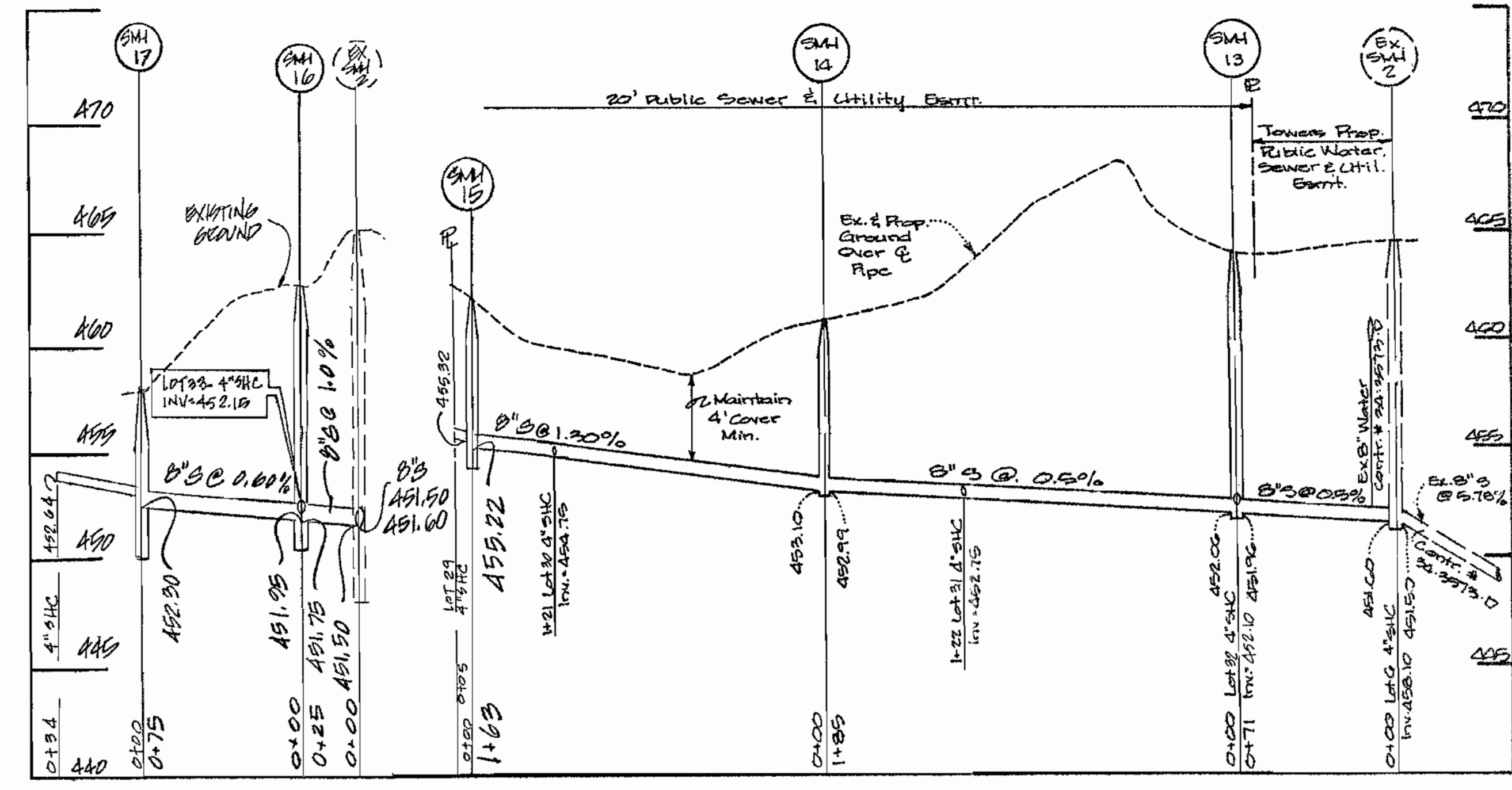
FINAL WATER AND SEWER CONSTRUCTION PLANS
SCOTT FARM
 LOTS 27-44
 WALTER SCOTT WAY AT GUILFORD ROAD
 TAX MAP NO. 35 P/O PARCEL 354
 OWNER/DEVELOPER
 SCARLET WILSON AND SHEL OMER
 6799 GUILFORD ROAD
 CLANESVILLE, MARYLAND 21229
 CONTRACT NO. 34-3793-D

CVF DESIGN	AS SHOWN
LMM DRAWN	SCALE 4 OF 6
GRK CHECKED	SHEET
NOV., 2004 DATE	PROJ No. FILE No.

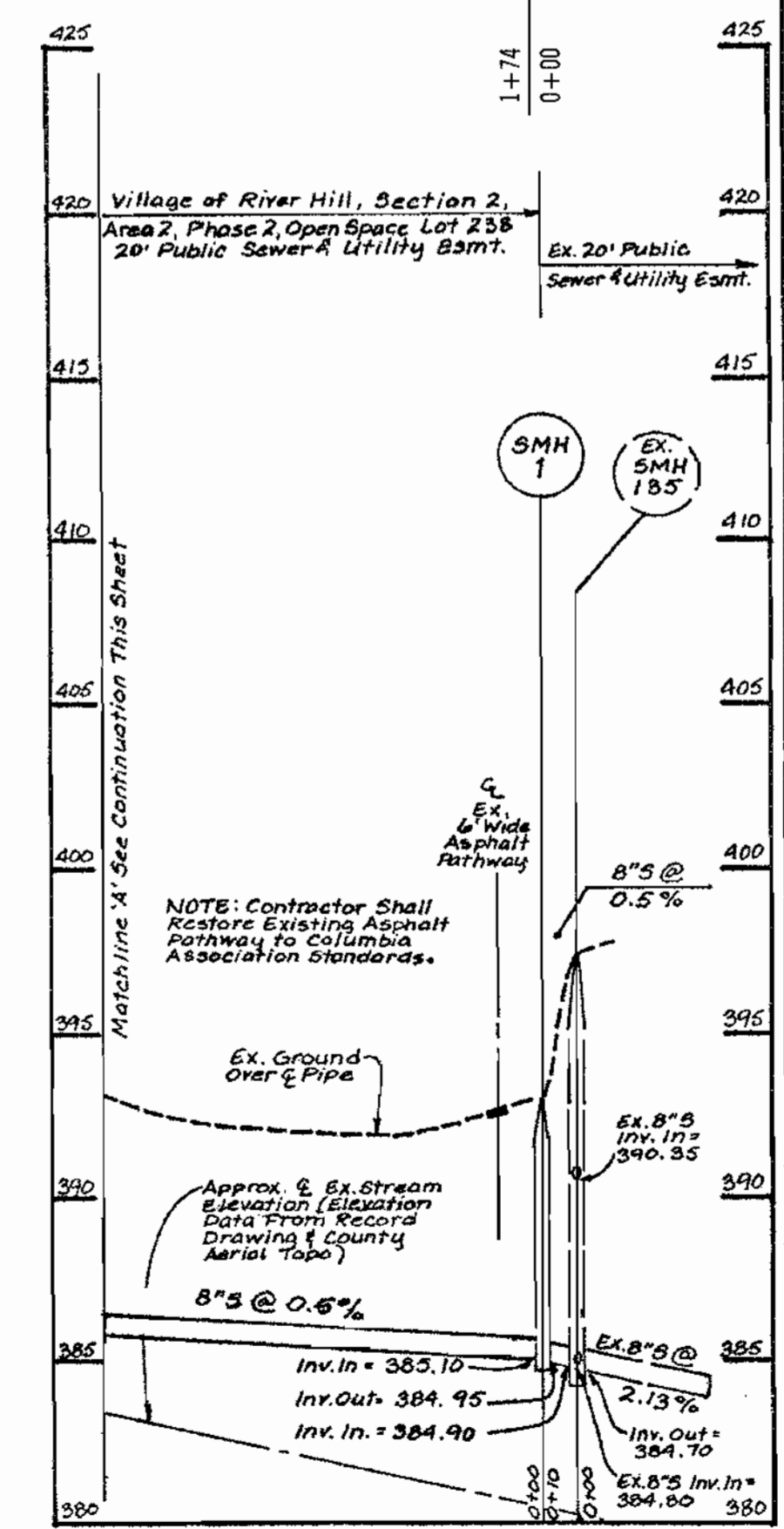
REPLACES SHEET SIGNED IN JUNE, 2000



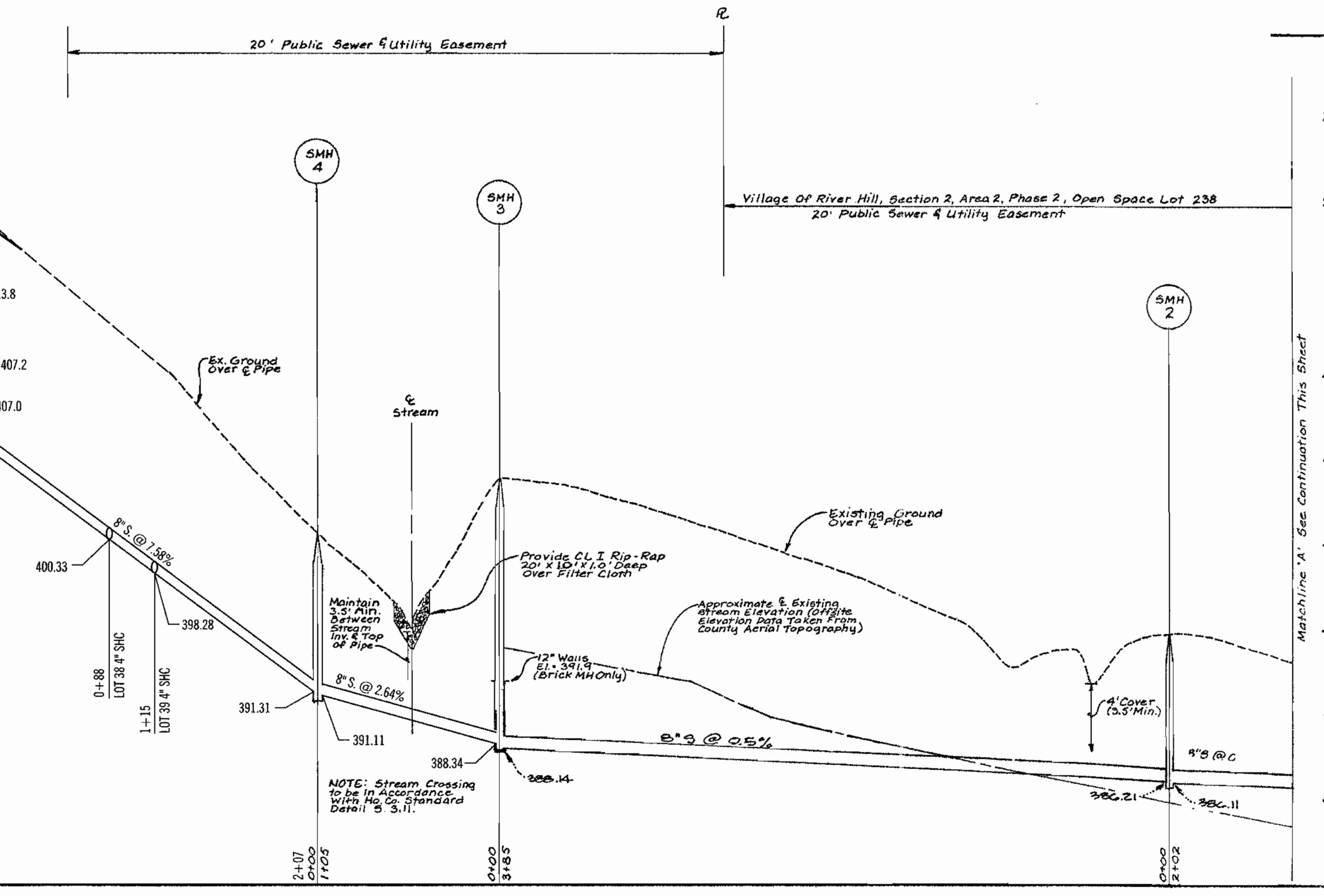
8" Public Sewer Profile
1" = 50' H
1" = 5' V



8" Public Sewer Profile
1" = 50' H
1" = 5' V



8" Public Sewer Profile
1" = 50' H
1" = 50' V

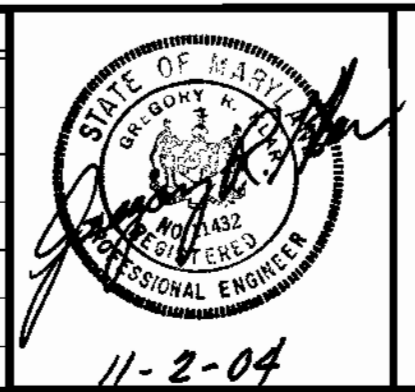


NOTE: SEE SHEET 2 FOR SEWER STRUCTURE SCHEDULE AND SEWER HOUSE CONNECTION TABLE.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
R. H. Benjamin 11-4-04
CHIEF - BUREAU OF UTILITIES - DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
[Signature] 11/2/04
CHIEF - DEVELOPMENT ENGINEERING DIVISION - DATE

No.	REVISION	DATE	BY



ENGINEERS • PLANNERS • SCIENTISTS • SURVEYORS
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Raleigh, NC • Rockville, MD • Tampa, FL • West Palm Beach, FL

FINAL WATER AND SEWER CONSTRUCTION PLANS
SCOTT FARM
LOTS 27-44
WALTER SCOTT WAY AT GUILFORD ROAD
TAX MAP NO. 35 P/O PARCEL 354
OWNER/DEVELOPER:
SCARLET HOLDINGS AND SUE L. LINES
6739 GUILFORD ROAD
CLARKVILLE, MARYLAND 21033
CONTRACT NO. 34-3793-D

CVF DESIGN	SCALE	AS SHOWN
LMM DRAWN	5	OF 6
GRK CHECKED	SHEET	
NOV, 2004 DATE	PROJ No.	FILE No.

REPLACES SHEET SIGNED IN JUNE, 2000

HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

- 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 any construction, (313-1855).
- 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 its revisions thereto.
- Following initial soil disturbance, 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 2, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 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 (Section G) for permanent seeding, sod, temporary seeding, and mulching. Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 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.
- Site Analysis: (Applies to Offsite Work only. See F-00-78 for Onsite Sediment Control Measures.)
Total Area of Site: 0.22 Acres
Area Disturbed: 0.21 Acres
Area to be roofed or paved: 0.21 Acres
Area to be vegetatively stabilized: 1567 Cu. Yds.
Total Cut: 1567 Cu. Yds.
Offsite waste/borrow area location N/A
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be required 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 an initial approval by the inspection agency is made.
- 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.

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:

- PREFERRED — Apply 2 tons per acre dolomitic limestone (92 lbs/1000sq. 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/1000sq. 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.
- ACCEPTABLE — Apply 2 tons per acre dolomitic limestone (92 lbs/1000sq. 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 of annual ryegrass (3.2 lbs/1000sq. ft.). For the period May 1 thru July 31, seed with 60 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue and 2 lbs. per acre (.05 lbs/1000sq. 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 per acre Kentucky 31 Tall Fescue and mulch 2 tons / acre well anchored straw.

MULCHING — Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. 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/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. ft.) for anchoring.

MAINTENANCE — Inspect all seeding areas and make needed repairs, replacements and reseeding.

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, if not previously loosened.

SOIL AMENDMENTS: — Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000sq. ft.).

SEEDING — For periods March 1 thru April 30, and from August 15 thru October 15 seed with 2-12 bushels per acre of annual ryegrass (3.2 lbs/1000sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs/1000sq. ft.). For the period November 16 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/1000sq. ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

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 pH, 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 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.

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 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.

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 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 clinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be applied 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.

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 1 — Vegetative Stabilization Methods and Materials.

IV. For sites having disturbed areas over 5 acres:
i. On soil meeting Topsoil specifications, obtain test results detailing 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 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 phytotoxic materials.

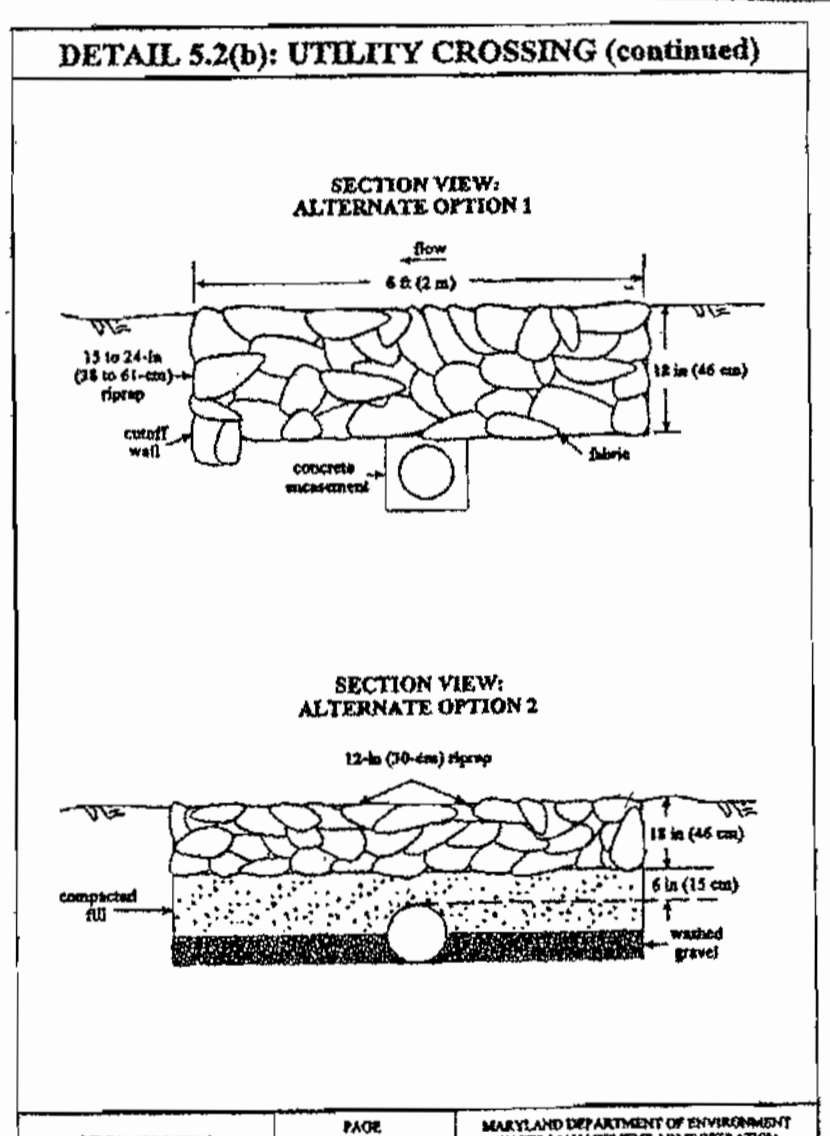
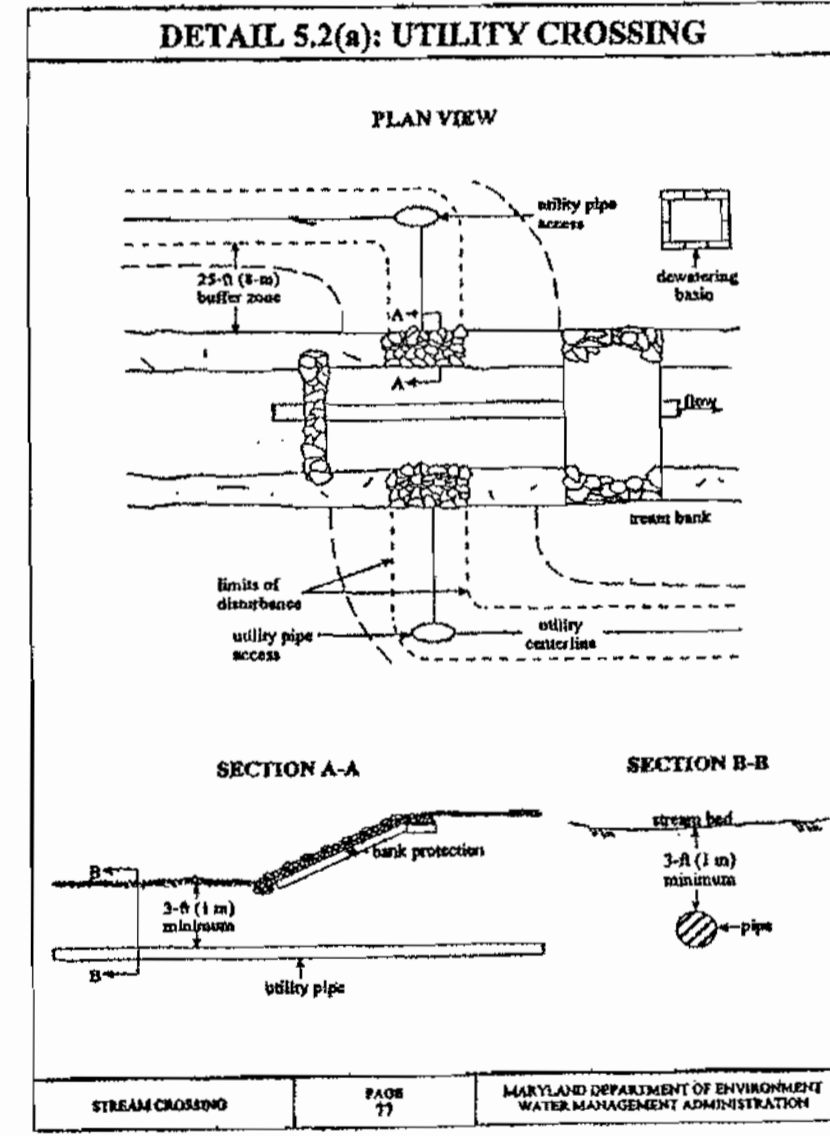
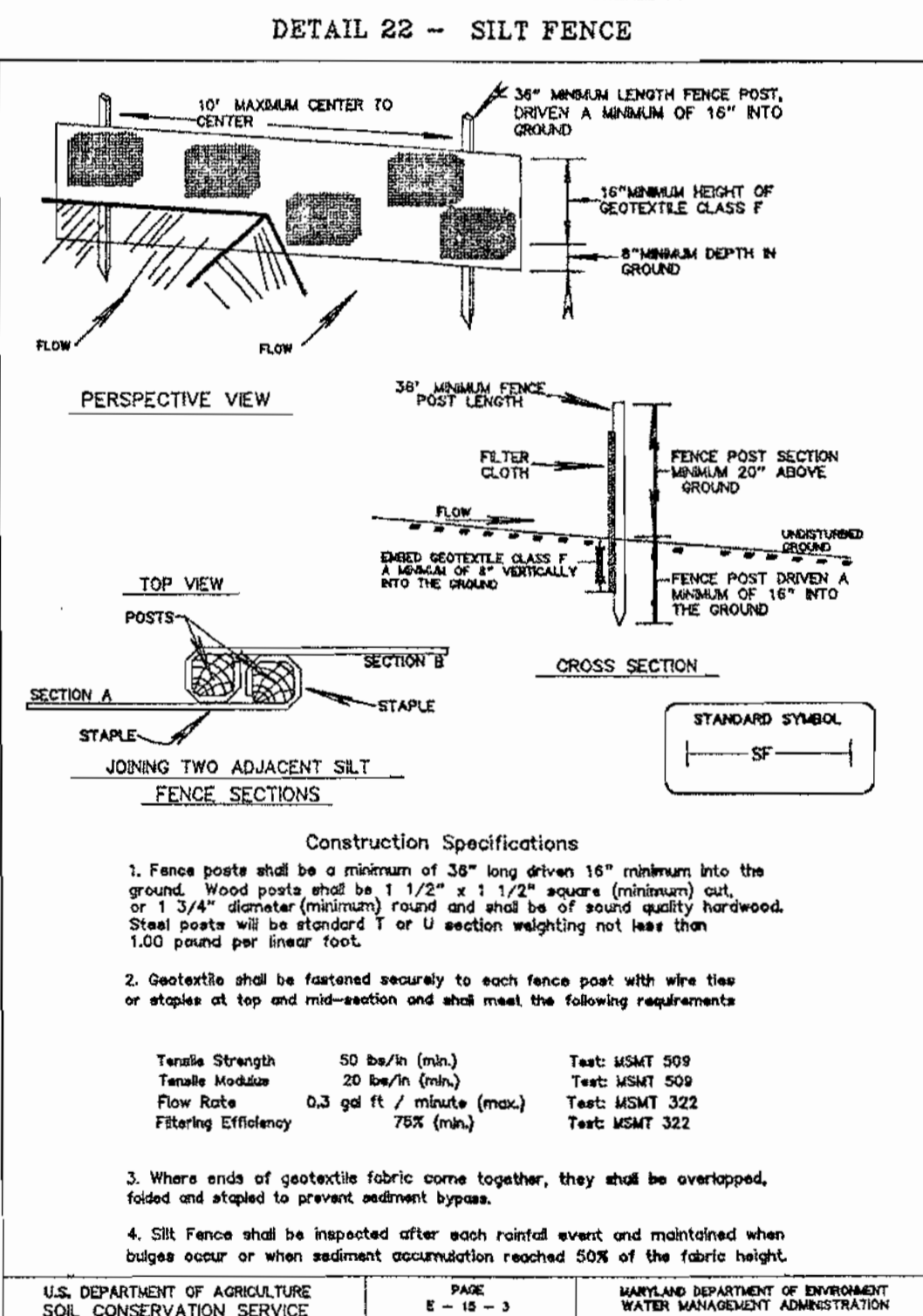
Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization — Section 1 — 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 seeding or sodding 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 grading and sodded preparation.

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:
i. 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 disturbed areas under 5 acres shall conform to the following requirements:
a. Composted sludge shall be supplied by, or originate from, a person or persons that 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 least 1 percent nitrogen, 1.5 percent phosphorus, 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.
ii. Composted sludge shall be amended with a potassium fertilizer 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.



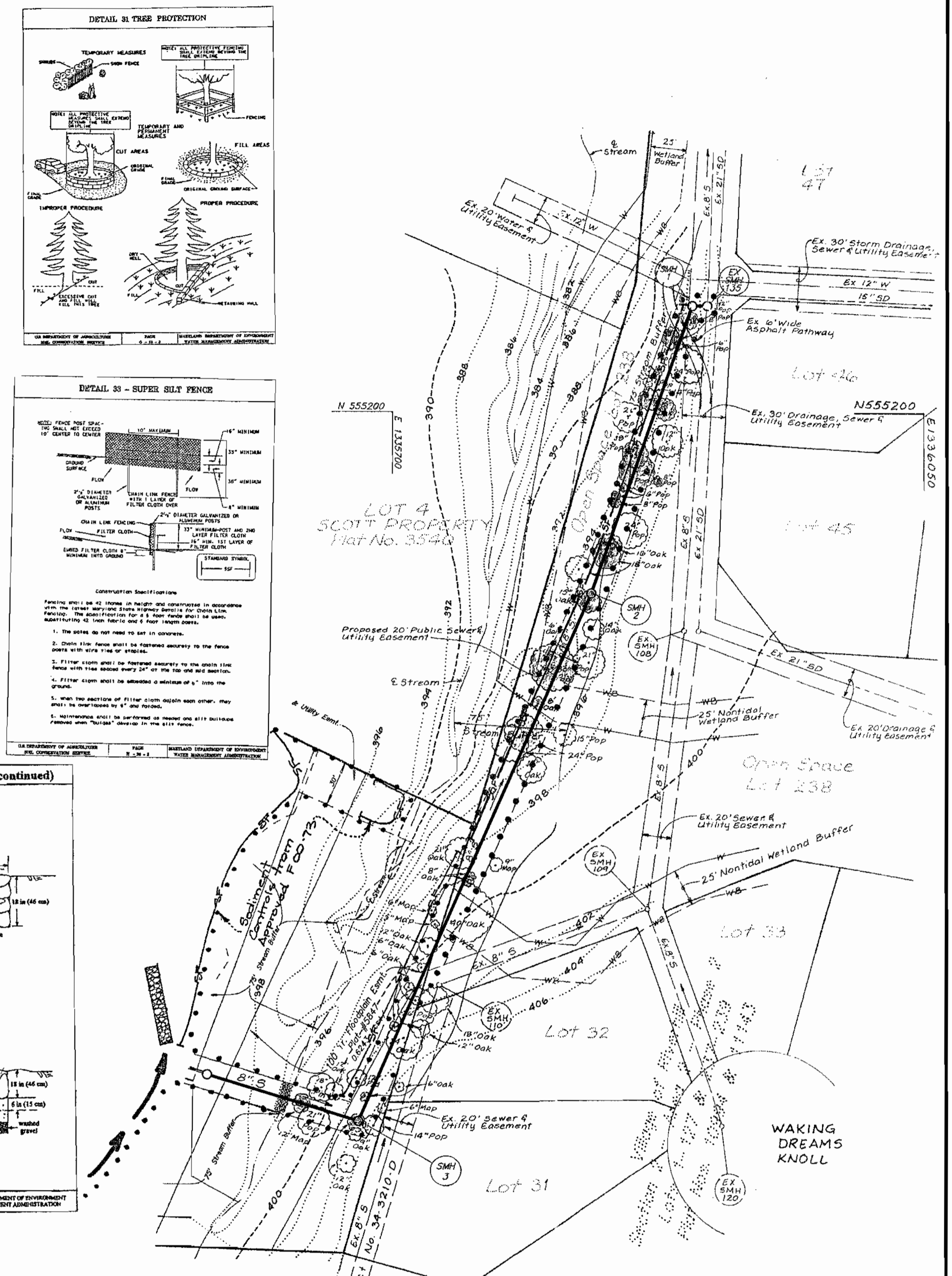
SEDIMENT CONTROL LEGEND

- LIMIT OF DISTURBANCE
- SILT FENCE
- EXISTING/PROP. CONTOUR
- EX. TREE TO REMAIN
- EX. TREE TO BE REMOVED

OFFSITE SEDIMENT CONTROL PLAN

NOTE: THIS PLAN FOR SEDIMENT CONTROL IS FOR THE OFFSITE PORTION OF THE PROPOSED SEWER ONLY. ONSITE SEDIMENT CONTROL MEASURES ARE SHOWN ON F-00-73.

Note: On April 3, 2000 the MD Dept. of the Environment issued a letter of Authorization # 99-NIT-0022/199906191 and related Water Quality Certification for the construction of the 8" Public Sewer through Non-Tidal Wetlands & Buffers.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

No. _____ REVISION _____ DATE _____ BY _____

11-9-04
R. H. B... CHIEF - BUREAU OF UTILITIES - DATE

11-2-04
... CHIEF - DEVELOPMENT ENGINEERING DIVISION - DATE

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
11-2-04

ENGINEERS • PLANNERS • SCIENTISTS • SURVEYORS
GREENHORNE & O'MARA, INC.
200 HARRY S TRUMAN PKWY. SUITE 200 ANNAPOLIS, MARYLAND 21401
(410) 266-0066

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FINAL WATER AND SEWER CONSTRUCTION PLANS
SCOTT FARM
LOTS 27-44
WALTER SCOTT WAY AT GUILFORD ROAD
TAX MAP NO. 35 P/O PARCEL 354

C/VF DESIGN SCALE AS SHOWN
LMM DRAWN 6 OF 6
GRK CHECKED SHEET
NOV. 2004 DATE PROJ. No. FILE No.

REPLACES SHEET SIGNED IN JUNE, 2000